



CRACOW
UNIVERSITY
OF ECONOMICS



KNOWLEDGE ECONOMY SOCIETY

CONTEMPORARY TRENDS
AND TRANSFORMATIONS
OF ECONOMIES AND ENTERPRISES



Edited by

Andrzej Jaki, Tomasz Rojek

KNOWLEDGE – ECONOMY – SOCIETY

CONTEMPORARY TRENDS
AND TRANSFORMATIONS
OF ECONOMIES AND ENTERPRISES

Zapraszamy do naszej księgarni internetowej
www.wydawnictwo.tnoik.torun.pl/sklep/



prawolubni

Książka, którą nabyłeś, jest dziełem twórcy i wydawcy. Prosimy, abyś przestrzegał praw, jakie im przysługują. Jej zawartość możesz udostępnić nieodpłatnie osobom bliskim lub osobiście znanym. Ale nie publikuj jej w internecie. Jeśli cytujesz jej fragmenty, nie zmieniaj ich treści i koniecznie zaznacz, czyje to dzieło. A kopiując jej część, rób to jedynie na użytek osobisty.

SZANUJMY CUDZĄ WŁASNOŚĆ I PRAWO!

KNOWLEDGE – ECONOMY – SOCIETY

CONTEMPORARY TRENDS AND TRANSFORMATIONS OF ECONOMIES AND ENTERPRISES

Edited by
Andrzej Jaki, Tomasz Rojek



Toruń 2019

wydawca

© Copyright by the Cracow University of Economics
& Towarzystwo Naukowe Organizacji i Kierownictwa · Stowarzyszenie Wyższej Użyteczności
„DOM ORGANIZATORA”

87-100 Toruń, ul. Czerwona Droga 8
tel. (+ 48 56) 622 38 07, 622 28 98

<http://www.tnoik.torun.pl> · e-mail wydawnictwo@tnoik.torun.pl



Reviewers

Ihor Alieksieiev, Vitalii Rysin

All papers have been prepared in English by the Authors

Wydanie publikacji dofinansowane z subwencji na naukę przyznanej Uniwersytetowi Ekonomicznemu w Krakowie
The book was financed with subsidy for science granted to the Cracow University of Economics

XI Międzynarodowa Konferencja Naukowa Wydziału Zarządzania Uniwersytetu Ekonomicznego w Krakowie
„Wiedza-Gospodarka-Spółeczeństwo” – CFM 2019 – zadanie finansowane w ramach umowy 759/P-DUN/2019
ze środków Ministra Nauki i Szkolnictwa Wyższego przeznaczonych na działalność upowszechniającą naukę

11th International Scientific Conference of the Faculty of Management of the Cracow University of Economics
„Knowledge-Economy-Society” – CFM 2019 – the task financed in accordance with the agreement 759/P-DUN/2019
from the funds of the Polish Ministry of Science and Higher Education designated for disseminating science

ISBN 978-83-7285-890-0 (printed version)

ISBN 978-83-7285-896-2 (pdf on-line)

Printed in Poland
Toruń

Wydanie I · Druk ukończono w 2019 r.

przygotowanie do druku

Projekt okładki
Jarosław Szczurek
www.good-art.pl

Studio KROPKA dtp · Piotr Kabaciński
tel. kom. 602 303 814
e-mail: biuro@swk.com.pl

Wszystkie prawa zastrzeżone. Żadna część tej książki nie może być powielana ani rozpowszechniana za pomocą urządzeń elektronicznych, mechanicznych, kopiujących, nagrywających i innych, bez uprzedniego wyrażenia zgody przez wydawcę i autora.

Table of contents

	Introduction	9
PART I	CHALLENGES AND DILEMMAS OF CONTEMPORARY ECONOMIES – ECONOMIC, SOCIAL AND LEGAL ASPECTS	
Chapter 1	Anzhelika Gerasymenko, Viktoriia Svystilnyk Evolution of the Information Asymmetry Concepts	15
Chapter 2	Giovanna Centorrino, Valeria Naciti Sustainable Voluntary Disclosure and European Emission Trading System: Evidences from Italian Companies.	25
Chapter 3	Maria Grazia Recupero Homo oeconomicus and Homo mimeticus Compared with Market Globalization.	45
Chapter 4	Maria Francesca Tommasini Waste. A Source of Utility or Disutility?	55
Chapter 5	Valentina Prudente Cultural Heritage Valorization and Urban Regeneration. A Look at Italian Law	61
Chapter 6	Francesco Martines The Role of Administrative Law in the Economic Globalization Era	71
Chapter 7	Roberto Caratozzolo Technology and New Enterprises: the Activity of Online Platforms between Law and Economy	81

Chapter 8	Antonina Astone Personal Data between GDPR and Blockchain	93
Chapter 9	Maurizio Ballistreri Social Rights and Basic Income in Italy	103
PART II	KNOWLEDGE AND INNOVATION AS DETERMINANTS OF EFFECTIVENES AND DEVELOPMENT	
Chapter 10	Vladan Ivanović Knowledge-based Economy: New versus Old Europa	123
Chapter 11	Bogusz Mikuła Human Capital Management as a Subsystem of Knowledge-based Management.	135
Chapter 12	Zora Arsovski, Slavko Arsovski, Aleksandar Djordjević Leadership Concept for Industry 4.0	147
Chapter 13	Anatolii Mazaraki, Ganna Duginets Industry 4.0 and the Development of Ukraine's Priorities.	165
Chapter 14	Valeriy Sai, Natalia Ilchenko Logistics 4.0: Technology of the Future	175
Chapter 15	Fabio Fragomeni, Rosalba Rizzo Messina and the Development of New E-commerce Activities . . .	183
Chapter 16	Anastasia Ilina The Effectiveness of Civil Service as a Factor in the Development of Innovation Infrastructure in Ukraine.	197
Chapter 17	Tomasz Rojek The Characteristics, the Role and the Functioning of Startups in the Economic Structure of the State	207
Chapter 18	Tindara Abbate, Patrizia Accordino, Raffaella Coppolino, Elvira Tiziana La Rocca, Daniela Rupo Innovative Tourism Startups: an Explorative Analysis	225

PART III**TRANSFORMATIONS AND DEVELOPMENT IN THE FACE OF CHANGES**

Chapter 19	Milan Kostić, Dragomir Dimitrijević, Nenad Janković Contribution of Competition Policy to Economic Development – Example of Former Transition Economies	243
Chapter 20	Anatolii Mazaraki, Myroslava Bosovska Drivers of Competitiveness of the National Tourism System of Ukraine in the Global Environment	257
Chapter 21	Ganna Duginets, Valeriy Sai Foreign Economic Activity of Ukrainian SMEs: Status and Prospects	273
Chapter 22	Anna Pietruszka-Ortyl Organizational Quality Culture in Polish Enterprises – Myth or Reality?	285
Chapter 23	Janusz Nesterak, Anna Charytanowicz, Olga Malinowska, Dariusz Put, Wojciech Szymba Performance Management and Business Performance Management as Controller’s Supporting Contemporary Management Concepts . .	299
Chapter 24	Mary Ellen Toffle, Antonino Germanà, Giuseppe Lucchese, Francesca Scribano, Francesca Pollicino University Internationalization: A Bright Light in a Dark Economy – How to Use Cross-Cultural Marketing to Expand the International Student Population in the Italian University System	309
Chapter 25	Verica Babić, Marko Slavković, Marijana Simić Students’ Perception on the Institutional Framework of Higher Education.	319
	Authors.	329

Introduction

Constant changes taking place in the world economy are currently related to the processes of globalisation and economic integration, as well as to various types of development, which is implemented to a different scale, at a different pace and in a different form. At the same time, what is significant for the contemporary economy is an increase in the scale and scope of international capital flow, interpenetration of physical, financial and human capitals.

Global processes take place primarily in the economic area. They mean freer flows of capitals, a more mobile location of production or service activities. The characteristic feature of the contemporary economy is not only the global scope, but also an unprecedented volume of the engaged financial means, as well as the acceleration of the pace of conducting activity and increasing its flexibility. Also competition is becoming fierce. Stronger and stronger international competition is becoming the reason for searching for extra savings, new technological opportunities, new sales markets.

The essence of these rapid, often even revolutionary transformations is also related to the growth of the role of science, knowledge and innovations. The attribute of such transformations are horizontal relationships, that is a confluence of economic, institutional, technological and social relations in local, regional, national, as well as international relationships. Undoubtedly, the primary and at the same time the most important category in these transformations is knowledge. Basically, it is about its acquisition, collection and first of all application. While becoming today one of the most important factors of business activity, knowledge makes the reassessment of the remaining factors, which in consequence leads to their recombination in Schumpeter's approach. At the same time, it is a universal substitute of all other factors of production – primarily tangible and transport resources. More and more commonly the emergence of a new economy is noticed – in which it is knowledge that plays the basic role.

Another characteristics of the new economy and enterprises is constant strive for development. The development of an enterprise arises from internal

conditionings, natural needs of the enterprise itself. Every business entity which is established with its development in mind, tries not only to maintain its existence, but also aims at constant development and increase the volume and structure of its activity. Thus, the development of an enterprise arises both from external conditionings connected with the necessity to face newer and newer challenges of the environment, but also from its natural, internal needs. Those two areas, integrally interrelated, constantly push the enterprise to the development right from its inception.

The aforementioned processes enforce the introduction of numerous new methods, models and techniques to broadly understood management studies. Therefore, new trends and faces of the transformation of economies and enterprises are also emerging. Among most current new trends the following are mentioned: digitalisation (of services, processes, works related to external and internal activity of an enterprise); constant feedback (consisting in frequent contact between an employee and the employer in order to obtain full and constructive feedback, motivate and assess progress in work and development); automation of processes (a solution related to digitalisation); the use of AI in business activity (more and more often artificial intelligence helps manage business processes and supports numerous elements connected with the activity of an enterprise); mobility of workforce; B2B2C policy (with the development of new business models a change in the strategy takes place in many firms. Former division into B2B and B2C is becoming less relevant, more and more often firms communicate in parallel with a business partner and the end client, combining the areas of business cooperation).

Contemporary trends in enterprise management aim at the improvement of its activity. The improvement is a process most often consisting of a few stages: a diagnosis of its existing state, indicating reasons for the identified failures, indication of solutions which may improve the present state. The whole process of improving the enterprise and preventing its collapse depends on the quality of activities within these stages. It is now believed that the most frequent reasons for the collapse of an enterprise include a decrease in the market share, mistakes in management, and wrong functioning with regard to enterprise finance. All the three factors combine and influence each other.

The consequence of the aforementioned diagnosis of the economic environment, contemporary trends and needs regarding the capabilities of effective conducting business activity is a need for changes in the processes of managing contemporary economies and enterprises. It refers both to the evolution of hitherto used management concepts, methods and instruments, and to the implementation of totally new solutions in this regard. Thus, this publication adopted as its basic aim to present, analyse and exemplify the conditionings of the function-

ing of the contemporary economy, identify its determinants, as well as to present concepts, models and tools of managing contemporary economies and organisations in the conditions of the volatile economic, social and political environment. Partial issues which constitute the accomplishment of this aim are exposed in the form of the following three parts of the presented work:

1. Challenges and Dilemmas of Contemporary Economies – Economic, Social and Legal Aspects.
2. Knowledge and Innovation as Determinants of Effectiveness and Development.
3. Transformations and Development in the Face of Changes.

This book has a character of a theoretical and cognitive, as well as methodological study whose aim is the presentation and systematization of the scientific and practical output concerning selected content areas, discussion and critical assessment of this output, as well as the presentation of own thoughts and proposals on the analyzed issues and problems. Handing over the discussed work to the Readers, we express our belief that the publication in the presented formulation is fully justified, both for theoretical and cognitive, practical and educational reasons. It can constitute a reference point for new reflections, research, disputes, analyses and critical discussion over the presented problems. The involvement of a large group of Authors enabled showing the discussed issues in a broad and many-sided way. As the scientific editors of this study, we would like to thank cordially all the Authors for accepting our invitation to co-create the publication and share the findings of their research with the Readers.

Andrzej Jaki, Tomasz Rojek

PART I CHALLENGES
AND DILEMMAS OF CONTEMPORARY ECONOMIES
– ECONOMIC, SOCIAL AND LEGAL ASPECTS

Evolution of the Information Asymmetry Concepts

Anzhelika Gerasymenko, Viktoriia Svystilnyk

1. Introduction

The problem of information asymmetry and its direct impact on the functioning of markets and the entire economy first time was considered 70 years ago by the founders of the theory of information asymmetry Akerlof, Stiglitz and Spence. They explained it as some kind of inequality between the parties to economic transaction, when one party possesses greater material knowledge than the other party does. This definition is rather clear, considering the manifestation of a problem, while it does not contain any reference to the reasons and the effects of the investigated phenomenon. Over these 70 years the nature of information asymmetry have been investigated a lot, bringing much better understanding of the problem, while definition have not fundamentally changed. It still mainly expresses the show of things, not the nature.

This article researches the nature of information asymmetry through analyzing of the evolution of the scope of economic concepts of information asymmetry. First three sections deal with the research of the ancestors of the theory of information asymmetry, the Nobel Prize winners – Akerlof, Stiglitz and Spence, explaining their inputs into revealing the nature of the problem, analyzing the difference of the approaches and the synergy of the latter. The fifth section shows the contribution of the other Nobel Prize winner – Stigler – into information asymmetry research, who reconsidered the way of information asymmetry impact on market equilibrium and public welfare, comparing to the approaches of Akerlof, Stiglitz and Spence. The sixth section provides the quick review of further research of information asymmetry up to the modern one. The seventh section concludes, developing the definition of information asymmetry from the perspective of its economic nature and the impact onto certain economic actors, involved markets and economy at large, revealed through the evolution research.

2. Launch of the information asymmetry studies. The lemons problem

One of the first who pay attention to the information asymmetry between business entities in the market was Akerlof. Thus, in 1970, in his “Lemon market” he argued that there was a sufficiently large number of markets, in which consumers were forced to use market statistics to make conclusions about quality of the goods, which they intended to purchase (1970, pp. 488–500). In these markets, sellers have an incentive to sell low quality products, because high quality creates a reputation not primarily for the specific seller to whom this information relates, but for anyone who offers their product on the specified market. As a result, there is a tendency to decrease both the average quality of goods and the market.

The researcher investigates the market of used cars, conditionally dividing cars into two categories good and bad (or so-called “lemons”). The car can be good, but it can also be a “lemon”. When buying a used car, the individual does not know what kind of car he buys – a good one or a “lemon”. With the same probability this car can have both good quality, and not. In turn, the owner of the car, which have been used for a certain time, is more informed about its quality compare to potential consumer. He can provide a more specific assessment of its quality, and the letter would be much more accurate than the assessment of the buyer. Thus, there is an asymmetry of available information, since the seller has much more information about the quality of the car.

At the same time, both good and bad cars should still be sold at the same price because a consumer is not able to distinguish them. As a result's the owner of a good car is in a disadvantageous situation: he does not want to sell his car at the appropriate (weighted by a consumer on the possibility to get a good or bad car) price. The consumer, at the price, for which he expects to buy a good car – gets a “lemon”. The only winner in this situation is the owner of the “lemon”, which sells its car at the price that is significantly higher than that corresponding to its quality. This situation can continue until the moment when bed-quality cars completely extinguish the good ones and the market will cease to exist (Akerlof, 1970, pp. 488–500).

The above mention problem is usually considered as a market failure, which asks for government intervention, while Akerlof conclusion on the case was not so simple. He stressed that the control and correction of information asymmetry in the market had to be a conscious desire of all market participants. The task of the latter is to minimize losses from information asymmetry through a search for indicators that can indicate the belonging of the product to the corresponding qualitative group (Shevchenko, 2012, p. 66). This idea, though raised by Akerlof repeatedly, was well developed in the writings of Spence (1973, pp. 355–374).

3. Spence signalling theory

In the works of Spence, the essence of “signals” is that they must consistently transfer information in the state of market equilibrium from sellers to buyers or from those who have more to those who have less information, thus overcoming the problem of information asymmetry and helping to identify more accurately the real value of product or service.

In his scientific work “Signalling in the labour market” Spence argues that usually at the time of recruitment employers are poorly informed about the potential of the possible worker. To confirm the quality of their skills should a certain period pass, the employee must acquire knowledge specific to industry, and just after that the employer has the opportunity to assess it adequately. Therefore, according to Spence, recruitment is a certain investment decision and to some extent it looks like a lottery, because to hire someone, the employer pays wages (lottery). Whether he wins this lottery or not, depends on how accurately he will be able to assess the signals about employee’s skills and qualification, such as education, previous work experience, race, gender, personal achievements, etc. All these characteristics (signals) create a certain image of the future employee who handles the resume. Some of the characteristics (signals) mentioned are unchanged, such as gender or race, others, for example, education, may change. That is why education is a certain cost signal, is an investment that speaks for itself. The diploma means that its owner is a skilled person and there is no need for employer to check it itself (Spence, 1973, pp. 355–374).

Market signals, according to Spence, are necessary tools that smooth information gaps in labour markets, as well as in consumer goods markets or financial markets. Each market is characterized by its own, specific signals. There is an education in a labour market, mortgage or financial guarantee in a debt capital market, financial and personal characteristics of the insured person in an insurance market, high dividends in a stock market, etc. The only thing that unifies them all is an additional transaction costs for such signals production.

As soon as the market illustrates the use of certain types of signals, the production of such signals becomes a distinct type of activity, which causes the creation of the so-called “information noise”. Its overcoming requires a steady increase of investment in production of higher order signals, which are able to provide a decision maker with the necessary information.

4. Information manipulation research by Stiglitz

Professor at Stanford University Stiglitz, who, at the same time as Akerlof and Spence, received the Nobel Prize in 2001 for the “analysis of markets with

asymmetric information”, was the next, but not the last, researcher of the impact of information on key economic processes. In his work “Information and the Change in the Paradigm in Economics” Stiglitz gave an example of the labour market of Kenya, stressing on the problem of information manipulation and its contribution into the basic level of information asymmetry.

While in Kenya, he observed that educational signals were rather inefficient in case of the same educational level of applicants, while there was an information asymmetry about their real skills. Those applicants who were more skilled than others would like to express relevant information, providing an employer with additional data and evidence, while less skilled ones were not interest in that (Stiglitz, 2002, pp. 460–501). It looked like a new kind of a signal of a higher qualification of an applicant. While this signal is not institutionalised with a state commitments and huge production costs it start to be applied by the unskilled applicants to hide their lower level of skills. Therefore, the information manipulation were in use.

Starting with above mentioned, Stiglitz concludes that information asymmetry is considered as not only an external effect (as it was believed those times), but also as a good provided to benefit from the information asymmetry. In this context, the study of the magnitude of transaction costs to overcome information asymmetry should be complemented with studies of transaction costs to provide information asymmetry by the interested actors. This idea lies in line with the concept of rent seeking, developed by Tallok (1967, pp. 224–232), explaining the public inefficiency of the current economic order, contributed by information asymmetry. There is some kind of a chain reaction, when bigger transaction cost on providing of information asymmetry brings bigger transaction cost on its overcoming, which again brings all the bigger transaction cost on providing a higher level of information asymmetry, and so on, while the Pareto equilibrium means no transaction cost on providing or overcoming of informational asymmetry.

In general, Stiglitz responded negatively to classical economic models and their equilibrium character and stressed that his predecessors, including Smith, Pareto, Keynes, had almost ignored the importance of the informational impact. They did not take into consideration shocks and unforeseen circumstances: at first general balance was achieved, and everything that happened after was planned, depending on the circumstances. Stiglitz mentioned that this paradigm could not be applied in the real world. Together with Rothschild he concludes that even if the imperfect information is small enough, there is still no single equilibrium in the market (Stiglitz, 2002, pp. 460–501).

5. Multiple market equilibrium within Stigler theory of information

Another “informational cause” of instability of market equilibrium was described by another Nobel laureate – Stigler – in the article “Economic Theory

of Information". He mentioned that, as information was one of the most valuable resources, it played a special role when setting prices on the market. Usually, prices change frequently, and unless a market is completely centralized, nobody knows all the prices that are set at any given moment by various sellers (or buyers). A buyer (or seller) who wants to determine the best price must interview different sellers (buyers). This phenomenon the researcher calls "search", while the readiness of the certain market actor to commit a search is a function of the cost that should be incurred to carry out such a "search" ("search cost").

A variety of prices is a manifestation and a measure of market uncertainty and/or a distorted indicator of price information ignorance – since absolute homogeneity of goods is impossible, there will be some price dispersion. There would always be a buyer, which is ready to buy a good with the first price offered in order to avoid a search. However, if the range of selling prices is large (compared to the search cost) the search will be done.

These costs must not be the same for all consumers. For example, time is more valuable for people with a high income, who usually prefer on spot buying to the search due to high opportunity costs of the latter. If a search cost is equal to the expected marginal effect, a consumer finds the optimal search volume to make a deal.

Sellers can also make a search. If a good is unique, they behave as buyers. In this case, the optimal search volume is measured by marginal cost of the search, being equal to expected increase in revenue.

In the case of a unique good, the effectiveness of personal search for both buyers and sellers is extremely low. Since it is not known, who is a potential seller, the search costs should be divided by the share of potential contractors in the total population, which is a search field. For example, someone plans to sell an old car, looking for a buyer. Less than one family per hundred (a random sample) is a potential buyer. This means that search costs for buyers' interview will increase by more than a hundred times, being too large to be incurred.

Advertising, let say, the ad column in media, being a meeting place for potential buyers and sellers, decreases the search cost much. However, the effectiveness of the ads is limited: the ad itself is a spending, and those that do not depend on the value of what is being advertised. It is especially costly to advertise the goods that have few potential buyers among the public who has access to the used advertising channel.

An alternative solution is the emergence of specialized traders, whose main function is to provide a place to meet potential buyers and sellers. Stigler (just as Akerlof) gives an example of a used car market, where a dealer, which passes through its hands more than a thousand cars a year and deals with three or five thousand offers of purchase or sale, provides a significant centralization of trading

activity. He faces some distribution of bids and can react it, changing a selling price. There is an opportunity for bargain (discrimination) in each individual agreement.

The stability of any distribution of selling prices depends on the cost of dealers. If the return to scale is constant, the rule of equality of rates of return requires the constant difference between purchase and selling prices. Usually this rule cannot be fulfilled: any dealer has a chance to buy cheap and to sell expensive. If the turnover is rather low, its income exceeds the cost, but no other dealer can eliminate this uncompetitive level of profits, although offering the same price. Asking for lower prices such a competitor can seize a bigger part of a market, which increases the profitability of the search and, consequently, the volume of search, while it cannot eliminate that chance.

Thus, the information asymmetry is considered by Stigler as a source of price dispersion, limited by the corridor of the search cost. There is a methodological difference between this approach to research of information asymmetry and approaches of Akerlof, Spence and Stiglitz, who looked at the information asymmetry as a destruction factor of existing economic models. Stigler is less critical. He only asks for partial correction of the existing equilibrium models with the factor of information asymmetry, certifying the presence of sufficient shock absorbers in the market, based on a competition.

6. Further research of information asymmetry

The works of Akerlof, Spence, Stiglitz, and Stigler have pushed for an outrage over an issue that has already matured several decades before. At present, attention to the phenomenon of information asymmetry is more or less traced in all modern economic theories, proceeding thus beyond the scope of the original research field.

Ross in "Economic Theory of the Agency: Problems of the Principal" leveraged the achievements the research of informational asymmetry within a market into the sphere of relationship of an agent and a principal. He showed it with the "moral hazard" problem. This problem arises, when a person who has the information necessary for making a decision has interests different from the interests of the person making the decision and tries to use the information advantage to influence the decision-making process. Therefore, an economic agent does maximize its own utility to detriment others in situations where they do not fully experience (or not enjoy full benefits) their actions due to the uncertainty and incompleteness of contracts, which prevent the imposition of all damage (or provide for all benefits) to the appropriate agent (Ross, 1973, pp. 134–139).

Development of the study of agency problem, as well as its transfer to the micro level of a separate firm was done by Jensen and Meckling, who investigat-

ed the conflict between an owner (principal) and a manager (agent) of a firm. While information asymmetry, the agent is associated with the threat of manipulating the principal's behaviour to gain greater benefits. That means higher costs associated with the control of the manager activities, which can confuse the principals, asking for higher rates of return and multiplying market equilibriums. In this context, Jensen and Meckling follow a similar approach to Stigler. They illustrate not principal, but partial distorting the market equilibrium due to information asymmetry and corresponding manipulation, while competition in the capital market is a screw stopper of too much extension of the corridor of acceptable market equilibriums (Jensen & Meckling, 1976, pp. 305–360).

The Nobel Prize winners of 2016, Holmstrom and Hart, see the solution to the problem of multiple market equilibriums, caused by information asymmetry and opportunistic behaviour of contractors, in institutionalizing of the incentives for their fair behaviour, as well as sanctions for unfair one within the contracts. They instrumentally describe the mechanisms for coordinating the plurality of long-term interests of contractors under uncertainty and information asymmetry.

Information asymmetry issues are also addressed by Ukrainian and Russian economists. Volchik emphasizes that the efficiency of market functioning as an economic mechanism directly depends on the initial information allocation, as well as criteria for its interpretation. Information asymmetry provides inefficient market outcomes, while information tools must be used by a government to prevent them (Chystiakova, 2008, pp. 89–94).

Bereznyi describes an information asymmetry as a matter of state failures. He studied issues of post-crisis informational asymmetry that arose in Ukraine. In his opinion, market failures are symmetrically related to the state ones, which are derived from asymmetric information allocation among economic actors. Therefore, the aggravation of informational asymmetry provokes the emergence of a particular failure that manifests itself in the economic crisis, which provokes post-crisis information asymmetry, creating threats for a new crisis rapid emergence or repeating the previous one (Korneichuk, 2006, pp. 5–8).

This approach is something between the approaches of Akerlof and Stigler. On the one hand, it points out the limited impact of information asymmetry on the market equilibrium; while on the other hand, it shows the multiplicity and repetition of nonequilibriums that create an institutional trap, which enroots ineffective exchange proportions in favour of more informed actors, as well as set of other relative negative long-run economic effects. This is a way to trigger adverse selection, which leads to proliferation of ineffective institutes in the economy through displacement of effective ones, just as inferior used cars pushes out high-quality ones within the Akerlof's model of "lemons". The mode of action is the same, while the scale is much bigger and the consequences – much deeper,

providing with each subsequent period of interaction increasing deadweight loss from the spread of ineffective economic mechanisms across the entire national economy.

Fyliuk, who considers the information asymmetry in terms of its impact on government economic policy, respects the similar position. She proves that information asymmetry significantly weakens the efficiency of decision making within the framework of economic policy of Ukraine, considering the crucial role of monopolization of Ukrainian economy in this problem aggravation. State authorities do not receive complete information about the real business situation, which sharply limits their ability to develop adequate economic policy.

Information asymmetry is also intensified by the actions of state officials themselves. Confusing and contradictory domestic legislation, duplication of regulatory functions in certain spheres of the economy, the lack of a well-established monitoring and statistical reporting system, etc. are factors that make it difficult to obtain reliable information on the modalities of changes in society, and thus make it impossible for civil society to control bureaucratic decisions and procedures (Fyliuk, 2015, pp. 3–11).

7. Conclusion

Summarizing the above mentioned, one should conclude that over the past half century the information asymmetry changed from the “black box” described by the external parameter of unequal allocation of information to one of the most popular areas of research. The latter reveals prerequisites of information asymmetry, forms of its manifestation and mechanisms of its distribution, as well as the ways of its impact on welfare of individual economic entities and public welfare at large. This means that the generally accepted universal definition of information asymmetry, presented at the beginning of the article, no longer meets the needs for determination of the relevant social and economic phenomenon.

Proceeding from the above evolution of economic doctrines of information asymmetry, we suggest its defining as a market failure that is driven by institutionalization of the plurality of ineffective market equilibrium, which are generated by the efforts of transactions’ parties to exploit unequal information allocation, as well as to counteract the latter, providing multiplication of socially inefficient spending.

Such a definition, in our opinion, is more complete. It illustrates information asymmetry as an internal determinant of the modern economic system and let emerge further research of the impact of information asymmetry on public welfare, as well as the ways of minimizing of its negative effects.

Bibliography

1. Akerlof, G.A. (1970). The Market of “Lemons”: Quality Uncertainty and the Market Mechanism. *The Quarterly Journal of Economics*, 84, 488–500.
2. Chystiakova, S. (2008). Problemy Asymetrii Informatsii v Konteksti Instytutsiinykh transformatsii [Problems of Information Asymmetry in the Context of Institutional Transformations]. *Academic papers of Donetsk National Technical University: Economic series*, 34, 89–94.
3. Fyliuk, H. (2015). Ekonomichna Teoriia i Ekonomichna polityka v Ukraini: vidnosna vidosoblenist. [Economic Theory and Economic Policy in Ukraine: relative isolation]. Kyiv: *Ekonomika [Economy]*, 27, 3–11.
4. Jensen, M. & Meckling, W. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3(4), 305–360.
5. Korneichuk, B. (2006). *Institucionalnaya Ekonomika [Institutional economics]*. Moscow: Urait.
6. Ross, S.A. (1973). The Economic Theory of Agency: The Principals Problem. *American Economic Review*, 62, 134–139.
7. Shevchenko, O. (2012). *Istoriia Ekonomiky ta Ekonomichnoi Dumky: Suchasni Ekonomichni Teorii [History of Economics and Economic Thought: Modern Economic Theories]*. Kyiv. Centre of Training Literature.
8. Spence, M. (1973). Job Market Signaling. *The Quarterly Journal of Economics*, 87(3), 355–374.
9. Stigler, J. (1961). Economic Theory of Information. *Journal of Political Economy*, 69(3), 213–225.
10. Stiglitz, J. (2002). Information and the Change in the Paradigm in Economics. *The American Economic Review*, 92(3), 460–501.
11. Tallok, G. (1967). Welfare Costs of Tariffs, Monopolies, and Theft. *Western Economic Journal*, 5(3), 224–232.

Sustainable Voluntary Disclosure and European Emission Trading System: Evidences from Italian Companies

Giovanna Centorrino, Valeria Naciti

1. Introduction

The Intergovernmental Panel on Climate Change (IPCC) assesses the impact to 2030, in terms of reduction of pollutant GHG emissions, of some interventions proposed by the same and inclusive of growth and development, in order to compare them with the limit of 2°C of global warming. The study assumes, as a starting point, the estimated projection of polluting emissions to 2030 (68 Gt CO₂), calculated assuming the same current growth trends (today 50 Gt CO₂).

To achieve this, global average coal productivity, measured by the global output ratio (US dollars) and pollutant GHG emissions, is expected to grow by 1–4% per year.

The Global Commission on the Economy and Climate, established in 2013 within the United Nations, sets within this framework the objective of fostering economic growth and development and tackling the risk of climate change.

Climate change is a global issue, and the action of governments and institutions cannot be enough: the private sector can play a primary role in combating climate change, concentrating the activities of reducing emissions in low-cost options and in the conscious choice of financing in line with company objectives and mission. A new model of climate risk management is finally emerging in the private sector.

Business benefits go far beyond reducing emissions, companies that are able to assess and understand the risks and opportunities related to the climate will be able to make better decisions over the long term, becoming a real business opportunity.

Companies have the duty to demonstrate to the society their active contribution, and it is important to underline that the management of environmental

issues can no longer be the sole responsibility of the sustainability teams, it must become a priority sector for the entire company management.

In other words, the concept related to environmental protection is constantly evolving also trying to match with the economic, social and cultural life of the place where the notion itself has evolved, namely with the *hic et nunc* and with the rulers' political and legal skills to outline future scenarios, suitable for new needs. The issue, therefore, takes on a considerably pragmatic dimension, especially in relation to companies' perspective regarding a series of norms and official documents that require and promote virtuous behavior aimed at preserving the environment.

Such a situation has produced significant consequences and the debate that followed led to a multi-dimensional vision of sustainable development whose policies include instruments and measures aimed at preserving the environment and ecosystem. In particular, it is noted that the growing awareness of environmental issues today requires companies to consider the effects generated by their production process on the natural environment, and adopt good behaviors that should go beyond mere compliance with laws designed to protect the environment.

Starting with the basic premise that industry has a great impact on the environment and that society legitimates industry it is argued that, as said above, industry has a duty to act in order to reduce the risk connected to the environmental impact. Therefore, there is a need for a measurement system to assess industry's impact, and to respond to the companies' stewardship function in order to report their environmental accounting to their stakeholders. To this aim national and international legal systems have introduced "new" rules and principles on the environment impact that companies must comply with in order to obtain "legal justification" to their economic actions. In order to address this kind of issues Italy has introduced an accounting standard aimed at boosting environmental protection measures, so as to reduce harmful emissions of industrial processes, and the application of new technologies with low environmental impact. However, today large and complex interest in environmental issue have demonstrated that the traditional accounting paradigm with its narrow focus on accounting numbers does not have the strength to capture the environmental consequences of organizational activity in this framework companies should give a measure of their environmental impact not only to respect the laws but in the attempt to really reduce it. Together with the traditional accounting according to Jones (2010) "*There is thus a need for a new holistic accounting which captures corporate environmental impacts*".

The objective of the paper is to analyze the "grade of sensibility" to sustainability issue of companies that are obliged to apply OIC 8.

The paper proceeds as follow. From section 2 to section 5 we present the theoretical framework and the relevant literature review. The sixth section pro-

vides data, methodology and results. The last section presents discussion and conclusion.

2. Sustainable development and private sector

In 2012, the United Nations General Assembly decided to organize the United Nations Conference on Sustainable Development (UNCSD), also called Rio + 20. It ended with a mainly programmatic document entitled *“The Future We Want”*, which launches numerous international and national processes on topics considered crucial for the future of the Planet. Primarily, these include the processes of defining new Global Sustainable Development Goals, and the creation of a high-level political forum on Sustainable Development (UN, 2012). The Conference focused on two main themes. *“A Green Economy in the context of sustainable development and poverty eradication”*, which is not just an environmental improvement but also a new paradigm that seeks to alleviate global threats such as climate change, loss of biodiversity, desertification, and a depletion of natural resources. It also promotes social and economic well-being. The second cornerstone theme is an *“Institutional framework for sustainable development”*. It is intended to be a reference to the global governance system for sustainable development, making institutions responsible for developing, monitoring, and implementing policies for sustainable development throughout its three pillars. The member states attending Rio started to come to a consensus regarding the definition of these new sustainable development goals. They were no longer seen as a possible competitor of the MDGs, but rather as a way to contextually integrate them in universal applications, building a new legacy together (UN, 2012). In 2014, the UN Member States, following a decision made at the Rio+20 Conference, proposed a set of Sustainable Development Goals that will supersede the MDGs (UN, 2014). The new Agenda 2030 *“is a plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom...All countries and all stakeholders, acting in collaborative partnership, will implement this plan...The 17 Sustainable Development Goals and 169 targets which we are announcing today demonstrate the scale and ambition of this new universal Agenda. They seek to build on the Millennium Development Goals and complete what these did not achieve. They seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls. They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.”* (UN, 2015, p. 1). The new goals for 2030, although addressed to different categories of players – governments and institutions, civil society, and non-profit organizations – are specifically intended to be a boost for the business world. The SDGs recognize that companies play a key and decisive role as they are the main mo-

tivators of sustainable and economic development. Companies of all sizes from all over the world are called upon to incorporate the SDGs as important new business models, therefore having an opportunity to invest, innovate, and activate multi-stakeholder collaborations. A strongly proactive approach to sustainable development is required for the next 15 years through the development of new models of responsible business. Pursuing sustainable development goals will certainly benefit the private sector, as companies would have new business opportunities, as well as the ability to strengthen relationships with stakeholders. They will also be able to stabilize the markets, promote transparency and non-corrupt financial systems, and identify, manage, and monitor risks on a more detailed level.

There are three fundamental elements for effectively implementing the SDGs. The first is leadership: innovating for a business by integrating sustainability into the core of a company. Secondly, collaboration with stakeholders must play a central role. Companies must co-invest in innovative projects so that joint efforts can pool recourse and share risks in order to find scalable solutions. The third key element is transparency, which is crucial in building trust and strengthening relationships with stakeholders (UN Global Compact, 2013).

According to Lise Kingo (UN Global Compact Board Meeting, New York,) *“The private sector has the power of innovation and ability to create many of the solutions needed to address the challenges the world is facing today. However, with less than 5,000 days left to meet the SDGs, we need to mobilize business to scale up their impacts significantly. We need many more companies to accelerate their investments and business activities to deliver on the global goals”.*

One challenge that most companies face is linking new development to core business. Building on already solid foundations, while directing each new project towards sustainable development is crucial in this phase. In the near future, the private sector will become an ever-growing part of global development, which is why it is crucial that companies are progressively involved with international agencies to develop a comprehensive and shared vision on how to monitor and coordinate all the stakeholders' needs.

The SDGs allow companies to contribute to the roadmap for sustainable development, impacting the socio-economic context from which they depend. The approaches to the SDGs are defined as transformational, interconnected, and universal. Therefore, companies in the private sector play a major role, and SDGs cannot be achieved without them. The private sector drives employment, creates new technologies, and is a source of finance. There are a few perspectives to take into account when evaluating the business implications of the Agenda 2030: the inability to act on economic opportunities, the advantages and disadvantages in terms of governance and transparency, and the need for collaboration between competitors. The SDGs require business to strategically commit to developing

products, services, and economic models for the benefit of society. If the objectives are set in the strategic level, the emphasis on progress and sustainable contribution are convincingly justified for a company.

3. The emission trading system

In 1992, the United Nations Framework Convention on Climate Change laid the foundations of what is known today as the Kyoto Protocol that establishes legally binding greenhouse gas emission limitations. The European Union Emissions Trading System (EU ETS) is a market-based regulation which represents the basis of the EU's policy to combat climate change in line with the EU's 2030 framework for climate and energy policies. There is a voluminous literature, dating back over 30 years, discussing on emission trading system from many point of view other than as an environmental protection device, like as political, social and economic issue and in order to illustrate the problems faced by standard setters as they explore the boundaries of accounting.

EU ETS was launched by the EU in 2005 and can be considered as a key tool for reducing emission of carbon dioxide CO₂ and others GHG which are principally responsible for warming the planet and causing climate change. It is *“the world's biggest emissions trading market, accounting for over three-quarters of international carbon trading”*¹.

It covers only emissions that can be properly measured, reported and verified.

EU ETS operates on a “cap-and-trade” approach putting a limit on overall emissions from installations. Under a “cap and trade” system the government mitigates the cost for entities, not by setting a base line, but by allocating tradable allowances for the period. In other words, participants are allocated a certain quantity of emission allowances in accordance with their historical emissions less a specified reduction commitment (Braun, 2009).

To respect this limitation, companies can buy and sell emission allowances with the aim to cut their emissions in the most cost-effective way. Each operator has an ‘emission allowance’ (in tonnes of CO₂), which gives him the right to release a metric ton of carbon dioxide (CO₂), or an amount of any other greenhouse gas with an equivalent global warming potential, freely into the atmosphere. At the beginning of each year, the National Authority issues part of the emission allowances free of charge, which they have identified on the basis of a national allocation plan approved by the European Commission, to the relevant companies. Quotas have long-term validity and are therefore used not only in the current year, but also in subsequent years. The mechanism foresees

¹ European Commission, (www.ec.europa.eu).

the obligation on the part of the company to return their shares to the competent authority by 30 April of the year following the year of reference. This mechanism is therefore a strong incentive tool for the reduction of greenhouse gases, aimed at encouraging improvements in the technology used in energy production and industrial processes, as well as the most efficient use of energy. Manufacturing industry received 80% of its allowances for free in 2013 and will continue to receive a share of their emission allowances for free until 2020 and beyond. This allocation, based on benchmarks that reward the most efficient installations in each sector, will decrease gradually year-on-year, down to 30% in 2020.

To date, the EU ETS is the world's first major emission trading market that inspires the development of other national or regional systems.

EU ETS represents a common environmental instrument for all member states, but it shows different characteristics in different national contexts. Such differences regard the different amount of allocated allowances, the different treatment of the industry sectors, the way in which the allocation is organized and the rules regarding their accounting treatment.

Companies that operate in this market have to identify new liabilities, assets and financial flows (Ascuì & Lovell, 2011), but this process has proven to be difficult for the enforcement of the financial report as the accounting profession must confront the difficulty in which the financial framework of carbon accounting overlaps with the other normative structures. Even if accountants have sought to render emission allowances knowledgeable using a range of techniques and practices (Lovell, 2014), at present there are no financial reporting standards on this matter (de Aguiar, 2017) coming from the most influential financial reporting standard setters (Financial Accounting Standards Board or the International Accounting Standards Board). Indeed, the IASB, have issued IFRIC 3 *Emission Right*, in December 2004 that was scheduled to go into effect for annual periods beginning on or after 1 March 2005.

Though IFRIC 3 was seen as an appropriate interpretation of existing IFRSs for accounting for the EU Scheme, both the IFRIC and the IASB acknowledged that IFRIC 3 created unsatisfactory measurement and reporting mismatches with existing IFRSs. As a result, the 'accounting mismatch' problem suggested the need for a more comprehensive consideration of the issue. Pending that consideration, IFRIC 3 has been withdrawn. Entities must therefore apply judgment and determine an accounting method based on the general principles.

4. The Italian Emission Trading Standard OIC 8

Since November 2011 the OIC (Organismo Italiano di Contabilità) was created as a registered Foundation with the aim to establish an Italian Accounting

Standards Setter. The national Accounting Standards are addressed to private entities which prepare financial statements in accordance with the provisions of the Civil Code, but they do not have force of law. Listed companies and banks are required to adopt International Accounting Standards (IAS)/International Financial Reporting Standards (IFRS)².

Given the severity of the environmental problems which face us and in order to respond to the European political actions aimed to the environmental protection, in Italy it seemed important to take immediate action to address these threats. In this path, there was introduced a range of market device such as the implementation and development of renewable energy sources, the improvement of the energy efficiency of existing production and industrial processes and the research and application of innovative and clean technologies. Among these patterns, also the accounting criteria for market mechanisms aimed at boosting environmental protection measures, there were taken into consideration. Thus, on February 7, 2013, the OIC approved a specific accounting standard for environmental protection: the OIC 8³ that regulates accounting treatment both with respect to companies covered by the rules for reductions in emissions of greenhouse gases, and for company traders who do not perform industrial activities, but who acquire emission allowances for value with the intention of reselling them on the market. The issue concerns the assessment and the accounting treatment of greenhouse gas emissions (grey certificates).

For companies regulated by OIC 8 the emissions allowances represent a penalizing system that obliges them to turn to the market to purchase the needed quotas for the fulfillment of regulatory obligations. Obviously, the fact that companies must buy the necessary quotas depict a deterrent to the production of greenhouse gases since this purchase inevitably causes an increase in production costs (Fig. 1).

As above said OIC 8 concerns the accounting treatment and evaluation of environmental certificates whose objective has been that of defining a way through which the company included in this discipline must report the environmental certifications in their financial statements. In order to analyzing the accounting treatment according to Centorrino (2019):

“At the time a company receives a free allocation of allowances from the National Authority, this operation is recorded with the use of memo accounts, according to the so-called „Commitment System” showing the total number of allowances allocated in the account “Commitments for emission allowances allocated free of charge” and a commitment to produce within set limits by the National Au-

² For further details please visit www.fondazioneoic.eu.

³ OIC 8 Accounting Principle- Emission quotas of greenhouse gases (www.fondazioneoic.eu).

thority in the account "Commitments to the Ministry of Environment for emission allowances allocated free of charge". These amounts are recorded at market value. At year-end in relation to actual gas emissions, the memo accounts are diverted, and this commitment is cancelled. However, in the case in which the relevant companies produce emissions in excess of the limits imposed, they can buy other allowances on the market. In the case of surplus allowances, these can be sold. Allowances are freely transferable and negotiable through special trading platforms or by contract (Article 19). Platforms for the exchange of emission allowances are private initiatives that assist users in finding and negotiating the transaction of sale of allowances.

At preparation of financial statements, when transactions have taken place entirely in the current year, these operations will generate costs or revenues to be recorded as profit or loss in payables and receivables, in the balance sheet. The costs are a „burden of the system” and will be recorded under item B14) Other Operating Expenses, revenues will be written in item A5) Other Revenues. Instead, in the case in which the relative values of the statutory requirement for the year must be shown in relation to the actual emission of gases, if at year-end the sum of the allowances owned (including those free of charge and those purchased) by the company is less than the quantity necessary for the fulfillment of legal obligations, the deficit can be covered by additional shares purchased on the market. This will be a residual charge incurred for emission allowances not yet purchased as off-set for liabilities to the National Authority. In the case in which the company has allowances that are greater than the legal requirements, these can be used in the following years or sold on the market. If this exceeding amount refers to allowances purchased, a prepaid expense will be recorded for the amount to be rectified for the next year. If the allowances in question were free allowances, these can be forwarded directly to the next year's statement. Emission allowances which are still available at year-end are recorded as inventory, under current assets on the balance sheet Inventory of Finished Goods and Merchandise. To record CO₂ allowances as inventory, the Accounting Principle indicates that it is preferable to allocate costs specifically incurred for the purchase of same to individual emission allowances. Changes in inventories of emission allowances are recognized in the income statement as Changes in Inventories of Raw, Ancillary and Consumable Materials and Goods.

Lastly, it should be noted that the delivery of emission allowances to the competent authority for the fulfilment of the obligation for the previous year does not involve any accounting registration, as all economic and financial considerations have already been taken into consideration on an accrual basis in the financial statements where the obligation arose” (Centorrino, 2019).

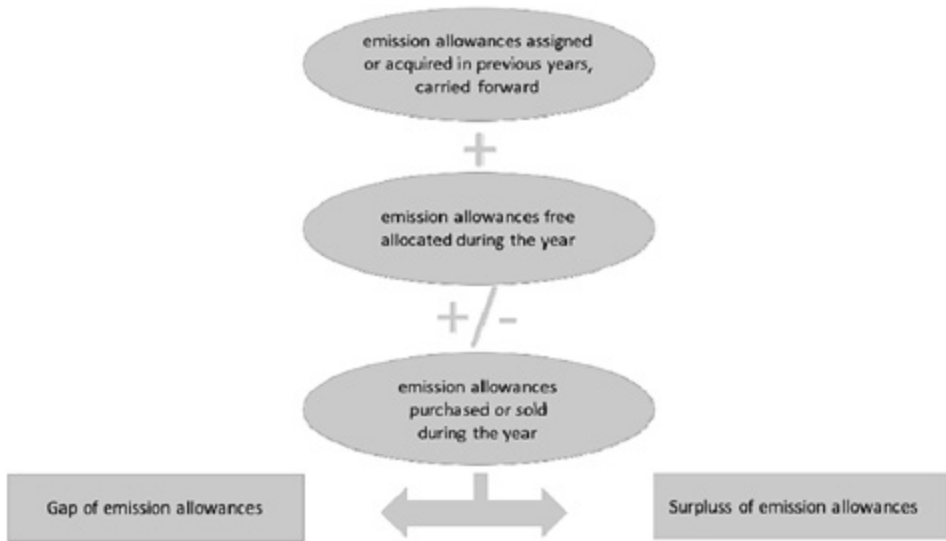


Figure 1. Emission allowances mechanism

Source: own work.

5. Sustainability Reporting, GRI and SDGs

The United Nations aims to improve the current model of production and consumption with Sustainable Development Goal (SDG) number 12: *Ensure sustainable consumption and production patterns*. With better management of natural resources and lower energy consumption, companies progressively favoring the use of recyclable and biodegradable materials in their production processes. SDG 12, in promoting a responsible and sustainable approach to natural resources, addresses both businesses, consumers and governments.

This SDG includes 11 targets, among these is target 12.6 which says: “*Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle*”. Its corresponding indicator is 12.6.1, noting the “*Number of companies publishing sustainability reports*”.

The UN Global Compact, a voluntary initiative based on CEO commitments to implement universal sustainability principles and supporting companies to adopt strategic sustainability actions related to the UN Sustainable Development Goals, has established a collaborative effort with the Global Reporting Initiative called “*Business Reporting on the SDGs*”. The latter is an action platform that provide guidance to companies integrating SDGs into their corporate reporting. The GRI Sustainability Reporting Standards have been integrated by SDGs Business Reporting.

“There is growing recognition of the value of corporate non-financial reporting. The Action Platform will leverage the GRI Standards – the world’s most widely used sustainability reporting standards – and the Ten Principles of the UN Global Compact to help businesses incorporate SDG reporting into their existing processes. This will empower corporate action that can make the achievements of the SDGs a reality” (GRI).

In the early 1970s studies on Corporate Social Reporting were introduced (Mathews, 1997). Quickly, the interest on social reporting grew and with it also grew the need for clearer and more transparent communication between companies and stakeholder. This process of enhancing transparency in company and stakeholder relations highlighted the importance of social accountability tools.

In the field of companies’ communication, an important role is covered from the economic-financial communication, which favors the learning of the management results, asset and financial aspects of the company, communicate to comply with regulatory obligations, or favor the sharing values and business strategies with markets and investors. This area of communication contributes to strengthening relationships with the stakeholders to ensure the development and survival of the enterprise.

Economic and financial communication takes a strategic role, thanks to the awareness of the companies, the potential they can have effective communication, and it is for this reason that the enterprise has to be able to realize a system of transmission of information that is to same effective and efficient time, reaching the various interlocutors and meeting their informative needs.

Voluntary communication is increasingly spreading because the obligatory communication is quite deficient and insufficient to answer the actual information needs of the recipients.

Although in the last few decades the interest of the academic and entrepreneurial world has grown considerably, it has not yet been possible to identify a commonly accepted theoretical reference that can certainly seek and fulfill the determinants underlying the reporting activity of social and environmental business.

Moreover, what has just been highlighted can well be inferred from many scientific contributions on the subject. In these studies, it is possible to trace the presence of different theoretical perspectives in support of the adoption of appropriate sustainability reporting tools by companies. These include the agency theory, the legitimacy theory and the stakeholder theory. The agency theory has been defined to explain the relationship between the principal and the manager. In this sense, a perfect corporate governance system should provide managers with the right incentives to make all investment and financing decisions in order to maximize value (Dallocchio & Tamarowski, 2005).

Suchman (1995) considers that *“Legitimacy is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.”*

Finally, the stakeholder theory was elaborated by Freeman in 1984, where his book *“Strategic management, stakeholder approach,”* defines stakeholders as a group or an individual that can influence or can be influenced by achieving the goals.

The author was the first to propose a new vision of the organization; the company has direct connections with all interested parties. Authors like Donaldson and Preston (1995) point out that the stakeholder model formalized by Freeman contrasts with the traditional input-output enterprise model. Investors, employees and suppliers are no longer actors they provide to the company inputs to turn out a customer benefit.

The relationships between the organization and the stakeholders are mutual. Each stakeholder expects different things from the same company, and not everyone is priorities in the same way.

6. Data and methodology

6.1. Sample and data

The sample used in this study is comprised of 168 Italian companies to which free allowances have been allocated, calculated in accordance with Article 10a (1) of Directive 2003/87/EC and Article 10 paragraph 9 of Decision 2011/278 / EU. The companies were selected from a published list on Minambiente website and that has been sent to the European Commission for approval.⁴

The first choice of method used to define the research plan was to focus on companies that are obliged to apply OIC 8, including information in the note of the financial statements. To create the database, information was collected directly from the websites of the companies.

According to Siano et al. (2016):

“Indeed, digital environments are progressively playing a crucial role in the sustainability communication of organizations in many different industries. Increasingly more often, the websites of large companies present wide sections dedicated to corporate social responsibility (CSR) issues to communicate their commitment to corporate sustainability to stakeholders. In particular, corporate websites have become effective communication channels for disclosing sustainability information and for improving exchanges with stakeholders. These web-based interactions and conversations are able to directly influence stakeholders’ interest and their engagement in social and environmental corporate performances.”

⁴ [http:// www.minambiente.it](http://www.minambiente.it)

Despite the upsurge of interest in the online communication of corporate sustainability, communication practices have only recently received attention in this field”.

Regarding the data collection, we downloaded all the sustainability reports of the above companies available on the telematics network.

Following this data collection scheme, it will be possible to obtain all the functional information to the dataset.

We investigated if companies that are obliged to apply OIC 8 also present a sustainability report, sustainability information on their web site, ethical code and a voluntary environmental management system. We give the score of one if a company presents the idem and the score of zero if the company doesn't present it (see Appendix).

6.2. Finding

The purpose of the survey is to understand the level of sensibility to social and environmental issues of companies that are obliged to apply OIC 8. Analyzing the 168 companies, it emerged that only 1.8% publish a sustainability report; 7.7% publish a code of ethics, 32.7% of analyzed companies publish social and environmental information on their website and only 9.5% have a voluntary environmental management system.

Moreover, we divided the companies grouping them by four sectors: companies that operate in the manufacturing and chemical industries; in the energy, oil and gas sectors; and the remaining in technology and services.

It was being founded that companies that have a higher level of sensibility to sustainability issues, given by the analysis of published documents and the information found on the website, are companies that operate in the manufacturing and chemical industries. In particular, the paper sector strongly supports the adherence to voluntary environmental management systems as effective tools for controlling impacts and improving environmental performance.

7. Conclusion

The lack of information on the attention of Italian small and medium-sized enterprises (SMEs) to sustainability issues has become a significant problem for Italian and foreign investors. The aim of our research is to investigate the degree of sensitivity of Italian SMEs to the problem of sustainability, in order to bridge the gap between the world of SMEs and that of responsible investors. The approach was to map 168 companies required for the application of the OIC 8. The survey was conducted through an analysis divided into 4 sections: sustainability report, code of ethics, web site information, and voluntary environmental management system.

We find that only 1.8% of the analyzed companies publish a sustainability report. In fact, while with the d.l. December 30, 2016, No. 254 from January 1, 2017, the obligation for companies with more than 500 employees to report information of a non-financial nature has entered into force, for the Italian SMEs it is still not envisaged by the law tools that can allow immediate reading of information in the field of sustainability.

The main purpose in drawing up a non-financial report is in fact to allow the company to guide its choices in the future according to sustainability criteria. For this reason, the obligation to draw up this type of balance sheet (sustainability report) is an incentive for companies to think in terms of long-term value creation.

Moreover, only the 7.7% of analyzed companies publish a code of ethics, 32.7% publish social and environmental information on their website and 9.5% have a voluntary environmental management system.

Therefore, our investigation has shown that SMEs companies that are obliged to apply OIC 8 in terms of emissions do not show in practice another degree of sensitivity to the problem of sustainability.

Despite is today well known that encouraging sustainability compliance can help firms become more competitive while making life better for workers and protecting the environment, it has to be noted that both compliance with mandatory standards and voluntary certification standards cost money.

This, obviously, is even more true for the cases that we have considered as SMEs firms that sometimes don't have the resources to invest in sustainability initiatives.

In order to achieve and maintain the compliance with sustainability standards in global value chains governments, financial institutions and businesses have to work together to support economics and financial models aimed to encourage SMEs to upgrade their production processes.

Bibliography

1. Ascuri, F., & Lovell, H. (2011). As Frames Collide: Making Sense of Carbon Accounting. *Accounting, Auditing & Accountability Journal*, 24(8), 978–999.
2. Bebbington, J., & Larrinaga-González, C. (2008). Carbon Trading: Accounting and Reporting Issues. *European Accounting Review*, 17(4), 697–717.
3. Block, K., Nohne, N., Torvanger, A., & Janzic, R. (2005). *Towards a Post 2012 Climate Change Regime: Final Report*. European Commission, Brussels, report to DG Environment.
4. Boston, J., & Lempp, F. (2011). Climate Change: Explaining and Solving the Mismatch between Scientific Urgency and Political Inertia. *Accounting, Auditing & Accountability Journal*, 24(8), 1000–21.

5. Bowen, F., & Wittneben, B. (2011). Carbon Accounting: Negotiating Accuracy, Consistency and Certainty across Organisational Fields. *Accounting, Auditing & Accountability Journal*, 24(8), 1022–1036.
6. Braun, M. (2009). The Evolution of Emissions Trading in the European Union – The Role of Policy Networks, Knowledge and Policy Entrepreneurs. *Accounting, Organizations and Society*, 34, 469–487.
7. Camfferman, K., & Zeff, S.A. (2006). *Financial Reporting and Global Capital Markets*. Oxford, UK: Oxford University Press.
8. Centorrino, G. (2019). The Italian Accounting Standard OIC 8 and the Lack of an International Standard on Emission Trading. [in:] T. Abbate, P. Accordino & G. Centorrino (Eds.), *Sustainable Development and Innovation A future perspective*. Roma: Aracne.
9. Cook, A. (2009). Emission Right: From Costless Activity to Market Operations. *Accounting Organizations and Society*, 34(3–4), 456–468.
10. Dall'occhio, M., & Tamarowski, C.O. (2005). *Corporate Governance e valore. L'esempio di Telecom Italia*. Egea.
11. Daske, H., Hail, L.C., & Verdi, R. (2008). Mandatory IFRS Reporting around the World; Early Evidence on the Economic Consequences. *Journal of Accounting Research*, 46(5), 1085–1142.
12. De Aguiar, T. R. (2018). Turning Accounting for Emissions Rights Inside Out as Well as Upside Down. *Environment and Planning C: Politics and Space*, 36(1), 139–159.
13. Donaldson, T., & Preston, L.E. (1995). The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications. *Academy of Management Review*, 20(1), 65–91.
14. Ellerman, A.D., & Buchner, B.K. (2007). The European Union Emissions Trading Scheme: Origins, Allocation, and Early Results. *Review of Environmental Economics and Policy*, 1(1), 66–87.
15. Frank, W.G. (1979). An Empirical Analysis of International Accounting Principles. *Journal of Accounting Research*, 17(2), 593–605.
16. Gibson, K. (1996). The Problem with Reporting Pollution Allowances: Reporting is not the Problem. *Critical Perspectives on Accounting*, 7, 655–665.
17. Giddens, A. (2009). *The Politics of Climate Change*. Cambridge: Polity Press.
18. Gray, R., Dillard, J., & Spence, C. (2007). Accounting as if the World Matters: Post-algia and a New Absurdism. [in:] 5th APIRA Conference, 8–10 July, Auckland. Retrieved on 30/05/2019, from: www.bsec.canterbury.ac.nz/apira2007/proceedings.html.
19. Gray, R. (2006). Social, Environmental and Sustainability Reporting and Organisational Value Creation: whose Value? Whose Creation?. *Accounting, Auditing & Accountability Journal*, 19(6), 793–819.
20. Gray, R. (2010). Is Accounting for Sustainability Actually Accounting for Sustainability and How Would we Know? An Exploration of Narratives of Organizations and the Planet. *Accounting, Organizations and Society*, 35(1), 47–62.
21. Griffiths, A., Haigh, N., & Rassias, J. (2007). A Framework for Understanding Institutional Governance Systems and Climate Change: the Case of Australia. *European Management Journal*, 25(6), 415–427.

22. Hopwood, A. (2009). Accounting and the Environment. *Accounting, Organizations and Society*, 34(3–4), 433–439.
23. Kolk, A., & Pinkse, J. (2005). Business Responses to Climate Change: Identifying Emergent Strategies. *California Management Review*, 47(3), 6–20.
24. Kolk, A., Levy, D., & Pinkse, J. (2008). Corporate Responses in an Emerging Climate Regime: the Institutionalization and Commensuration of Carbon Disclosure. *European Accounting Review*, 17(4), 719–45.
25. Lazarus, R.J. (2008). Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future. *Cornell Law Review*, 94(5), 1153–1234.
26. Lehman, G. (1996). Environmental Accounting: Pollution Permits or Selling the Environment. *Critical Perspectives on Accounting*, 7, 667–676.
27. Lohmann, L. (2009). Toward a Different Debate in Environmental Accounting: the Cases of Carbon and Cost-benefit. *Accounting Organizations and Society*, 34(3–4), 499–534.
28. Lovell, H. (2014). Climate Change, Markets and Standards: the Case of Financial Accounting. *Economy and Society*, 43(2), 260–284.
29. Lovell, H., & MacKenzie, D. (2011). Accounting for Carbon: The Role of Accounting Professional Organisations in Governing Climate Change. *Antipode*, 43(3), 704–730.
30. McKinnon, S.M., & Janell, P. (1984). The International Accounting Standards Committee: A Performance Evaluation. *The International Journal of Accounting*, 19(2), 19–34.
31. Miller, P., & O’Leary, T. (1987). Accounting and the Construction of the Governable Person. *Accounting, Organizations and Society*, 12(3), 235–265.
32. Miller, P., & O’Leary, T. (1994). The Factory as a Laboratory. *Science in Context*, 7(3), 469–496.
33. Milne, M.J., & Grubnic, S. (2011). Climate Change Accounting Research: Keeping it Interesting and Different. *Accounting, Auditing & Accountability Journal*, 24(8), 948–977.
34. Nair, R.D., & Frank, W.G. (1980). The Impact of Disclosure and Measurement Practices on International Accounting Classifications. *The Accounting Review*, 55, 426–450.
35. Prado-Lorenzo, J.-M., & Garcia-Sanchez, I.-M. (2010). The Role of the Board of Directors in Disseminating Relevant Information on Greenhouse Gases. *Journal of Business Ethics*, 97, 391–424.
36. Siano, A., Conte, F., Amabile, S., Vollero, A., & Piciocchi, P. (2016). Communicating Sustainability: An Operational Model for Evaluating Corporate Websites. *Sustainability*, 8(9), 950.
37. Solomon, J., Solomon, A., Norton, S.D., & Joseph, N. (2011). Private Climate Change Reporting: an Emerging Discourse of Risk and Opportunity?. *Accounting, Auditing & Accountability Journal*, 24(8), 1119–1149.
38. Suchman, M.C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. *Academy of Management Review*, 20, 571–610.
39. United Nations (UN) (2002). Johannesburg Declaration on Sustainable Development.

40. Wambsganns, J.R., & Sanford, B. (1996). The Problem with Reporting Pollution Allowances. *Critical Perspectives on Accounting*, 7(6), 643–652.
41. Webb, D.J., Mohr, L.A., & Harris, K.E., (2008). A Re-examination of Socially Responsible Consumption and its Measurement. *Journal of Business Research*, 61, 91–98.
42. Zahra, S. (1993). A Conceptual Model of Entrepreneurship as Firm Behavior: a Critique and Extension. *Entrepreneurship Theory and Practice*, 17(4), 5–21.

Appendix

Company	Sustainability Reporting	Ethical code	Web site information	Voluntary environmental management system
TOPPETTI 2 S.R.L.	0	0	1	0
FORNACE MOSSO PAOLO S.R.L.	0	0	0	1
CARTIERA DI MOMO S.P.A.	0	0	1	0
ARPA INDUSTRIALE S.P.A.	1	0	1	1
ABET LAMINATI SPA	0	1	1	0
CALCE PIASCO S.P.A.	0	0	1	0
SEDAMYL S.P.A.	0	0	1	0
TINTORIA CRESPI GIOVANNI & C. S.R.L.	0	1	1	0
A.MERATI & C.CARTIERA DI LAVENO SPA	0	0	0	0
OCV ITALIA S.R.L. A SOCIO UNICO	0	0	0	0
VETROBALSAMO SPA	0	0	1	0
CANDEGGIO FRATELLI ZACCARIA SP A	0	0	0	0
SITIP SPA	0	0	1	0
CARVAL CARTIERA DI VALLETTROMPIA SRL	0	0	1	0
BREDINA SRL	0	0	0	0
TEA SEI SRL	0	0	0	0
CONDINO ENERGIA SRL	0	0	0	0
VETRI SPECIALI S.P.A.	0	0	0	0
TRENTOFRUTTA S.P.A.	0	0	0	1
VETRERIE RIUNITE SPA	0	1	1	0
VILLAGA CALCE (S.P.A.)	0	0	0	1
INDUSTRIA CEMENTI GIOVANNI ROSSI SPA	0	0	1	0
MUGNAI CARTA SRL	0	0	0	0
CARTIERE SACI S.P.A.	0	0	0	0
CARTIERA DEL VIGNALETTO S.R.L.	0	0	1	0
FAVINI S.R.L.	0	0	1	0
VILLAGA CALCE SPA	0	0	0	0
CARTIERA CARMENTA S.R.L. A SOCIO UNICO	0	0	0	0
ACCIAIERIE VENETE SPA	0	0	1	0
CARTIERE DEL POLESINE S.P.A.	0	0	1	1
TEI SPA	0	0	0	0

Company	Sustainability Reporting	Ethical code	Web site information	Voluntary environmental management system
STERILTOM – ASEPTIC SYSTEM S.R.L.	0	0	1	0
EMILIANA CONSERVE SOCIETA' AGRICOLA S.P.A.	1	1	1	1
CARTIERA DI FERRARA S.P.A.	0	0	1	0
ROCCA PAPER MILL S.R.L.U	0	0	0	0
CARTIERA PIERETTI S.P.A.	0	0	0	0
TOSCOPAPER S.P.A	0	0	0	0
CARTIERE MODESTO CARDELLA S.P.A.	0	0	1	1
CARTIERA DELLA BASILICA S.R.L	0	0	0	0
NUOVA CARTIERA DELLA TOSCANA S.P.A.	0	0	0	0
CARTIERA PONTE D'ORO ANSALCART A S.R.L.	0	0	0	0
CARTONIFICIO SANDRESCHI SRL	0	0	1	0
DONATI LATERIZI SRL	0	0	0	0
CARTIERE DI TREVÌ S.P.A.	0	0	0	0
IT ALCALCE SRL	0	0	1	0
CARTIERA SAN MARTINO SPA	0	0	0	0
FORNACI DI MASSERANO S.R.	0	0	1	0
BARTOLI S.P.A.	0	0	1	0
SONOCO ALCORE DEMOLLI SRL	0	0	0	0
CARTIERA DI PORPORANO SRL	0	0	0	0
MAURO BENEDETTI S.P.A.	0	0	0	1
ICO INDUSTRIA CARTONE ONDULATO SRL	0	0	0	0
CARTIERA GIORGIONE S.P.A.	0	0	1	0
CALCART A S.R.L.	0	0	0	0
ADDA ONDULATI SPA	0	0	0	1
GRECI INDUSTRIA ALIMENTARE SPA	0	0	0	0
IDEAL CART S.P.A.	0	0	0	0
CARTIERA CARMA (OGGI CARTIERE CARRARA)	0	0	1	1
CARTIERA CONFALONE SP A	0	0	0	0
CARTIERA FRANCESCANTONIO CERRONE SP A	0	0	0	0
CARTIERA SAN GIORGIO SRL	0	0	1	0
CARTIERE ERMOLLI S.P.A	0	0	1	0
CARTIT ALIA SRL	0	0	0	0
SAMPOL ITALIA S.R.L.	0	0	0	0
M.C.LIRIS.R.L	0	0	0	0
COTTOSENESE SP A	0	0	0	0
ELLI GIOVANNINI SPA	0	0	0	0
MINERMIX S.R.L	0	0	1	0
S.P.A. SICULO EMILIANA PER LA PROD DI CARTA E CARTONE S.A.C.C.A.	0	0	0	0
TINTORIA E RIFINIZIONE NUOVE IDEE S.P.A.	0	0	0	0
VETREERIA ETRUSCA SRL	0	0	1	0

Company	Sustainability Reporting	Ethical code	Web site information	Voluntary environmental management system
VETRI SPECIALI S.P.A	0	0	0	0
RAIPAPER S.R.L.	0	0	0	0
CARTESAR SPA	0	0	0	0
CARTIERA BOMPANI S.R.L.	0	0	0	0
CARTIERA GRILLO S.A.S. DI GIUSEPPE E DOMENICO GRILLO	0	0	1	0
CARTIERA OLONA S.A.S.	0	0	0	0
CARTIERA SO.CAR.PI. S.R.L.	0	0	0	0
CARTIERE ENRICO CASSINA – C.E.C – SRL	0	0	0	0
CEMENTERIA COSTANTINOPOLI SRL	0	0	1	0
DISTILLERIE BONNOLO SPA	0	0	1	0
CASTEGGIO LIEVITI SRL	0	0	0	0
ICO INDUSTRIA CARTONE ONDULATO SRL	0	0	1	0
CARTIERA DELLA BASILICATA SRL	0	0	0	0
PAPIRO SARDA SRL	0	0	0	0
VETRETTA DI BORGONOVO SP A	0	0	0	0
ARIETE SRL	0	0	0	0
TOLENTINO S.R.L	0	0	0	0
BIRRA PERINI SRL	0	0	0	0
UNIGRÀ S.R.L	0	0	1	0
TRIGNO ENERGY S.R.L.	0	0	0	0
PIANET A S.R.L	0	0	0	0
CO-VER POWER TECHNOLOGY S.R.L.	0	0	0	0
CARTIERE DI GUARCINO S.P.A.	0	0	1	0
AR INDUSTRIE ALIMENTARI S.R.L.	0	0	0	0
LE DUE VALLI SRL	0	0	0	0
FORNACI ZULIAN SRL	0	0	0	0
CANDEGGIO LA BRIANTEA S.R.L.	0	0	0	0
ALTO GARDA POWER SRL	0	0	0	0
UNIGRA' S.R.L.	0	0	0	0
ANIELLO LONGOBARDI S.R.L.	0	0	0	0
F. DIVELLA SPA	0	0	0	0
ECOTHERM SRL	0	0	0	0
FEGER DI GERARDO FERRAIOLI S.P.A.	0	1	0	0
INTERECOGEN SRL	0	0	0	0
CONDIT ALIA SRL	0	0	0	0
COMPAGNIA MERCANTILE D'OLTREMARE SRL	0	0	0	0
FRATELLI LONGOBARDI S.R.L.	0	0	0	0
DI LEO NOBILE S.P.A.	0	1	1	0
CARTIERA CAPOSTRADA	0	0	0	1
COSTANTINOPOLI DI C. VILLANI & C. SNC	0	0	0	0
CAV. UFF. PIETRO GRIMALDI S.R.L.	0	0	0	0

Company	Sustainability Reporting	Ethical code	Web site information	Voluntary environmental management system
CBCOTTI S.R.L.	0	0	1	0
LA TORRENTE S.R.L.	0	0	0	1
FELICE CONSERVE S.R.L.	0	0	0	0
PERANO ENRICO & FIGLI S.P.A.	0	0	0	0
GRAZIELLA S.P.A.	0	1	1	0
GIAGUARO S.P.A.	0	1	1	0
ORTOFRUITS ,85 S.C.A.R.L.	0	0	0	0
D. & D. SRL – PRODOTTI CONSERVATI	0	0	0	0
F.P.D. S.R.L.	0	0	0	1
I.C.A.B. S.P.A.	0	0	0	0
CARTIERA GIUST A S.R.L.	0	0	0	0
PRATO NEVOSO T ERMOENERGY SRL	0	0	0	0
MAZZUCHELLI 1849 SPA	0	0	0	0
TRAVI E PROFILATI DI PALLANZENO S.R.L.	0	1	1	0
EURAL GNUTTI S.P.A.	0	0	1	1
DONATI LATERIZI SRL	0	0	0	0
FORNACI D.C.B – PIERINO BRANELLA	0	0	0	0
SIAI S.R.L.	0	0	0	0
FORNACE T ORRICELLA LATERIZI S.R.L	0	0	0	0
FORNACI IONICHE S.R.L.	0	0	0	0
COTTO PETRUS SRL	0	0	0	0
SCIANATICO LATERIZI SRL	0	0	1	0
FORNACE CENTRALE SRL	0	0	0	0
DI MUZIO LATERIZI	0	0	1	0
HATRIA S.P.A. A SOCIO UNICO	0	0	0	0
CERAMICHE MARCA CORONA S.P.A.	0	0	0	0
META SPA	0	0	0	1
MIRAGE GRANITO CERAMICO S.P.A.	0	0	1	0
SAIB S.P.A.	0	0	0	0
VISCOLUBE S.R.L	1	0	1	1
GRANITO FORTE S.P.A.	0	0	0	0
CERAMICA SANT'AGOSTINO SPA	0	1	1	0
CERAMICHE SERRA S.P.A	0	0	0	0
VINCENZO PILONE S.P.A.	0	0	0	0
CERINDUSTRIES S.P.A.	0	1	1	0
GRAL S.P.A.	0	0	0	0
FORGE MONCHIERI S.P.A.	0	0	1	0
LAMINAZIONE ACCIAI SPECIALI S.P.A	0	0	0	0
FRANCHINI ACCIAI SPA	0	0	0	0
FORNACI DEL SILE SRL	0	0	0	0
CASALGRANDE PADANA S.P.A	0	1	1	0

Company	Sustainability Reporting	Ethical code	Web site information	Voluntary environmental management system
CALCEMENTI JONICI S.R.L.	0	0	0	0
FOC CISCATO S.P.A	0	1	1	0
SIMA CERAMICHE SRL	0	0	0	0
FORNACI DEL FAGARÈ S.R.L.	0	0	0	0
LATERIZI REATO S.R.L.	0	0	0	0
COEM S.P.A.	0	0	1	0
FORGIATURA A. VIENNA DI ANTONIO VIENNA E S.A.S.	0	0	0	0
TOPPETTI 2 S.R.L.	0	0	1	0
ALBERIO SP A	0	0	1	0
BRANDUZZO LATERIZI SPA	0	0	0	0
FORNACE DI BASSIGNANA S.R.L.	0	0	0	0
GATTELLI SPA	0	0	0	0
FORNACE DI BASSIGNANA S.R.L.	0	0	0	0
CERAMICA MEDITERRANEA S.P.A.	0	0	1	0
CARTIERE VILLA LAGARINA SRL	0	0	0	0

***Homo oeconomicus* and *Homo mimeticus* Compared with Market Globalization**

Maria Grazia Recupero

1. Introduction

This contribution explores an epistemological expansion on the direction of economic contemporary trends and transformation by means of René Girard's *mimetic theory*. The intent is to go over our standard account of how economies operate or, simply, to suggest a different way of looking at the same things. The specific form of modern subjectivity called *homo oeconomicus* is first of all a free and rational product of self-interest, recognized as a producer of his own satisfaction excluding ethical values, public good and collective interests. Western individualism has promoted "the emanation of a serene subjectivity, the creation ex nihilo of a quasi-divine ego" (Girard, 1966) thus ignoring the essential chaining of each one's desire with the others, which implies their mutual dependence. Girard's theoretical contribution purposes to unify fragmented political, economic and religious perspectives around the crucial role of desire and mimesis in the construction of the human being. This paper will highlight the complexity of the intersubjective constitution of human identity through economic action. Since postmodern society seems incapable of creating a different point of view for social justice and integration on a global scale, the present context mimetic theory becomes an interesting ethical critique of market globalization, providing fundamental tools to refocus on why economic issues and economics (as a discipline) occupy such an important place in our world. It will also try to develop a thought capable of conceiving of and accepting their incompleteness.

2. The broken idol of the global market

The hypothesis underlying my reflection is that the economy is constitutively religious. I'd like to think that's true not only in a philosophical sense – think-

ing about of Max Weber up to Erich Fromm for example, each one in their own way of course. In fact here we mean “religion” from the original Latin etymology of Lattanzio *re-ligāre*, composed of the intensive prefix *re-* and *ligāre* = “to join together”, “to bind” (ie: “to be bound”). Religion concerns social relations in the broad sense, so we would also say cultural rather than confessional.

For the modern man the power of the free market has represented a sort of idol, perfect and omnipotent, promoting the paradigm of rational choice and free price competition with a view of efficiency and endless growth. In a harmonic market setting, as the modern idea of market, self-interested traders compete with each other towards achieving the positive output of a freely “buy and sell”. Defying these economic forecasts, we can reduce the main characteristic of individual action in modernity to rationality: *homo oeconomicus* knows and understands everything without emotions, balancing profits and costs, rationally evaluating any kind of situation in order to optimize his personal interest. *Homo oeconomicus* has a well-ordered set of preferences consistently revealed through his actions in order to choose the best and most target-oriented alternative (Steinmair-Pösel, 2005)¹. Today the idol is irremediably broken but no less fascinating because of this, if only for the “nostalgia of the golden age” – that of *homo oeconomicus* as the agent’s standard in a classical model in which its rationality can generally be reduced to maximizing a personal utility function.

So this is my primary question: what about the modern man now, during the so-called “second modernity”? *Homo oeconomicus* alone cannot resist the great global-economic transformations: so far artificially intelligent devices and invisible algorithms, for example, have been introduced into our lives. Over time, are the progressive benefits of the global techno-economic system going to exceed socio-cultural costs? The rationality axiom along with a nostalgic affection for exchange, consumption, limitless growth, implemented by the massive mode of wide world web contacts is therefore unable to formulate solutions to frequent recessions, irrational speculative bubbles, excessively fluctuating financial trends, and so on.

Taking into account the global nomadic flows in the aftermath of the 2008 economic collapse, and in the middle of the breakdown begun in the summer of 2011, *homo oeconomicus* became increasingly unconfident, as chaotic as the world around him, unable to restore order in disorder. More specifically the recent economic *shocks*, as well as the failed procedures for crisis management, have confirmed the far-seeing case envisaged almost after the so called “Glorious Thirty” – i.e. the years between the end of World War II and the 1974 oil crisis – when Amartya Sen wrote the famous article “Rational Fools”.

¹ For an important dialogue on a wide range of topics connected to this theory, see: (Palaver & Steinmair-Pösel, 2005).

Looking at the current relationship between the idea of “rationality” and its historical-political performance, we can say that this ideal-type of the traditional economic agent seems at least to live in a confusional state. *Homo oeconomicus* moves into the wild void left by the most recent meltdowns, looking for the economization of his relationships within a dimension basically virtual, where the “land” is now only an unnecessary object of power (Schmitt, 1954). Freed from the usual constraints of time and space proposed by an “incorporated” economy, the action of capital labelled as “volatile” is out of control, thus undermining the fiscal resources of the States and the productive investments (*The Guardian ...*, 2017). The brief reference to this technical topic, beyond the scope of my work, suggests that even if politics is no longer able to direct economic policies in long-term planning, the frequent recessions paradoxically legitimize – and in some cases actually impose them.

3. Efficient market hypothesis and mimetic theory

The global situation – though simplified – appears to be undecided as following: globalization of markets and deregulation, on one side; thirsty for regulation on the other side. Because of its ambiguity, I therefore intend to present an unorthodox interpretation of this scenario, connecting the classical figure of freedom and order to the other face of *homo oeconomicus* in a psycho-theoretical profile. In my opinion, in the free global market the dynamic between “pursuit of freedom” and “escape from freedom” (Fromm, 1941) is the same strange relationship between rationality and idolatry. In particular, in idolatrous behavior we can find a complex alteration of desire, a kind of a never-ending thirst. It pushes individuals to search for an “absolute object”, making them available to submit themselves to any power as long as it appears worthy of being obeyed. We can see an interesting idolatrous conduct in the risky schemes of this kind of “capitalism without capital”: for the transaction regimes of financial capital, I would replace the word “risky” with the qualified expression of “fearful and fascinating”, according to the eminent concept of “sacred” described by Rudolf Otto as *mysterium tremendum ac fascinans*. That is something that attracts while it repels and terrifies at the same time. It is hard to ignore this emotional ambivalence...

In my current perspective *homo oeconomicus* as the master of decision and rationality becomes more defined through that of *homo mimeticus*, according to René Girard’s *mimetic theory*. It shows its validity – which does not mean exhaustiveness – in the field of anthropology, politics, not less than economics. His central point is desire. Girard says: «Behind our desires, there is always a model or mediator who most often is not recognized by others and not even recognized by the imitator of the model. In general, we desire what other people around us

desire. Our models can be real as well as imaginary, collective as well as individual. We imitate the desires of those we admire. We want to “become like them” and to appropriate their being» (Girard, 2010). *Mimetic desire* is not connected to objects, but to *the being* of the other while he desires. So that the ultimate decision maker finds himself subject relentlessly to the will of another. This relational knot ties together the subject, the model and the object, in a “triangular structure” that Girard calls *metaphysical desire*, pointing its conflicting potential, due to the fact that for every human desire it is impossible to satisfy something like this². So the mediator, who informs the subject of “what he should desire in order to acquire that being” (Girard, 1977), first of all looks endowed with superior *Being*, attracting the glance of others: glances of admiration, respect, appreciation, love. Consequently the model shortly could become an obstacle on the illusory way to achieve *Being*. Here lies the hidden meaning of Nietzschean “resentment” (Nietzsche, 1887)³, the relational threshold which, in a vague instant, leads from admiration to rivalry, from cooperation to opposition, from harmony to violence. Depending on whether the model is real or imaginary, collective or individual, in a given culture people can change from one model to another, as well as anyone can become a model for anyone, or for some only. Even democracy does not escape and indeed multiplies these dynamics: it’s an interesting paradigm of a mimetic system, symmetrical and hierarchical at the same time, where the citizens choose their leaders among themselves, and consequently generate resentment in those not chosen.

In the intention to refocus the topic of the present contribution, we can assume that unlike the classic economic agent, guided by his personal interest, *homo mimeticus* or “mimetic agent” – said Paul Dumouchel, one of the most important Girardian scholars on the direction of economics – is unconsciously interested in others, because he doesn’t know what he wants, what he prefers: everyone desires “something he himself lacks and which some other person seems to possess”. Compared to *homo oeconomicus*, *homo mimeticus* is less in-

² Girard states that violence is generated by this kind of dependence process, so that the appropriative action of the individual named A (subject) is rooted in the imitation of an individual named B (model). Mimetic rivalry reaches together A and B, for one and the same object, so becoming progressively identical in violence. It is the theme of “warring brothers” or the enemy twins, Cain and Abel to name the major example. It is not simply a mythical theme, dealing in a significant way with terrorism as shown in (Girard, 2001) and (Baudrillard, 2003).

³ Girard’s theory, stretching far beyond textual analysis, focuses on the cognitive and epistemological potentiality of the greatest thinkers of all times. Just to name a few, between the lines of Sophocles, Hobbes, Shakespeare, Cervantes, Nietzsche, Dostoevsky, Freud, we can discover a shrinking universe made up of atomized humanity, on one side, and the uncontrollable existence of mimesis. See, e.g. (Girard, 1966, 1979, 1987, 1996).

dividualized. He tends to form some preferences or others, to adopt this or that rule of behavior, depending on the behavior and preferences of others. Nothing is fixed and determined once and for all, except what we could describe as ‘function of dependence’ on others. In consequence “it is always impossible to explain the behavior of one agent taken individually”, besides as groups become bigger and more complex, managing this difficulty becomes more and more of a problem. While economics “tend to view conflict and cooperation as polar opposites” considering that conflict excludes cooperation and vice versa, “desire and mimesis between individuals suggest, to the opposite, that violence and cooperation, conflicts and consensus are not polar opposites, but will tend to grow together”. Desire remains terminally indecisive, it can be an ambivalent pre-condition both for cooperation and for conflict. So it “[...] may seem paradoxical, but think about it a second, most of the conflicts we have are with those with whom we most closely collaborate” (Dumouchel, 2014)⁴.

Because of the complexity of this approach, in a dimension without definition that is not contradiction, I would just add that if there is not a certain distance – material or symbolic – between the subject and the model, the “positive or good reciprocity” that binds them can break out, more or less symbolically, into the violence of “negative or bad reciprocity”. That’s the condition called by Girard “double bind”, recalling the famous studies of Gregory Bateson (Girard, 2014). This is the same “bind” at the beginning of my etymological considerations on the religious which, now we said, leads to cooperation as to conflict, to *Eros* as to *Thanatos*. That’s our fundamental symmetry, that’s the tragic human being in a relationship towards the unattainable “absolute object” (the idol), which on account of its very inaccessibility, forever captivates and captures us. About this aspect we can come back to consider that idolatry represents three cases of *mimetism*: with God, and this is the case typically traceable to fundamentalism for example; with objects, or the divinity’s immanent surrogates like temporal goods, as well as globalized markets and growth economic needs in our context; with subjects, that is the case most directly attributable to the dynamics of “bad reciprocity”⁵. These cases are not mutually exclusive and maybe we should keep in mind this further configuration interweaving between movement-consumption-freedom-violence, dominating the developments of the free global market and culture... It succeeds in turning envy, jealousy, resentment, rivalry, and

⁴ See, e.g. (Dumouchel, 1994, 2015).

⁵ “Whereas the first commandment recommends the love of the only true God the ninth and the tenth commandments prohibit the coveting of all those things that belongs to our neighbors” (Girard, 1977). Another central point of Girardian theory concerns the paradigm of the scapegoat: see, e.g. (Girard, 1986, 1987).

other forces that endanger human societies into profit sources, but in so doing it cannot escape the periodic crises created by the flagging of desire (Manent, 1982). As emphasized by the same Girard: “violence is the process itself when two or more partners try to prevent one another from appropriating the object they all desire through physical or other means” (Girard, 1979). Is it the escalation of reciprocity in the “bad” side which has become an economic necessity, a constant to forestall the fullness that would cause the endless growth system to unravel? Many problems are raised and some different options could be considered but in my opinion it is quite the other way around. Or, better, it is like a bipolar structure in a circular direction. The following reasons are investigated in the next section.

4. Mimetism and entropy on the planetary scale

Let us summarize some achievements of the present theoretical experiment leading the reader into the style of Girardian analysis provided below:

If desire is allowed its own bent, its mimetic nature will almost always lead it into a double bind. The unchanneled mimetic impulse hurls itself blindly against the obstacle of a conflicting desire. It invites its own rebuffs and these rebuffs will in turn strengthen the mimetic inclination. We have, then, a self-perpetuating process, constantly increasing in simplicity and fervor. Whenever the disciple borrows from his model what he believes to be the “true” object, he tries to possess that truth by desiring precisely what this model desires. Whenever he sees himself closest to the supreme goal, he comes into violent conflict with a rival. By a mental shortcut that is both eminently logical and self-defeating, he convinces himself that the violence itself is the most distinctive attribute of this supreme goal! (Girard, 1977).

Using all the levers at our disposal in a “Girardian way”, we can imagine that the “free market” global model turns into “freedom of *mimetic escalation* on the planetary scale”; and without realizing it, the law of “the invisible hand” turns into the “invisible law of metaphysical desire”. So we’re often encouraged to think of the economic-financial field as one of the many “metaphysical spaces of desire”.

Moreover, this kind of vision fits well with the idea of *entropy* in science, as well as in economics and politics. The famous second law of thermodynamics concerns the irreversible process of dissipation of energy mostly in the natural world. It states that, oversimplifying, in an isolated system disorder can only increase. The first economist to deal with entropy is apparently Georgesçu-Roegen in 1971, with his research about the economic process, entropic “in all its material fiber” (Georgesçu-Roegen, 1971). Just like one of the latest research studies on wealth creation by energy conversion, “accompanied and limited by polluting emissions that are coupled with entropy production” (Kümmel, 2011). In the

present work, however, I wish to attempt something slightly different than this kind of analysis, concerned above all with the exploitation of natural resources, environmental degradation relying on consumerism of industrial societies, and so on. In fact these research works are focused primarily on material or physical aspects, so to speak, foreseeing our ruin or extinction as an effect. First of all, I do not feel like totally embracing this vision, given that predictions belong to science and not to philosophy. More than anything I would assume entropy to be a metaphor for the global interconnected markets and interdependent economies which fall back on themselves, therefore feeding mimetic chaos. The argument of entropy is useful to conclude this reasoning connecting the current social tensions with a radical category of existence, so that if I wonder: why is economic growth at once considered our best defense against social unrest but also as the cause of violence, of the contagion of disorder? I could think it's because the main damage made by the global system is the destructive waste of one specific "energy" resource, desire, spread out along with the subject himself, in a more or less tangible "war of all against all" (Hobbes, 1651). In my view our economy based on endless growth of acquisitive desire, as self-sustained process, works in the same way as entropy and it is unsustainable.

Of course it is impossible to undo desire, but a sort of symbolic challenge to the "monopoly of bad reciprocity" is possible, since *mimesis* has the potential to lead not only to violence but also to the most creative aspects of human cognition, collaboration and love itself as previously mentioned⁶.

5. Conclusion

Ultimately, perhaps, the main difficulty for economic theory as it exists is trying to bridge the gap between the axiomatic scheme of rationality (illusion) and behavior inconsistent by nature (reality). Moreover, in the vast arena of economic issues and economic disciplines, there are many related studies – experimental economics, behavioral economics, neuro-economics and evolutionary game theory applied to economics – which are trying currently to bridge the gap between axiomatic scheme and behavior. What's missing from their approach? As Girard reminded us very often: "the refusal of the real is the number one dogma of our times" (Girard, 2001). Then the support of mimetic theory as an unconventional interpretation of economics allows us to see the incomplete and uncertain figure of *homo oeconomicus* accepting the renunciation of any explanatory ambition on a deeper level, according to the Kantian lesson of renunciation

⁶ From a neuroscientific perspective and developmental psychology on both sides of mimetic desire, see (Gallese, 2009).

of omniscience. Girardian theory cannot be subjected to empirical verification or falsification, although many of his detractors tend to extrapolate the provocative side of the French thinker in order to turn it against his theoretical apparatus as a whole. Girard himself admits: “it is the sort of thing you either see or do not see. It’s like a flash of lightning; you either get it or you don’t get it. Ordinary reasoning just loops back on its own premises... Everything great is always a question of faith” (Girard, 1996).

Nevertheless, this perspective could imply an upgrading of global ethical strategies devised to impose civil and social responsibility (Rifkin, 2010). Retracing the cardinal imprints of mimetic theory, that’s the central issue of our society: “How can we manage the conflicts that inevitably arise out of cooperation”? (Dumouchel, 2014). The same Girardian perspective could indicate the saving secret guarded by the certain set of crucial categories which we are thinking about, provided with tools to overcome the most dangerous upheavals of metaphysical desire. It should be recalled that, according to the ancient Greek verb *krino* (that is “to choose”), the “global crisis” could not be simply identified with an unstoppable catastrophe, becoming “a moment of (planetary) evaluation” necessary for an improvement choice. And this perspective, besides, applies to the same “intangible capitalism” (*The Guardian...*, 2017) which should not further entrench the system in entropy, but adapt itself by keeping watch on one of the most suggestive senses of the Latin term *de-siderium*, “the lack of stars”. In fact, it’s composed of *de-* (giving the prefix a privative meaning, as “unbridgeable distance”, so “absence” too) and *sidera*, i.e. “stars”. As suggested above, Girard himself acknowledged that “mimetic desire, even when bad, is intrinsically good, in the sense that far from being merely imitative in a small sense, it’s the opening out of oneself” (Girard, 1993).

In spite of the entropic global race which does not open to otherness but seeks the promise of satiety; which does not accept incompleteness; does not accept the dignity of the limit, the positive side of desire could be judiciously empowered for very humanistic reasons orienting ourselves from competition towards the worst to awareness towards the best. Can we refuse the violence inherent in all idolatrous dynamics, respecting the distance *of* others and *from* others? I do not know, I still think about “the lack of stars”, that is “a gap that cannot be filled”, as the renunciation to possess otherness, to go back – in a completely different sense – to the famous Dantesque quote: “Thence we came forth to behold the *stars*” (Alighieri, 1867, p. 139).

Bibliography

1. Alighieri, D. (1867). *Inferno* (trans. H. W. Longfellow). Boston: Ticknor and Field.
2. Baudrillard, J. (2003). *The Spirit of Terrorism* (trans. C. Turner). London: Verso.
3. Dumouchel, P. (1994). *Rationality and the Self-organisation of Preferences*. Université du Québec à Montréal: Groupe de recherche en épistémologie comparée.
4. Dumouchel, P. (2014). *The Ambivalence of Scarcity and Other Essays*. Michigan State: University Press.
5. Dumouchel, P. (2015). *The Barren Sacrifice*. Michigan State University Press.
6. Fromm, E. (1941). *Escape from Freedom*. New York and Toronto: Farrar & Rinehart.
7. Gallese, V. (2009). The Two Sides of Mimesis. Girard's Mimetic Theory, Embodied Simulation and Social Identification. *Journal of Consciousness Studies*, 16(4), 21–44.
8. Georgesçu-Roegen, N. (1971). *The Entropy Law and the Economic Process*. Harvard University Press.
9. Girard, R. (1966). *Deceit, Desire and the Novel. Self and Other in Literary Structure*. Baltimore, MD: The Johns Hopkins University Press.
10. Girard, R. (1977). *Violence and the Sacred*. Baltimore, MD: The Johns Hopkins University Press.
11. Girard, R. (1979). Mimesis and Violence: Perspectives in Cultural Criticism. *Berkshire Review*, 14.
12. Girard, R. (1986). *The Scapegoat*. Baltimore, MD: Johns Hopkins University Press.
13. Girard, R. (1987). *Things Hidden Since the Foundation of the World*. Stanford, CA: Stanford University Press.
14. Girard, R. (1993). Violence, Difference, Sacrifice: A Conversation with René Girard. *Religion and Literature*, 25.
15. Girard, R. (2001). *I See Satan Fall Like Lightning*. New York: Orbis Books.
16. Girard, R. (2001). *What is Occurring Today is a Mimetic Rivalry on a Planetary Scale: an Interview with Henri Tincq*. *Le Monde* 6 November.
17. Girard, R. (2010). Preface. [in:] M. Anspach (Ed.), *Oedipe mimétique*. Paris: l'Herne.
18. Girard, R. (2014). *The One by Whom Scandal Comes*. Michigan State University Press.
19. Girard, R., & Williams, J.G. (1996). *The Girard Reader*. New York: Crossroad.
20. Girard, R., Antonello, P., & de Castro Rocha, J.C. (2007). *Evolution and Conversion: Dialogues on the Origins of Culture*. London: Continuum.
21. Hobbes, T. (1651). *Leviathan*. London: Printed for Andrew Crooke.
22. Kümmel, R. (2011). *The Second Law of Economy*. New York: Springer.
23. Manent, P. (1982). La leçon de ténèbres de René Girard. *Contrepoint*, 5, 457–463.
24. Nietzsche, F. (1887). *The Genealogy of Morals*. New York: Boni and Liveright.
25. Otto, R. (1923). *The Idea of the Holy: an Inquiry into the Non-rational Factor in the Idea of the Divine and its Relation to the Rational*. London: H. Milford, Oxford University Press.

26. Palaver, W., & Steinmair-Pösel, P. (Eds.) (2005). *Passion in Economy, Politics, and the Media*. Wien: LIT Verlag.
27. Rifkin, J. (2010). *The Empathic Civilization: The Race to Global Consciousness in a World in Crisis*. London: Penguin Group.
28. Schmitt, C. (1997). *Land and Sea*. Washington, DC: Plutarch Press.
29. Sen, A.K. (1977). Rational Fools: A Critique of the Behavioral Foundations of Economic Theory. *Philosophy & Public Affairs*, 317–344.
30. Smith, A. (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations*. London: Printed for W. Strahan; and T. Cadell, in the Strand.
31. *The Guardian View on Capitalism Without Capital, Editorial* (2017). The Guardian. Retrieved on 30/05/2019, from: <https://www.theguardian.com/commentisfree/2017/dec/26/the-guardian-view-on-capitalism-without-capital>.

Waste. A Source of Utility or Disutility?

Maria Francesca Tommasini

1. Introduction

In a world in which environmental policy tries to guarantee sustainable development for future generations, it is evident that States have aimed, above all in recent years, to limit the waste of raw materials to the maximum and to reduce pollution through proper waste management. The correct approach to this discipline cannot be separated from the analysis of the legal notion of waste, which, as appeared for the first time in Directive no. 75/442, defines it as “any substance or object that the holder abandons or has decided to abandon”. Subsequently, in Directive no. 91/156, the concept of “abandoning” was substituted with that of “discarding”. On the basis of this definition two different orientations have been created in case law: the first that considers waste both the things that are such by law and those that the holder discards; the other, according to which the term “discard” may also include the disposal or recovery of a substance or an object (Federici, 2000, p. 311; ID., 2005, p. 1077). In fact, some types of waste can be considered as assets if they are suitable for economic reuse or recovery as residues or secondary raw materials placed on the market (Gratani, 1995, p. 653), subject to new legal relationships, and used in other sectors also by subjects other than the holder (Gratani, 2000, p. 718). Under Directive 2008/98/EC, Community legislators established the criteria for determining the methods of waste recovery which must pursue the protection of human health from the harmful effects of waste management, according to the principles of precaution and prevention (Salanitro, 2013, p. 795; Rottgen, 2008, p. 18).

2. Historical evolution in Italy of the legislation on waste

In Italy the first source of legislation regarding waste was law no. 366 of March 20, 1941, on the “Collection, transport and disposal of solid urban

waste” which regulated each phase of its management with the dual objective of improving services, avoiding waste and ensuring the reuse of both agricultural and industrial recoverable raw materials. Only many years later came Legislative Decree no. 22 of February 5, 1997 (Ronchi Decree) in which the legislator set the duty of disposal and recovery of waste without endangering human health and without using procedures or methods that could damage the environment (Dodaro-Ruggero-Tumbiolo, 2000, p. 557). The protection of the environment and natural ecosystems had to be guaranteed by all public and private bodies and by public or private natural and legal persons, through actions based on the principles of precaution, preventive action and correction, as a priority to source, of the damage caused to the environment, as well as on the principle “who pollutes pays” (Article 174, paragraph 2, of the EU Treaty). To these principles were added, according to article 178 of the Environment Code, the criteria of efficiency, effectiveness, economy and transparency (Citrigno-Moschella, 2014; Lombardi, 2015, p. 845). Once the Ronchi Decree was repealed, the concept of waste was taken up by Legislative Decree no. 205 of December 3, 2010 which defined it as a substance or object (of a solid, liquid or gaseous nature) necessarily consisting of movable things and deriving from human activities or from natural cycles.

3. Results: waste as a possible asset

3.1. Waste as a source of usefulness

The concept of waste has given rise to many questions concerning its classification as a good or as a harmful object (Scozzafava, 2007; Gambaro, 2012; Piraino, 2012, p. 459). While some authors have considered that waste cannot be considered an asset because it is no longer useful (Federici, 2006, p. 1068), other authors, however, have considered that the identification of waste as an asset depends not on the nature of the thing but rather on the function that it may perform (Guariniello, 2009, p. 153; Mariotti, 2009, p. 304). Finally, there are those who claim that there are “useful goods” that is, things that can be used freely or according to specific statutes and “waste goods” that can be produced or realized. The “blessing” of waste depends on the will of the holder, who, incentivized by possible tax benefits, gives them the function of new resources. In this sense, the recovery of waste-goods that have the function of replacing other materials within the plant, must be distinguished from the re-use of the same that “consists in transforming waste into a new utility for the holder”. In both cases, waste falls perfectly within the civil law view of assets pursuant to article 810 of the Civil Code and in particular in the definition of productive assets. Legislative Decree 152/2006, in this sense, encourages the reuse, recovery and recycling of waste that

must be carried out by the holder through the adoption of appropriate processing techniques in marketable products. To this end, some indispensable conditions are necessary: the asset-waste must be suitable “for a specific and specific use” without the need to carry out further recovery operations on the material; there must be “a market or a demand” for the reintegration of the asset; and finally the product resulting from the recovery process must not lead to “overall negative impacts on the environment or on human health”.

3.2. Waste as a source of disutility. Acts of legal and illegal dumping

Things, according to the provisions of the law, can be, as it were, “rejected” by their holder (voluntary disposal – abandonment). The power of the producer can manifest itself with the abandonment of waste, regardless of whether it retains economic value, or whether it has a current or potential capacity to satisfy needs. This power is recognized by law and is technically qualified as disposal. The operations are governed by Decree Law 205/2010 and must take place in observance of the self-sufficiency and proximity that limit the circulation of waste. Therefore, the manufacturer must find all the information necessary for the safe disposal of waste and as prescribed by local authorities. Often, however, the holder abandons or illegally disposes of waste (D’Adda, Nicotra & Salanitro, 2013). We may talk of abandonment in the presence of a single waste disposal procedure, which takes place in an entirely occasional manner and in such a way as not to permanently deface the environment (Amendola, 2003, p. 338). Article 192 of Legislative Decree No. 152/2006 identifies the person in charge of, and therefore subject to the sanctions of the law, and the person who materially provides for the abandonment of waste, as well as the owner of the areas on which it is found (Frigerio, 2010, p. 153; Palombella, 2011, p. 92; Natalini, 2007, p. 1). These subjects are responsible for the prohibition of abandonment also without malice, to be verified case by case by the Public Administration. Only after this check has been made may an order be issued to return the places to their original condition and correctly dispose of the waste. If the fixed time has elapsed and the obliged subjects have failed to do anything, the P.A. proceeds with recovering the money necessary to do so (Morzenti & Pellegrini, 2009, p. 1520).

We are in the presence of an unauthorized landfill when the following conditions are met: the stability of accumulation for a considerable time and in any case not determined, the recurrence of multiple acts of dumping and the presence of significant quantities of waste such as to degrade the site in which they are located (Di Lella, 2012, p. 428). Illegal dumping activity is to be distinguished from the uncontrolled waste storage that occurs when a modest amount of waste is disposed of by depositing it in an area, constituting not just a single act of waste disposal but an act qualitatively and quantitatively more serious than

this, although not such as to constitute an illegal landfill act (Costato-Pellizer, 2007, p. 670; Bian, 2005, p. 1435).

Illegal landfill activity must also be distinguished from illegal disposal, in which the waste is used in different ways, such as, for example, “sorting, processing, use and recycling after recovery”. The crime of illegal disposal, unlike that of unauthorized landfill, is characterized by the fact that “waste is used for profit”.

4. Responsibility for reclamation of polluted sites. Environmental damage and remedial protection

The dumping of waste can cause environmental contamination if the contamination (CSC) and risk (CSR) concentrations are exceeded. In such cases it will be necessary for the damage manager to reclaim the polluted site. If the person responsible for the damage is not the owner of the site then the latter is obliged, pursuant to article 245, paragraph 2, D. Lgs. 152/2006, to notify the competent authorities, which must take action to identify the person in charge of reclamation work (Pomini, 2013, p. 95). In compliance with the constitutional principle “the polluter pays”, the responsibility for environmental remediation is borne by the person directly responsible for the pollution. If the person responsible for the pollution is not identified or has no intention of proceeding with reclamation, the works are carried out by the Administration, which will recover the costs incurred by the owner of the site that benefits from the clean-up work. The regulation of the remediation of contaminated sites must be coordinated with the legislation on environmental damage (Giampietro, 2008, p. 175). In fact, the law states that if environmental damage has been ascertained, the Minister of the Environment can order those responsible for the event to restore the environment “of the damaged resources or services to or from the original conditions” (Bonelli, 2013, p. 3). Only if primary reclamation does not give rise to a restoration of the environment to the original conditions, will it be possible to undertake complementary reclamation aimed at “compensating for the failure to completely restore the damaged resources”. In this regard, Article 311 establishes that if the person responsible for the damage fails to take the necessary measures, the Minister of the Environment may take action for compensation of the damage in a specific form and, if necessary, for equivalent assets (Barbierato, 2016, p. 2039; Alberton, 2011; D’Adda, 2006, p. 261).

5. Conclusion

Lastly, with regard to waste harmful to the impact on significant values of the community and/or constitutionally guaranteed assets (health, environment, cultural heritage), the regulation requires producers and/or holders to dispose

of it (Saija, 2008, p. 414). In these circumstances, based on the opinion of the technicians who report on environmental impact, the president of the regional council or the president of the province or the mayor may issue urgent ordinances to allow temporary recourse to special forms of waste management. The ordinance has a reinstating character because it aims at the removal of the state of danger. It can also be addressed to those who are not responsible for the pollution but are in a direct relationship with the property (owner) such as to allow him to carry out the interventions deemed necessary in order to eliminate the identified situation of danger, even if it is imputable to others.

Bibliography

1. Alberton, M. (2001). *La quantificazione e la riparazione del danno ambientale nel diritto internazionale e dell'Unione europea*. Milan: Giuffrè Editore.
2. Amandola, G. (2003). *Gestione dei rifiuti e normativa penale*. Milan: Giuffrè Editore.
3. Barbierato, D. (2016). La nuova tutela risarcitoria del danno ambientale. *Responsabilità Civile e Previdenza*, 6, 2028–2048.
4. Bian, R. (2005). Il D. Lg. n. 36 del 13 gennaio 2003: dalla nozione di discarica al concetto di deposito temporaneo. *Giur. merito* (6), 1435–1438.
5. Bonelli (2013). Il risarcimento del danno all'ambiente: la nuova disciplina dettata dalla L. 166/2009. *Dir. comm. Internazionale*, (1), 3–10.
6. Citrigno, A., & Moschella, G. (2014). *Tutela dell'ambiente e principio "chi inquina paga"*. Milan: Giuffrè Ed.
7. Costato, L., & Pellizer, F. (2007). *Commentario breve al codice dell'ambiente*. Milan: Giuffrè.
8. D'Adda, A. (2006). *Il risarcimento in forma specifica. Oggetto e funzioni*. Padova: Cedam.
9. D'Adda, A., Nicotra, I., & Salanitro, U. (2013). *Principi europei e illecito ambientale*. Torino: Giappichelli.
10. Di Lella, B. (2012). Differenze tra discarica non autorizzata, abbandono o deposito incontrollato di rifiuti e smaltimento irregolare. *Riv. Giur. Ambiente*, (3–4), 428–431.
11. Dodaro, G., Ruggero, A., & Tumbiolo, R. (2000). La gestione dei rifiuti dopo il D.Lgs n. 22 del 1997. *Riv. Giur. Ambiente* (3–4), 557–574.
12. Federici, R. (2000). A proposito di cose che non sono beni: sottosuolo e rifiuti. *Rass. dir. civ.*, 311–337.
13. Federici, R. (2005). I rifiuti e le cose in senso giuridico. [in:] *Studi in onore di Berti*. Napoli: Jovene.
14. Federici, R. (2006). La nozione di rifiuti: una teoria. *Riv. it. dir. pubbl. comun.*, 1068–1075.
15. Frigerio, L. (2010). Il punto sulla responsabilità del proprietario in materia di bonifica e abbandono di rifiuti. *Riv. Giur. Ambiente*, (1), 153–156.
16. Gambaro, A. (2012). *I beni, in Trattato di diritto civile e commerciale of Cicu-Messineo-Mengoni-Schlesinger*. Milan: Giuffrè.

17. Giampietro, F. (2008). La delicata questione dei rapporti tra bonifica e danno ambientale nel T.U.A. [in:] Alcaro, F., Fenga, C., Moscati, E., Pernice, F., & Tommasini, R. (Eds.), *Valori della persona e modelli di tutela contro i rischi ambientali e genotossici*. Florence: University Press.
18. Gratani, A. (1995). La Corte di Giustizia prende posizione. I residui vanno assoggettati alla disciplina prevista per i rifiuti. *Riv. Giur. Ambiente*, 642–656.
19. Gratani, A. (2000). La nozione comunitaria dei rifiuti e dei rifiuti pericolosi di fronte ai giudici nazionali e comunitari. *Riv. Giur. Ambiente*, (5), 691–723.
20. Guariniello, A. (2009). La disciplina dei combustibili. [in:] *Diritto ambientale*. Rimini: Maggioli.
21. Lombardi, R. (2015). Il bene rifiuto tra concezione relazionale e responsabilità civile. *Rass. dir. civ.* (3), 845–852.
22. Mariotti, E. (2009). La gestione dei rifiuti e la bonifica dei siti inquinate. [in:] E. Mariotti & M. Iannantuoni (Eds.), *Il nuovo diritto ambientale*. Rimini: Maggioli.
23. Morzenti Pellegrini, R. (2009). L'abbandono di rifiuti e la (relativa) socializzazione del costo dei conseguenti obblighi ripristinatori. *Foro amm. CDS* (6), 1520–1566.
24. Natalini, A. (2007). Deposito incontrollato di rifiuti: nessuna responsabilità omissiva del proprietario del terreno. *Dir. giust. on line*.
25. Palombella, D. (2011). Il proprietario risponde per l'abbandono dei rifiuti sul fondo. *Dir. giust. on line*.
26. Piraino, F. (2012). Sulla nozione di bene giuridico in diritto privato. *Riv. crit. dir. priv.*, 459–488.
27. Pomini, E. (2013). L'individuazione degli obblighi d'intervento a carico del proprietario incolpevole e volontario. *Riv. Giur. Ambiente*, 95–99.
28. Rottgen, D. (2008). La fine del rifiuto (end of waste): finalmente arrivano le indicazioni da Bruxelles. *Ambiente e sviluppo*, 11–18.
29. Saija, R. (2008). La qualificazione giuridica dei sottoprodotti dell'industria agrumaria tra tutela della salute e disciplina dei rifiuti. [in:] Alcaro, F., Fenga, C., Moscati, E., Pernice, F., & Tommasini, R. (Eds.), *Valori della persona e modelli di tutela contro i rischi ambientali e genotossici*. Florence: University Press.
30. Salantiro, U. (2013). L'evoluzione dei modelli di tutela dell'ambiente alla luce dei principi europei: profili sistematici della responsabilità per danno ambientale. *Nuove leggi civ.*, 795–821.
31. Scozzafava, T. (2007). I beni. [in:] P. Perlingieri, *Trattato di diritto civile del Consiglio Nazionale del Notariato*. Naples: Esi.

Cultural Heritage Valorisation and Urban Regeneration. A Look at Italian Law

Valentina Prudente

1. Introduction

Italian public law scholars have always paid attention to the subject of cultural heritage (Grisolia, 1952; Cassese, 1976; Giannini, 1976; Merusi, 1976, and many others). This is because Italy offers an extensive gamut of cultural treasures, that are traditionally divided into categories according to their type (movable or immovable things, real estate, collections) or qualities (things of historical, artistic, archaeological or ethno-anthropological interest). Italian jurists quickly realized that the traditional categories referring to public goods in general could not be automatically extended to cultural things and so they began to explore the specific legal connotation, in search of a coherent frame of reference. After an initial moment when scholars were involved with the identification of the ‘cultural goods’ category and its legal regulation, research naturally took care of the ‘static’ aspects of the subject. These included the analysis of the forms of protection, the constraint procedures or the administrative powers over them (Berti, 1970). More recently, however, legal studies have turned to a more ‘dynamic’ profile that defines the use and enhancement of cultural heritage (Casini, 2001).

Careful investigation about the notion of valorisation, enhancement activities and administrative functions, aimed at promoting knowledge and better public appreciation, contributed to the emergence of an important aspect of cultural heritage which in an original stage of studies had not been immediately visible.

Over the last years, an intrinsic component of cultural heritage has gradually been unveiled and then progressively explored: its ability to generate economic development. This is due to the important contribution of economists, sociologists and political scientists.

It is understandable that the survey on this ‘quality’ began to fascinate even jurists, due to the intriguing implications existing in terms of negotiating tools

and new technologies in a perspective connected to administrative organization, tools of public-private cooperation and public policies, especially local ones, on the subject of cultural heritage.

The approach to the economic aspect of cultural heritage passes through the acceptance of a new and different relationship between forms of protection and valorisation activities, not placing one of them in conflict with the other (as if the valorisation activities could conflict ontologically with those of protection). The time has come to finally accept the idea that both functions which focus on cultural assets can be summarized and expanded, because 'protection' is not exclusively linked to conservation and 'valorisation' is not necessarily synonymous with exploitation (and consumption) of cultural assets (Piperata, 2014).

2. Protection and valorisation of cultural heritage: two complementary activities

It is now accepted that enhancement is functional to protection and conservation, because it activates resources that may be used for this purpose (Severini, 2016); and it is acknowledged that 'valorisation of cultural heritage' has a double nature. At first the cultural one, with the declared aim (see Article 6, Code of Cultural Heritage) of promoting knowledge of cultural heritage and ensuring the best public use of it, in order to encourage cultural development as referred to in Article 9 of the Constitution. And then the economic one (consisting in the use of assets to produce economically valuable utilities) generated by the fact that cultural assets are attractive and enjoyed by a large public.

The evolution of legislation on cultural heritage shows that a hierarchy is no longer required that places protection activities at the top, immediately followed by cultural valorisation and then, at the most basic level, economic utility.

So, we must not suppose that valorisation activities (cultural, even before economic) conflict with the primary interest of the protection and conservation of cultural assets.

However, it must be said that some influential scholars believe that the relationship between protection and valorisation activities has not changed (Pastori, 2014) and in the field of cultural heritage protection there is a common space of coexistence reserved for both protection and enhancement activities. But, according to these authors, we must accept that there are much wider areas in which enhancement activities must leave room for the preferable and necessary protection activities, which have to occupy a privileged place (Severini, 2016, p. 18).

It is easy to see that the majority of authors support the idea that protection comes first when considering the relationship between protection and valorisation activities. The organization of public administrations responsible for the

care of cultural heritage has long been sized and structured around this concept and, in many aspects, it still is.

It is necessary to note that enhancement of cultural heritage is on an equal footing with the aims that guide its protection and conservation. It constitutes a duty of public administration, as much as protection, and it ends up being directly connected to the more general principle of good public administration (Cammelli, 2012).

3. The dual nature of valorisation

It is now accepted that the dual nature of valorisation (cultural and economic), is directly linked to the institutional purpose of the public administrations in this sector. This field of public activities is deprived of the resources that guarantee the care of the underlying public interests. The dual nature is also connected with the direct and indirect implications, which come from the multilevel territorial systems (national, regional, local) in terms of economic development.

The notion of valorisation adopted by the Italian Code of Cultural Heritage and Landscape (Legislative Decree n. 42/2004), having the purpose of creating the conditions to develop culture, is characterized by an evident dynamic connotation. This is due to the fact that related activities consist in the organization of resources, structures and networks and the provision of functional skills for promoting the knowledge and public use of cultural heritage.

Cultural heritage generates resources due to the promotion of knowledge and significant enjoyment on the part of audiences. These resources will be reinvested in the sector to increase the development of culture and improve services for users (Perlo, 2016, p. 8).

The idea of 'cultural' valorisation related to cultural heritage is present in Article 9 of the Constitution, which assigns the Italian Republic the task of promoting the development of culture (Manfredi, 2011, p. 27). However, the other meaning of valorisation, that of economics, has been affirmed more recently, because of the administrative reform initiative carried out by the legislators of the 1990's, 'with the unchanged Constitution', called the 'Bassanini' decree by Public Functions Minister (Legislative Decree n. 112/1998).

The part of the 'Bassanini' decree that is reserved to regulate cultural assets and activities distinguishes the cultural heritage protection functions from the enhancement functions and through this distinction distributes competences between the State, Regions and other territorial entities. So, it inaugurates a different approach in the sector by identifying new tools designed to enhance the profitability of cultural heritage.

This new approach, which remains in the subsequent legislation, concerns the economic profile of valorisation, which becomes progressively, but inexorably, a new benchmark for administrative activity in the cultural heritage sector.

The following emerges from some provisions of the Cultural Heritage Code:

- Article 111.1 lists the permanent organization of resources, structures or networks as valorisation activities;
- Article 115, brings 'management' into the valorisation and defines two possible models;
- Article 117 lists many services offered to the people that have a commercial/entrepreneurial role (such as store management, commercial use of reproductions; cafeteria services; editorial and sales service of artworks' catalogues and any other information material).

In other words, if the valorisation activity includes the permanent organization of resources, structures or networks, it must be based on a self-sustainable approach. Furthermore, the possibility of reaching a wide audience makes cultural heritage a source of profitability and development, if correlated to its function and intelligently connected with the socio-territorial context.

In accordance with this, the economic profit of cultural assets is no longer negligible, even for jurists. Cultural assets have the intrinsic capacity to generate economic flows and become the engine of territorial development. Therefore, we must conclude that cultural heritage is capable of generating economic growth not only on the level of contract law and the proprietary use of it; but also on another level: the plan of common enjoyment of all citizens (Morbidelli, 2016).

4. Cultural heritage valorisation and urban regeneration

The subject of the valorisation of cultural heritage, so intended, has many points of contact with the processes of urban regeneration.

We usually use the phrase 'urban regeneration' in many senses and referred to many disciplines, but it is taken for granted that we are referring to something that goes forward- 'urban renewal' or 'urban redevelopment'. These last phrases are types of actions, public and/or private, that increase economic, social and cultural value in an existing urban area. Urban regeneration, instead, because is connected to the idea of sustainability, means much more than this. It is not only about buildings recovery or space renewal, it is about the redevelopment or rehabilitation of a neglected area particularly in regards to social and cultural aspects (Mantini, 2013).

So when we talk about urban regeneration, we are not thinking about the phenomenon called 'gentrification', that is a process activated by the arrival of wealthier people in a neighbourhood, causing the increase in property val-

ues, but changing the district's character and culture. This process does not have the character of sustainability. It economically and socially marginalizes the established resident of the area involved in gentrification, depriving the place of its original features.

'Urban regeneration' instead means sustainability even in the sense of promoting safety, maintenance and the restoration of public and private buildings; providing for reduction in the energy and water consumption as well as land consumption; promoting 'energy and ecological districts'; enhancing public spaces, urban greenery, neighbourhood services and preservation of historic centres to bring everyday life back to normal well-being; investing in the area's fundamental social and cultural resources. 'Urban regeneration' of a specific area of a town is connected to the rationalization of mobility and the waste cycle in order to save time, money and environmental resources.

In this framework it is easy to understand that restoring a historical monument or building a museum can contribute to improving the attractiveness and fairness of a depressed neighbourhood and stimulating private investment in it. If the use of cultural heritage in activities of urban regeneration becomes easier, it is because the general idea about valorisation has changed (Manfredi, 2017).

According to Article 6 of the Code of Cultural Heritage, valorisation includes all activities of promoting knowledge and ensuring better conditions of using and enjoying cultural goods, for improving the culture development. In reference to landscape, it also consists in the renovation of buildings and areas under protection that are compromised or in a state of deterioration.

The new attention to the connection between cultural goods and urban regeneration is also underlined by the internal regulation of the Ministry of Cultural Heritage, in the organisation approved by Prime Minister Decree n. 171/2014. Article 16 of the regulation assigns the tasks of promoting the redevelopment and recovery of urban suburbs through agreements with local authorities, universities and other public and private stakeholders to the 'General Management of Contemporary Arts and Architecture and Urban Suburbs'.

However, on the side of the Italian State city planning regulation, we see less attention to the theme of cultural heritage valorisation linked to city spaces regeneration.

There is not a general law about the re-use of existing buildings and protection of land consumption, even if a draft of State law on the subject is under examination by the Italian Senate Commission.

The city planning legislation, then, lacks an overview of urban development and sustainability, presenting fragmented rules that are not really organised with each other. Some Regions recently issued laws about land consumption and urban regeneration, but the different regulations show worrying discrepancies in

a subject where uniform legislation would be better in areas like environmental and landscape protection (Torelli, 2017).

However, the Regional legislation of the subject focuses on redevelopment programs, providing a strategy of urban regeneration not only aimed at improving city planning or infrastructural aspects, but also involved in pursuing urban welfare and environment care.

The role of local actors becomes very important in this framework. This is because programs can take place which connect cultural heritage and the regeneration of urban areas because of them.

5. Public/private partnership

The ‘valorisation’ of cultural heritage indeed requires the growth of public/private collaboration systems, especially if it is combined with urban regeneration policies. It is not necessary to list all the positive factors that this collaboration offers, but we can say that the forms of collaboration in the sectors of administrative power are not new: Article 118.4 of Italian Constitution gives a significant role to the initiative of single or associated people, in carrying out activities of general interest.

The needs of ‘cooperation’ in the field of cultural heritage are unique, so this partnership requires adequate discipline, which cannot always be found in the general rules about these instruments. In support of this, it is necessary to recall, first of all, the rule, placed among the general provisions of the Code of Cultural Heritage (Article 6, paragraph 3), which assigns the task of encouraging and supporting private participation in the valorisation of cultural heritage to the Republic. This provision makes public/private collaboration a basic element of the valorisation activity, which must be carried out through an integrated and participatory model based on legislative guidelines.

Article 111 of the Code describes the valorisation activities like those that consist in the permanent organisation of resources, structures or network or else in the availability of technical expertise or financial and instrumental resources, aimed at performing functions and purposes written in Article 6. The article adds that private persons can cooperate or participate in these activities. Valorisation is also a private initiative and it has a social recognized value.

In the Italian system the tasks of planning or managing valorisation activities are variously distributed among the State, Regions and local authorities, so policies of collaboration and participation become very important for efficient and effective actions.

For this reason, the need for integrated organisation in the context of development activities also emerges from Article 112 of the Code. The Code iden-

tifies instruments of coordination (on a conventional basis to define strategies and common objectives of valorisation and elaborate consequent strategic plans of cultural development and programs) and institutional instruments, authorizing territorial bodies (State, regions and local authorities) to create legal entities for the development and implementation of strategic cultural development plans and programs, in which private owners of cultural assets and private non-profit legal entities may participate.

This demonstrates that the effectiveness of the valorisation of cultural assets with the consequent beneficial effects on public use depends on the preliminary exercise of an adequate organizational function between public bodies and also between these and private individuals. It also depends on finding economic resources in order to overcome the limits resulting from the distribution of cultural heritage and the allocation of valorisation tasks at different levels of government.

Private collaboration needs contractual instruments like agreements with public authorities to realize projects of cultural heritage valorisation. This is well known to the legislator that even Article 151 (paragraph 3) of the Public Procurements Code (Legislative Decree n. 50/2016) provides special forms of partnership that can be activated by the Ministry of Cultural Heritage with private persons in order to ensure the enjoyment of the cultural heritage of the Nation and to encourage scientific research applied to protection. The article lists activities covered by these special partnerships, identifying them in 'recovery', 'restoration', 'planned maintenance', 'management', 'opening to public use' and 'enhancing value of immovable cultural assets'. This is considered an open clause, which tends to encourage atypical partnerships by recovering a wider participation in the field of cultural heritage (Rossi, 2018).

The introduction of this wide-ranging rule shows how important it is for the legislator to implement the forms of collaboration between the administrations invested with the tasks of protecting and enhancing cultural heritage and the private sector (both profit and non-profit). There are even more significant areas that need integration between public actors and private stakeholders. If this type of intervention is not properly programmed, there can be fragmentation. There are important areas that need to be integrated with public actors and private interests.

In effect these processes have even more value in the field of urban regeneration connected to intervention to enhance cultural heritage, where not only cooperation between public authorities and private persons, but also participation of local communities is an indispensable element for the success of enhancement strategies.

In successful experiences of EU programs like 'Culture for Cities', founded by the EU's Creative Europe, cultural heritage is considered as engine of economic growth and social inclusion. In fact, topics of these experiences are: increasing

access to cultural heritage; development of local community participation; realization of urban regeneration actions (Harrison, 2013).

So we can identify several levels of public-private collaboration:

- level of contractual relationships, which concerns public authorities and private entrepreneurs, who make their know-how and skills available for money or other benefits using contractual tools;
- level of project relationships with non-profit organizations, which carry out social projects aimed at promoting useful socially or cultural activities on behalf of the local authority;
- level of programmed relations, that concern the community of citizens, that through participation in urban regeneration programs are committed to collective well-being, benefiting in turn from increased development.

Public authorities implement the values of environmental sustainability and social cohesion by using the programming method and involving the local community in urban regeneration plans linked to the enhancement of cultural heritage. There are even more significant areas that need integration between public actors and private stakeholders. In other words, with the transition from the contract (between public and private entities) to the program (between public authorities and the local community) the themes of urban regeneration are easily and definitively introduced into urban agendas (Boscolo, 2017).

6. Conclusion

The brief examination of the trends in the Italian regulatory framework regarding cultural heritage valorisation shows that due to social changes, contributions of economists and evolution of legal studies, the concept of the economic value of cultural assets and the connection to this value seem to have been acquired by the legal system. This is especially present in the sector area, which is traditionally linked to profit, private persons and entities, and with the public interests that are directly linked with the use and maintenance of cultural heritage.

This is a significant change in the perspective, that finds its roots in Article 9 of the Constitution. This change of perspective has progressively increased through the reforms that, especially in the last twenty years, have affected this regulatory framework. Administrative organization of Cultural Heritage is not immune to this change: it demonstrates a certain 'structural' sensitivity to the issue, which will have to quickly become a 'functional' capacity to manage changes in a systematic perspective.

Protection and enhancement of cultural heritage do not travel on parallel lines, nor are they placed in a hierarchical position, but constitute a conceptual binomial that constantly interacts.

This is the consequence of the uniqueness of protection and enhancement activities. If in fact conservation and protection activities are linked to cultural heritage and also public use, it is clear that the vision relating to the assets must be unified.

This organic vision seems to be penetrating the State's administrative organization, once concentrated exclusively on protection. The relationships between the public sector and the private sector are changing, which are demonstrated by the current legislation in terms of closer collaboration and integration.

The valorisation tasks are not the exclusive prerogative of State public administrations, they are distributed among various public entities that are required to interact within a systematic and organized reference framework. This means that all competent public administrations, be they State, regional or local authorities, must put in place permanent collaboration tools (through agreements or through the creation of entities with specific skills in the field) and must strive to prepare programs and plans for the best implementation of cultural heritage protection and enhancement activities.

In this general framework, there is space for urban regeneration activities around a monument or a museum, inserted in a city area that needs enhancement.

The presence of a monument or a cultural institute in a depressed neighbourhood forces public authorities to think in terms of sustainable development of the district.

It is important to underline that public bodies must collaborate in planning activities and must use programming methods to generate development strategies. Urban programs must involve private entities and citizens, in order to facilitate the dissemination of activities for sustainable development and social cohesion.

Methods of programming and the practice of participation avoid the fragmentation of interventions and provide a systematic approach, which can promote the harmonious development of activities related to urban regeneration around cultural heritage on the part of all those involved.

Bibliography

1. Berti, G. (1970). Problemi giuridici della tutela dei beni culturali nella pianificazione territoriale regionale. *Rivista Amministrativa*.
2. Boscolo, E. (2017). La riqualificazione urbana: una lettura giuridica. *Rivista di Urban@it*, 1, 5.
3. Cammelli, M. (2012). Nuova legislatura e patrimonio culturale: il tempo è Scaduto. *Aedon, Rivista di arti e diritto*, 3.
4. Casini, L. (2011). La valorizzazione dei beni culturali. *Rivista Trimestrale di Diritto Pubblico*, 651.

5. Cassese, S. (1976). I beni culturali da Bottai a Spadolini. [in:] *L'amministrazione dello Stato*. Milano.
6. Giannini, M.S. (1976). I beni culturali. *Rivista Trimestrale di Diritto Pubblico*, 1, 3–38.
7. Grisolia, M. (1952). *Tutela delle cose d'arte*. Roma.
8. Manfredi, G. (2011). La valorizzazione dei beni culturali come compito costituzionalmente necessario/The enhancement of cultural heritage as a necessary constitutional task. *IL CAPITALE CULTURALE. Studies on the Value of Cultural Heritage*, (3), 25–31.
9. Manfredi, G. (2017). Rigenerazione urbana e beni culturali. [in:] G. Di Lascio (Ed.), *La rigenerazione di beni e spazi urbani. Contributi al diritto delle città*. Bologna.
10. Mantini, P. (2013). Rigenerazione urbana, resilienza, re/evolution. Profili giuridici. *Proceedings of Congresso Nazionale dell'Istituto Nazionale Di Urbanistica "Città motore dello sviluppo del Paese*.
11. Merusi, F. (1976). Commento all'art. 9 Cost. [in:] Scialoja-Branca (Ed.), *Commentario alla Costituzione*. Roma-Bologna.
12. Morbidelli, G. (2016). Introduzione. [in:] G. Morbidelli & A. Bartolini (Eds.), *L'immateriale economico nei beni culturali*. Torino: G. Giappichelli editore. Proceedings of the Conference organized in 2014 by the CESIFIN Foundation Alberto Predieri
13. Pastori, G. (2014). Le funzioni dello Stato in materia di patrimonio culturale. *Aedon, Rivista di arti e diritto*, 1.
14. Perlo, N. (2014). La valorisation économique des bien culturel locaux: un nouveau référentiel d'action publique. *Proceedings of the Conference "La valorisation économique des biens culturels locaux en France et en Italie", held in Toulouse, 21 November 2014*.
15. Piperata, G. (2014). *La valorizzazione economica dei beni culturali: il caso dei musei e delle collezioni. Proceedings of the Conference "La valorisation économique des biens culturels locaux en France et en Italie", held in Toulouse, 21 November 2014*.
16. Rossi, P. (2018). Partenariato pubblico-privato e valorizzazione economica dei beni culturali nel codice degli appalti. *Federalismi.it*, 2, 21.
17. Severini, G. (2016). L'immateriale economico nei beni culturali. [in:] G. Morbidelli & A. Bartolini (Eds.), *L'immateriale economico nei beni culturali*. Torino: G. Giappichelli editore. Proceedings of the Conference organized in 2014 by the CESIFIN Foundation Alberto Predieri
18. Torelli, G. (2017). La rigenerazione urbana nelle recenti leggi urbanistiche e del governo del territorio. *Istituzioni del federalismo: rivista di studi giuridici e politici*, (3), 651–679.

The Role of Administrative Law in the Economic Globalization Era

Francesco Martines

1. Introduction

This paper fits into the broader context of relationships between law and economics; in particular, it is destined to investigate the relationships of administrative law and global economy.

Historically these relationships were difficult because a full development of the economy needs freedom from every kind of restrictions and, on the contrary, administrative law is that branch of law that creates the rules and procedures through which public institutions manage and guarantee social coexistence, protecting general interests.

The protection of general interests has often involved the sacrifice or, in any case, the limitation of economic freedom. Over the last 50 years, a real tension between administrative law and the economy has arisen. Many politicians, supported in part by the scientific literature (Djankov, McLiesh & Ramalho, 2006), affirm that administrative law constitutes a strong limit to the economic development of a country and that, to overcome phases of economic stagnation, the weight of administrative law must be reduced.

This hypothesis needs to be verified in consideration of the most recent evolution of EU administrative law and, above all, in consideration of the new globalized economy.

More precisely, we must ask ourselves what the effects are on the administrative law deriving from the evolution of the markets and the very fast affirmation of a global and virtual economy that involves the whole world crossing every boundary with a click.

2. The features of administrative law and its reflection on economic topics

By administrative law we mean the rules governing the power of the State to intervene in the life of citizens to guarantee the protection of the common and general interests.

This intervention also concerns the economic life of a country.

In fact, administrative law is today subjected to a strong pressure from economic development more than any other areas of the law. In a context characterized by globalized markets and the need for economic growth that can no longer be postponed due to the international economic crisis, attention must be paid to the rules of administrative law governing market access and economic activities. Surely one of the main factors affecting economic growth is the way the markets are regulated.

The general idea is that economic growth is favored by a less intrusive and pervasive administrative law. Hence, it has been argued that administrative law constitutes a real limit to the free development of economic relations. By way of example, it is sufficient to think of the so-called “state aid” with which the States decide to help certain areas of the economy rather than others, altering natural competition.

The features of administrative law that, more than others, would make the system unfavorable to rapid economic development are to be identified in the circumstance that it emanates “from the top” (the Parliaments), that is state authorities that do not have enough knowledge of the real conditions of global markets. Furthermore, administrative law – precisely because it comes from the top – is contained mainly in hard law rules, which can be modified and adapted to changes with great difficulty and slowness.

Another element in contrast with economic growth would be constituted by the fact that, through administrative law, each State exercises its sovereignty by limiting, more or less openly, the access to the market by investors from other countries.

Finally, with specific regard to the Italian legal system, investments by economic operators would be discouraged by the high level of bureaucracy and the slowness of the procedures imposed by administrative law.

Moving from these considerations, I will try to explain if and how administrative law should represent a kind of support to sustainable economic development in the globalization era.

3. The apparent difference between civil law systems and common law systems

In some scientific studies (Dicey, 1959; Hayek, 1973) dealing with these issues it is frequent to read that there is a deep difference in the approach with which administrative law affects the economic life of the country depending on whether it is involved in “civil law” system rather than a “common law” system.

According to this theory in the civil law system, administrative law is too rigid by extremely compressing the individual’s economic freedom; on the contrary, in common law systems administrative law would be softer, leaving more space for economic freedoms.

The administrative law of civil law systems (such as the Italian law) is considered a cause of the fact that the Italian market is not so attractive to global economic investors; due to the same reasons (internal administrative law and high taxation). Conversely, Italian companies would be uncompetitive at the level of globalized markets.

Is this difference correct and acceptable? If we examine how common law systems discipline the market we will find (in the same way that happens in the civil law systems) administrative law rules introduced “from the top” (by Parliaments). Indeed, in common law systems all economic discipline is generated through statutory law (Calabresi, 1982), i.e. legislation enacted by the Parliament (for example the British privatization laws of 1980 or the US Sarbanes Oxley Act of 2002).

There is also another relevant aspect that leads one to believe that the described difference is only apparent.

As it is known that the evolution of the global economy reduced the role of domestic administrative laws significantly and favored regulations coming from EU and other international organizations (Cassese, 2006).

EU and International Law introduced common lines in all internal administrative law systems so that, in my opinion, it is not correct to underline the deep difference between civil law and common law systems, at least in the field we are investigating.

Finally, in recent years the role of jurisprudence has continuously assumed greater importance; in fact, most laws on the subject choose to introduce very generic rules, leaving the authorities and the courts the task of interpreting and adapting the general rule to the concrete cases. Antitrust law is a typical example of an area in which this regulatory approach occurs.

On the basis of these considerations it is not possible, in my opinion, to draw a clear distinction between administrative law and common law and, above

all, it is not correct to consider the former as unsuitable for the markets and the latter suitable for their good functioning.

Administrative law is present in all legal systems and it must be considered a positive resource for the global market.

It is therefore necessary to understand how administrative law can be configured to be adequate to market expectations without losing its original characteristics.

4. The new approach of administrative law: liberalization and protection of human rights

The question, therefore, in my opinion, should not be placed in terms of the quantity or weight of administrative rules (so, where there is less administrative law there is more economic freedom and where there is more administrative law there is less economic development).

The question should rather be posed in terms of the quality and attitude of administrative regulation, moving from the idea that – as demonstrated by EU law and international law – administrative law cannot do less for a sustainable economic development (Stiglitz, 2002).

Administrative law must not stop intervening in economic relationships and it should also institute the possibility of limiting the abuse of vulnerable people that can result from a total deregulation of the economy.

What administrative law must do, however, is achieve the results through flexible tools that recognize trust and empower those who want to start an economy activity.

In this direction it is necessary that those who want to start an economic activity should not be obliged to wait for explicit authorization from the State because this kind of procedure puts people in a situation of uncertainty that, finally, has a cost.

To guarantee control, administrative law can favor a “downstream” audit: in this way, those who want to start an economic activity can send a report declaring the compliance of the activity with the law, under his/her own responsibility.

In Italy this solution was introduced 10 years ago by the general Act of Administrative Procedure (the Law n. 241/1990, articles 19 and 20). We can say that through this rule a true economic liberalization has started.

What are the risks of full liberalization?

A first kind of risk is related to the position of third parties (persons or private entities unrelated to the relationship between those who intend to start economic activity and the public administration) who may suffer direct damage from the specific economic activity.

In fact, if there is a preventive authorization, the State can carry out a verification – before the economic activity get started – and avoid the negative consequences that the activity can have on other people by not releasing the authorization.

If, in the name of liberalization goals, the control by the State on the economic activities is an *ex post* (downstream) control (when the activity gets started), what kind of protection can the State offer to the people who suffer damage?

The Italian system solved this problem by recognizing a partial protection to these persons; in fact, people who suffer damage from an activity started without an explicit authorization can contact the public administration to solicit an effective *ex post* control and obtain a suspension of the economic activity; alternatively, they can directly apply to the Court and obtain a solution by a judgement.

It is evident that in both cases the protection offered by the system is weaker than in the past.

The needs of protection of the subjects that can suffer direct damage from the economic activity are not the only relevant ones.

Frequently there is a need to protect collective interests which have constitutional relevance (for example: environment, health, public security, human rights protection). In these cases, the Italian system sacrifices the interest in a full economic liberalization in favor of the aim to ensure a particular and rigorous “upstream” control on the compatibility of the economic activity with the primary interests involved.

In all these cases those who want to start an economic activity which involves these kinds of interests cannot start until the public administration releases an explicit authorization.

On the basis of these considerations, therefore, we can say that in the era of globalization administrative law should play a fundamental and strategic role.

This role consists in identifying, case by case, the point of balance between two fundamental interests for the progress of the industrialized countries: on the one hand, the interest in a rapid economy, without barriers and not hindered by bureaucracy; on the other hand, the protection of the rights of the most vulnerable people (first of all those who live on the poverty line) and of the general primary interests related to the protection of fundamental human rights.

5. The relevance of discretionary power

The diffusion of tools of liberalization of private economic activities determines a further effect that strengthens the role of administrative law in the era of globalization.

Although, in a first phase, liberalization determines a compression of administrative power which gives space to economic operators, in a second phase it

expands. This phenomenon is linked to the role that the public institutions must play in order to check that economic activity is effectively compliant with the general rules imposed. This control implies a concrete action that concerns the verification of the conformity of the activity started with respect to the general regulation.

This kind of control presupposes the exercise of a deep discretionary power by the public authority, since the authority must concentrate its evaluation on the concrete and real profiles of the action carried out by the private subject (Tesauro & D'Alberti, 2000).

Moreover, in the name of protecting economic freedom, the public authority should choose solutions that can better balance the protection of collective interests with the progress of economic activity.

It can be observed, therefore, that the phenomenon of liberalization has not reduced the space of administrative law, as one might think at first glance. On the contrary, this phenomenon has promoted an implementation of the role of public authorities (and consequently of administrative law) that must operate an effective control over the economic activities undertaken, relying on discretionary and non-standardized assessments.

One of the areas in which the value of the public discretionary power is most appreciated is that of the antitrust discipline (D'Amato, 1997).

Traditionally administrative law, as noted, guarantees the balance between public power and private freedom. In my opinion, the recent EU antitrust rules on market regulation in sectors such as financial markets, energy, communications have determined a strengthening of the role of administrative law in the sense that it has the task of subjecting entrepreneurial power to limits and checks to ensure that the freedoms of all categories of subjects involved in the market are protected: other entrepreneurs, investors, savers, workers and consumers.

For example, large multinationals in the telecommunications sector have been subjected to special obligations for the purpose of guaranteeing access to infrastructure for other companies; large operators in the broadcasting sector cannot exceed certain market thresholds; companies in the electricity and gas sectors that previously operated in a monopoly regime were obliged to sell market shares to ensure that other operators could compete.

In Italy, as in other EU countries, the supervision of compliance with the antitrust rules is entrusted to special public authorities that operate in conditions of strong autonomy and independence with respect to Government.

Economic freedom, as a fundamental right protected by the Italian Constitution (Article 41), is a pillar of antitrust law. When, however, the exercise of that freedom-right determines agreements that restrict competition, or abuse of a dominant position, or concentrations between companies that reduce effec-

tive competition, business activity becomes illicit. In these cases, business becomes negative market power (Landes & Posner, 1981) and it needs to be sanctioned by public authorities.

This distorted condition of the free market can occur even if a company does not assume a clearly illicit behavior; this happens when an economic operator takes a “dominant position”. As the jurisprudence stated, a company gets a dominant position when it has the power to hinder and curb effective competition (EU Court, 14 February 1978, case 27/76). As has been observed by the doctrine, the dominant position implies the ability of a company to charge prices at a level higher than its own in a market in actual competition, maintaining profit margins (Landes & Posner, 1981).

The public authority who manages these topics is not only independent of the Government, but is also “neutral” in the performance of its functions, among which there is a kind of procedure largely inspired by the process in front of the Courts.

It is not very frequent, in Italian public law system, that administrative authorities hold functions destined to solve conflicts through a decision that has similar effects of a judgment released by a court. Because of the neutral position of the administrative Antitrust authority, exceptionally, it exercises a sort of jurisdictional power (De Benedetto, 2000). It is evident, therefore, that economic globalization (and the connected issues related to the protection of competition between companies from every part of the world) has led to an expansion of the traditional areas of administrative law to include functions that are proper to the jurisdictional power within it (D’Alberti, 2018).

6. The effects on the organization of public institutions

The considerations about the effects of economic globalization on the area of the activity of administrative law (which is not reduced but rather expanded) have further and equally significant implications in terms of organization.

The organization of public institutions, in fact, in many EU countries (for example in Italy) is anchored to a hierarchical approach which, compared to these new topics, proves to be inadequate and inefficient. The themes of the global economy, in fact, are characterized by high technicality that makes the traditional model of public institution unprepared for new challenges.

In this sense the creation of independent authorities dedicated to the protection of specific sectors of the economy constitutes a first step towards the modernization of the organization of public administration. Still, however, there is a long way to go: the constant training of staff working in public administrations has a fundamental importance to make them truly competitive in the

domestic and international market. Moreover, still on the organizational level, it is very important that leaner procedures be developed that allow us to overcome unnecessary and obsolete forms of bureaucracy that represent one of the main obstacles to the country's economic growth.

7. Conclusion

Facing this situation, it is possible to trace some solutions.

Is there space for administrative law in the era of economic globalization?

The answer is yes if we try to look at the quality and attitude and not the quantity and weight of the public action. As noted above, the economic globalization has placed new areas of intervention in administrative law and therefore new challenges for it to face.

How can State control be reconciled with the need to protect economic freedom?

I believe that market globalization increases the demand for public control, rather than decreasing it. The risks of economic distortions, damage of fundamental rights, the sacrifice of the most vulnerable social classes continue to grow and must be managed by public administrations, in particular by those that are directly elected by the people.

Only public institutions, before and better than a Court, have the discretionary power that allows to get decisions that are "case by case oriented" that can compound the opposing needs and ensure a good balance.

In other words, thinking of a market free from the mediation of administrative law, besides being a chimera, probably reveals an error of perspective that does not consider the risks of the globalized market.

What challenges does public administration have to face at the organizational level?

To achieve the goals we have discussed, public administration needs efficient public employees with managerial skills, who are conscious about the role that the system assigns them.

In conclusion, administrative law should maintain its traditional functions in the era of economic globalization (defining rules about the exercise of public power) and has acquired an additional function strongly related to the protection of fundamental rights.

Bibliography

1. Amato, G. (1997). *Antitrust and the Bounds of Power: the Dilemma of Liberal Democracy in the History of the Market*. Hart Publishing.
2. Benedetto, M.D. (2000). *L'Autorità garante della concorrenza e del mercato*. Bologna.
3. Calabresi, G. (1982). *A Common Law for the Age of Statutes*. Cambridge: The Law-book Exchange, Ltd.
4. Cassese, S. (2000). *La nuova costituzione economica*. Roma-Bari.
5. Cassese, S. (2006). *Oltre lo Stato*. Roma-Bari.
6. D'Alberti, M. (2018). Intensity of Judicial Review of Administrative Power: Changes and Prospects. *Rivista Triestrale di Diritto Pubblico*, 3, 891–906.
7. Dicey, A.V., & Wade, E.C.S. (1959). *Introduction to the Study of the Law of the Constitution* (Vol. 10). London: Macmillan.
8. Djankov, S., McLiesh, C., & Ramalho, R.M. (2006). Regulation and Growth. *Economics Letters*, 92(3), 395–401.
9. Hayek, F.A. (1973). *Law, Legislation and Liberty, I, Rules and Order*. Chicago: University of Chicago Press.
10. Landes, W.M., & Posner, R.A. (1981). Market Power in Antitrust Cases. *Harvard Law Review*, 94, 937–996.
11. Stiglitz, J.E. (2002). *Globalization and Its Discontents*. London.
12. Tesouro, G., & D'Alberti, M. (2000). *Regolazione e concorrenza*. Bologna.

Technology and New Enterprises: the Activity of Online Platforms between Law and Economy

Roberto Caratozzolo

1. Introduction

Nowadays digital innovation has been playing an increasingly vital and fundamental role in the creation and development of new business activities which, thanks to this tool, are able to find new market spaces and interesting growth prospects both in innovative and in traditional fields.

At the core of these substantial changes there is the growing technological progress, that is influencing and transforming the lives we lead, our behaviors, the way we work – as individuals, in business, and in our communities, as it becomes more integrated across all sectors of our economy and society¹. Moreover, it is deeply modifying the economic system, generally reshaping how goods and services are provided and challenging well-established business models and traditional relations among intermediaries, companies and consumers. Global economy has rapidly become digital, because information and communication technology (ICT) is no longer a specific sector but the foundation of all current innovative economic systems.

New enterprises are growing up directly through digital channels and IT technology but, also, traditional economic activities and businesses are progressively transforming themselves into mainly digital activities, with updated structural and functional characteristics that are absolutely different from the known mechanisms of intermediation, markets, infrastructures and supplied services. Information technology allows these activities to be more flexible and more adaptable to the several needs of an ever-growing number of people.

¹ In this regard some authors considered that technology has a regulatory function. So Reidenberg (1997) and Lessig (1999) spoke about “code as law” or “lex informatica”, where hardware and software are able to determine the behavior of the actors confronting each other in cyber space.

This new trend can have several effects in different fields, certainly economic but also personal, social and legal, being absolutely interesting for its skill to involve, at the same time, values and interests of different nature, believed necessary for the overall perspectives of development that they can guarantee. For these reasons, there has been an extensive debate for some years at domestic and international level, in order to identify adequate measures which, promoting a correct development of this kind of business, can contribute to achieve a fair and sustainable economic growth.

Technological transformation brings an entrepreneurial innovation that generates new business models, new markets and new forms of revenue. In this regard, we talk about “Disruptive Economy” to indicate how, through the growing use of technology and IT systems, traditional companies and their traditional ways to operate, are disappearing, in favour of new initiatives characterized by speed, efficiency, immediacy and low costs².

Some authors, more analytically, have said that not only the leading companies in a sector disappear, because they are weakened and replaced by others, but also the business areas themselves, which lose their characteristics, are replaced by new ones with different and innovative principles.

2. Main features about online platforms activity

These activities are based on specific new structures that put in direct connection all operators, both producers and consumers or offers and users or companies and clients, allowing savings in terms of time and money and allowing more efficiency, more economic sustainability, creation and circulation of new wealth. In this regard we talk about digital online platforms, that are characterized by operating in a peer to peer logic, making it easier to develop of new kind of relations and sign up contracts directly among users, without any intermediation among their economic and legal status. So, online intermediation services have become fundamental tools for businesses, customers and markets in general. In fact, they can help to improve consumer well-being – allowing them to easily access to many services and to increase range choice of products and services offered online or offline – and private or public companies too – offering access to new markets and more business opportunities, also reducing related costs. Online intermediation services have increased the number of commercial transactions, creating a real dependency of commercial users, in particular micro, small and

² According Online Platforms and the EU Digital Single Market (2016), “the dynamics of the digital economy ... disrupt existing markets and simultaneously challenge the (sector specific) rules that govern those markets”. As a result, most of new digitalised activities are above the law.

medium-sized enterprises, to more easily and quickly reach new customers in various parts of the world.

There is no specific definition about digital platforms. The European Commission (COM, 2015), did not define exactly the case, although in a document that opened the related consultation referred to the platform as the company that operates on “bilateral” or “multilateral” markets (*Public ...*, 2015).

Despite this, with the term digital platform we usually indicate those subjects that allow interaction among users of a services or a products with their suppliers, achieving a more efficient coordination between them in different market sectors. In general, they can be considered as particular intermediaries specialized in promoting the coordination between two or more groups of different people with different interests (Ammannati, 2019). In fact, while in traditional markets, this coordination is ensured by the physical presence of both of them (as in the case of fairs), in a digital context their presence is virtually ensured by the same platforms (Coyle, 2016). Digital platforms today have such an impact that they transversally affect all aspects of human, personal and economic relations, since they play a decisive role in our society in carrying out daily relationships between a very large number of people who use social media network as a digital meeting place, e-commerce platforms as new markets, search engines as doors to human knowledge.

Online platforms have dramatically transformed economic systems in digital economy and brought many benefits in today’s digital society. They play a primary role creating “digital value” that underpins future economic growth and consequently are of major importance to the effective functioning of the digital single market and they continue to evolve at a pace not seen in any other sector of the economy. Currently, they cover a wide-ranging set of activities including online advertising platforms, marketplaces, search engines, social media and creative content outlets, application distribution platforms, communications services, payment systems, and platforms for the collaborative economy³.

According to the European Commission (COM, 2016), online platforms share some important and specific characteristics. In fact, they have the ability to create and to shape new markets, to challenge traditional ones and to organize new forms of participation or conducting businesses based on collecting, processing, and editing large amounts of data; they benefit from ‘network effects’, where, broadly speaking, the value of the service increases with the number of users; they often rely on information and communications technologies to reach their

³ We can consider as typical examples of this trend Google, AdSense, DoubleClick, eBay, Amazon Marketplace, Google and Bing Search, Facebook and YouTube, Google Play and App Store, Facebook Messenger, PayPal, Zalando marketplace and Uber.

users, instantly and effortlessly; they play a key role in digital value creation, notably by capturing significant value (including through data accumulation), facilitating new business ventures, and creating new strategic dependencies.

These main features have brought a range of important benefits to the entire system. Digital platforms are able to facilitate efficiency gains, to increase consumer choice, thereby contributing to improve competitiveness of industry and to enhance consumer welfare. They also have the potential to enhance citizens' participation in society and democracy, as they facilitate access to information, in particular for younger generations and across borders⁴. Platform economy presents major innovation opportunities for companies, as well as for established market operators to develop new business models, products and services.

In this regard we talk about “Disintermediation” or “Re-intermediation”: traditionally regulated activities are disintermediated and, at the same time, re-intermediated by online platforms.

So, the so-called platform economy grows up, based on new organizational methods and on new economic and legal relations developed through technology. Traditionally, economic doctrine identifies two different kinds of on line platforms: capital platforms and work platforms. The first connect customers and sellers directly, allowing them to sell assets they own (a typical example is Airbnb). The second ones, instead, allow the meeting among customers and service providers who can be carried out in the physical world (gig work) or virtual (on-demand work). Within the broad category of digital platforms, however, there are also different economic subjects that operate in other sectors such as advertising or retail (Google, Facebook, Amazon). This distinction is used in most international studies and research, although there are further activities that can be carried out through platforms that confirm the large heterogeneity and complexity of this new economic kind.

Digital platforms use tools capable of tracking and transforming a lot of relevant information. They process and store numerous data in real time and use them to learn and to improve the effectiveness of algorithms, through which information is transformed into organizational and economic value.

The control of enormous amounts of information, the so called big data, within the platforms in which all those involved can exchange the functions of workers, consumers and suppliers of goods and services, makes the boundaries between business and the market weak (Franzini & Guarascio, 2019). According to traditional economic doctrine, in fact, the element discriminated between

⁴ See details in Report on 2015 public consultation on EU Citizenship: Share your opinion on our common values, rights and democratic participation. The by far biggest group among the 2.170 respondents were young people aged 18–30 (29%). See also (Standard Eurobarometer 82 ..., 2014).

business and the market is information. The unavailability of complete and easily accessible information restricts or eliminates the space for market exchanges, or for price-based exchanges. In the presence of incomplete information and unequally distributed among economic operators, the company emerges for its function of reducing transaction costs and favouring the creation of otherwise impossible economic transactions. However, while on the one hand platforms make it possible to reduce information asymmetries and transaction costs, reducing inefficiencies and increasing economic opportunities, on the other they create a kind of monopoly position, being able to get high benefits from the management of a huge bulk of information

We can consider that all new enterprises inspired by these criteria are part of a big movement identified as “Sharing Economy” or “Collaborative Economy”⁵. Someone also talks about “Crowd-based capitalism” rather than sharing economy, because services are provided by people and not by companies (crowd-based), they are paid in any case and they aren’t free.

Actually, it could be considered not strictly as sharing economy but as a new form of capitalism in which the individual’s skills are offered to on line portals but not to the company they are working for.

This system is able to encourage more asset sharing and more efficient use of resources, which can contribute to the European Sustainability Agenda and to the transition to a circular economic system.

In the international field, this main features have become one of the most important criteria to inform next possible legal or administrative interventions. In fact, among seventeen targets on poverty removal, women’s empowerment, climate change, political and economic inclusion and governance standards, aimed at managing the global lag for the next years, tend to identify a process of change based on an integrated approach, and the different dimensions – economic, social and environmental – are considered equally fundamental to ensure a sustainable economic growth model⁶.

Precisely for this potential to represent and realize, at the same time, interests of different nature, public and private, a broad academic, political, institutional debate is focusing on this new type of enterprises, as it is necessary to find certain rules and specific legal principles to promote its correct development and to ensure consistency, certainty, and trust.

⁵ Koopman, Mitchell and Thierer (2015) according to which sharing economy is “any marketplace that uses the Internet to bring together distributed networks of individuals to share or exchange otherwise underutilized assets” and it includes goods or services that are shared or swapped “for fee or for free”.

⁶ In these terms (United Nations, 2015).

3. The European debate about regulation of online platforms

The growing importance of the digital economy linked to the diversity and fast evolution of platform environments also raises new policy and regulatory challenges⁷. While offering great potential in terms of efficient access to (cross-border) markets, European businesses cannot fully exploit the potential of the online platform economy due to a number of potentially harmful trading practices and a lack of effective redress mechanisms in the European Union. At the same time, online services providers concerned face difficulties operating across the single market due to emerging fragmentation. Debate about rules concerns those threats regarding the growing power of the platforms on markets, the effects on labour market as well as the protection of consumers and users and the data they constantly supply.

Currently business models linked to on line platforms are not regulated homogeneously in Europe, but comply with specific rules set for corresponding contractual frameworks.

In fact, while certain parts of them are framed by regulation, but only at local or national level, other parts may fall into so called “regulatory grey areas”, because it is not always clear which regulations are necessary to apply. Moreover, the current regulatory framework may not be effective in preventing some of illegal practices, nor in providing effective redress. Significant emerging regulatory fragmentation in the EU further complicates the regulatory environment. Whilst primarily resulting in impacts for business users, this situation affects all actors in the multi-sided online platform ecosystems, including consumers, which could face a reduced choice of competitive goods and services. This causes significant differences among the Member States due to inconsistent and inhomogeneous regulations. The lack of certainty about legal framework, despite the natural growing use of these models, does not allow an adequate development of new business models and causes a certain reluctance to access and to use their services, especially in those who do not often use digital instruments.

The central problem that takes over is finding the right tools to favour these new entrepreneurial structures, which can enhance all the interests involved.

⁷ According COM (2018) at present, more than a million EU enterprises trade through online platforms in order to reach their customers, and it is estimated that around 60% of private consumption and 30% of public consumption of goods and services related to the total digital economy are transacted via online intermediaries. The growing intermediation of transactions through online platforms led to a progressive dependence of the business on platforms that become similar to gatekeepers towards markets and consumers.

Sharing economy, as we have seen, blurs traditional lines between consumers and providers, employees and self-employed, or the professional and non-professional provision of services. This can result in uncertainty over applicable rules, especially when combined with regulatory fragmentation stemming from divergent regulatory approaches at national level.

In an overall design aimed at taking advantage of the huge potential offered by new technologies and to promote financial innovation, European Union is analysing both possible advantages and risks connected with internet use in the entrepreneurial sector, considering sharing economy as a suitable tool through which it is possible to achieve macro and micro economic goals, as sufficient growth, adequate stability, integrity, efficiency and competitiveness of the entire economic sector, but also to use it to guarantee consumers, companies and investors' trust and protection. In order to fully take advantages of platforms economy, European Union considers necessary to guarantee adequate levels of business confidence in the online platforms with which they establish business relationships. To realize these objectives, transparency rules and effective mechanisms for legal or extralegal actions that can guarantee protection of users and cross-border operation of platforms are necessary, in a general fair, predictable, sustainable and safe online context. The fragmentation of legislation in order to different commercial sectors should be limited, while maintaining, however, the operation of those individual States rules, in particular contract law with reference to the rules on the validity, formation, effects or termination of a contract, when they comply with Union law and the relevant aspects are not known to be regulated. Member States should remain free to apply national legislation that prohibits or sanctions unilateral behavior or unfair commercial practices.

In any case, legislators and regulators cannot avoid addressing the issue of the relationship between regulation and technology because it changes the structure of the markets, of the relationships (even contractual) among new operators and users, the characters of the activity and the preferences and behaviour of individuals.

The current European legal framework is designed to regulate conventional businesses and to protect rights of consumers the vulnerable part in a business transaction. It isn't easy to apply it directly to a new business, because, as we have seen, there are large differences in them. There are a lot of doubts about interpretation and application of traditional rules, related to the different aspects seen before.

For example, the geographical extent of the activity carried out by digital platforms. In fact, they naturally turn to international markets because, through the IT channels on which they operate, they can cross the boundaries and address consumers/users from other countries, different from those in which they

are based. This poses a problem of identification and application of exact rules and principles for the protection of consumers and, in general, of markets.

In every single European State different rules reflect different approaches to tackle the challenges of these new business models. Due to these reasons, the Parliament and the European Commission are analysing their most immediate issues.

In June 2016, the Commission published a Communication “European Agenda for the Collaborative Economy” with the aim to address concerns over uncertainty about rights and obligations of different actors and in order to provide answers from an EU perspective.

The Communication aims to provide a non-binding guidance on how the existing European legislation can be applied to these enterprises. It examines issues faced by market operators and public authorities alike clustered within five key areas: 1) Market access requirements for on line platforms; 2) Liability regimes; 3) Protection of users or consumers; 4) Self employed and workers in this model; 5) Taxation.

In May 2017 the European Parliament has adopted a “Resolution” where it evaluated positive aspects but also the possible risks connected to this type of activity, and has put forward a proposal for a new regulation that takes into account the need, for the purpose of legal certainty, to identify new tools to ensure an adequate development of sharing economy.

The Parliament has analysed several topics about consumer rights and consumer protection regime on sensitive issues which concern data privacy, transparency and reliability of information provided to the consumers, liability regimes of the collaborative platforms, algorithm fairness and possible forms of discrimination.

An unique and homogeneous framework should be necessary to guarantee a Digital Single Market in which the free movement of goods, persons, services and capital is ensured and where individuals and businesses can seamlessly access and exercise online activities under conditions of fair competition, and a high level of consumer and personal data protection, irrespective of their nationality or place of residence. Achieving a Digital Single Market will ensure that Europe maintains its position as a world leader in the digital economy, helping European companies to grow globally (COM, 2015). Digital economy is able to expand markets and foster better services at better prices, offer more choice and create new sources of employment.

The main European legal politic goals are improving access for consumers and businesses to online goods and services across Europe, creating an adequate development trough right conditions for digital networks and services, maximising the growth potential of European Digital Economy.

Digital Single Market will provide businesses, particularly entrepreneurs, with new opportunities to scale up across Europe. Immediate action is therefore required to break down barriers to cross-border online activity including differences in contract and copyright law between Member States and reducing VAT related burden. Part of building consumer trust in cross-border online sales requires affordable and high-quality cross-border parcel delivery services, which do not exist today

4. Possible development prospects

The current international debate is about a central topic, that is the appropriateness or the need for proper legal framework to discipline the phenomenon, or if it could damage its nature and its values.

In fact, supporters of the sharing economy don't want strict rules because these could be incompatible with the spontaneous use of the web and they could disincentivate the development of these new models.

A new opinion, that is emerging progressively both at institutional and doctrine level, believes that a specific regulatory system should be appropriate with set rules that could provide operators with certainties and clear and transparent fixed points, to undertake a new initiative and be able to use it. These rules could ensure fair competition, transparency, consumer protection and clarity on taxation. Regulation does not damage business initiative, if carried out with spontaneity and immediacy, but, on the contrary, it could incentivate it, providing operators with certainty in legal and economic relations.

The further issue that regulators and legislators are facing is whether innovation can be traced back to the existing legal and regulatory framework using traditional rules or if it is necessary to imagine new specific rules considering diversity of the services offered but also specificity of technology.

In this respect, it would be appropriate that all regulators and special authorities ensure an adequate balance between creative freedom for business and necessary regulatory system. These new regulatory measures must guarantee appropriate consumer protection. At the same time they must be proportional and strictly necessary to pursue the chosen objectives. In other words, regulators should avoid imposing obsolete regulations on innovative companies. And every regulatory measure, although necessary, should be balanced with the specific public objectives worthy of protection and sufficiently flexible to allow new forms of competition.

Regulators can't attempt to limit or prevent telematic economic activities, which would be detrimental to the development of the new economy but, on the contrary, after having analyzed the differences among different species of telematic swaps, they should adopt specific measures that ensure freedom of access to

the market of new competitors, the protection of consumers/users and technological and economic innovation.

It is necessary to overcome a certain level of generalized reluctance that currently represents one of the most important natural factors limiting the way we resort to these techniques through a specific, clear and homogeneous regulation at a European level, that could reinforce operators' trust in these new business models. A common and shared strategy, that can eliminate the existing contradictions, could be important.

The European institution is moving in this same direction, supporting the development of the collaborative economy, clarification of the existing applicable legal provisions and identifying new ones to shape its course in a socially, economic, but also balanced and sustainable manner. In this contests European Commission has adopted a specific Regulation that promotes fairness and transparency for business users of online intermediation services, about terms and conditions to carry out online services, suspension and termination, ranking, using data, accessing to handling system (COM, 2018).

On line platforms can really represent a structural phenomenon that, if adequately addressed, regulated and controlled, can offer real supports to make the entire economic system transit towards the most modern criteria dictated also by the circular economy. The intrinsic cross-border nature of the online services at issue implies that the objectives cannot be reached effectively by Member States alone. In this context, it is convenient on the one hand to avoid heavy and fragmentary regulation, which inhibits the prospects of a flourishing development and profitable of the related activities, on the other, a total lack of discipline.

A minimum common denominator of rules at European level, possibly harmonized, is essential to solve the above mentioned problems. Ensuring that common, suitable and effective rules apply to providers of the services concerned and the users of those services regardless of the law and forum identified in terms and conditions is necessary. To do this European Regulators, after eliminating all the contradictions of innumerable local rules, should dictate the guidelines and fundamental principles of the new entrepreneurship capable of creating a unique, homogeneous level playing field, with the same rules for all operators, adopting a solution that is based on a functional rather than structural regulatory approach⁸. It may be appropriate to adopt the principle dictated by the Financial European Authorities, "same services and same risks" for which the same rules should be applied, regardless of the type of legal entity concerned or its location in the Union. (*Report ...*, 2017). This approach could ensure a level playing field

⁸ For an analysis on the contrast between different possible legal approaches, see (Lynskey, 2017).

among stakeholders operating in the digital and ‘traditional’ markets as well as ensuring a similar level of protection for consumers of financial services. What should be regulated is the provision of a service or an activity independent from the form of companies providing this services or activities.

Bibliography

1. Ammannati, L. (2019). Verso un diritto delle piattaforme digitali?. *Federalismi.it*, 3, 1–18.
2. COM (2015). *A Digital Single Market Strategy for Europe*. Brussels, European Commission: Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions. COM/2015/0192 final.
3. COM (2016). *Online Platforms and the Digital Single Market Opportunities and Challenges for Europe*. Brussels, European Commission: Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions. COM/2016/0288 final.
4. COM (2018). *Proposal for a Regulation of the European Parliament and of the Council on Promoting Fairness and Transparency for Business Users of Online Intermediation Services*. Brussels, European Commission. COM/2018/0238 final.
5. Coyle, D. (2016). *Making the Most of Platforms: a Policy Research Agenda*. Retrived on 30/05/2019, from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2857188.
6. *EU Citizenship: Share your Opinion on our Common Values, Rights and Democratic Participation (2015)*. *European Civic Forum*. Retrived on 30/05/2019, from: <http://ec.europa.eu>.
7. Franzini, M., & Guarascio, D. (2019). Questa volta è diverso? Mercati, lavoro e istituzioni nell'economia digitalizzata. *Sinapsi*, 8(2), 19–34.
8. Koopman, C., Mitchell, M.D., & Thierer, A.D. (2015). *The Sharing Economy: Issues Facing Platforms, Participants, and Regulators*. Mercatus Center – Georg Mason University.
9. Lessig, L. (1999). *Code: And Other Laws Of Cyberspace*. Basic Books.
10. Lynskey, O. (2017). Regulating ‘Platform Power’. *Law Society Economy Working papers*, 1/2017, 1–30.
11. *Online Platforms and the EU Digital Single Market. A Response to the Call for Evidence by the House of Lord’s Internal Market Sub-committee* (2016). The House of Lords.
12. *Public Consultation on Regulatory Environment for Platforms, Online Intermediaries, Data and Cloud Computing and the Collaborative Economy* (2015). Brussels: European Commission.
13. Reidenberg, J.R. (1997). Lex Informatica: The Formulation of Information Policy Rules through Technology. *Texas Law Review*, 76(3), 553–593.
14. *Report on FinTech: the Influence of Technology on the Future of the Financial Sector* (2017). European Parliament: Committee on Economic and Monetary Affairs. 2016/2243(INI).

15. *Standard Eurobarometer 82 "Media Use in the European Union"* (2014). Brussels: European Commission.
16. United Nations. (2015). *Transforming our World: The 2030 Agenda for Sustainable Development*. General Assembly 70 session.

Personal Data between GDPR and Blockchain

Antonina Astone

1. Introduction

Power relations today have profoundly changed and companies like Google, Microsoft and Facebook, called Over the top, have enormous power, which they have acquired through Big data (Castells, 2001, p. 45).

Infact, information is a “good” in an economic and legal sense, and nowadays the current digital economy is based largely on information derived from data. The European Directive by Parliament and the Council on certain aspects of digital service supply contracts, Com (2015, p. 634), in recital 13, refers precisely to the fact that „In the digital economy, market operators often and increasingly tend to consider information on natural persons goods of comparable value to money. Digital content is often provided not in exchange for a cash consideration but a non-monetary consideration, that is to say allowing access to personal data or other data”.

In the information society, there is the problem of balancing the right to use data with the right to protection.

The right to privacy does not consist only in the right to be alone, calibrated on the concept of private property, a right par excellence of the bourgeois man, to which definition the jurisprudence of the US Supreme Court has contributed, decisively, but has also been translated into the right to the protection of personal data, distinguished, in the Charter of Fundamental Rights of the European Union, by the right to respect for private and family life. The right to respect of private data is also guaranteed in para. 1 of Article 16 of the TFUE.

Today, thanks to the internet, personal data circulate without spatial and temporal barriers all over the world.

The positive aspects, from an economic, socio-cultural point of view, brought about by the internet, are mitigated by its capacity to breach the fundamental rights of the person, including privacy.

This right, in turn, seems to protect the interests of private individuals in maintaining control not only over their own information but also in determining ways of representing their private life publicly, in a system which appears to run at two speeds: one, slower, for the “real world” and one, at high speed, for the “virtual world”.

In particular, the Internet world is characterized by what has been called “a constant video surveillance” of the net’s travellers, and seems to no longer recognise the “summa” division between the person’s ability and inability to act, linked essentially to minors, which constitutes a watershed for the fulfilment of legally valid acts.

There has been a need to adapt EU legislation to new technologies and the ever-disparate use of the internet. The main objective has been to standardize the rules on the subject in order to make the digital economy more fluid by strengthening trust in electronic transitions and implementing the effectiveness of public and private online services.

2. The European Privacy Regulation

The European Privacy Regulation, Regulation (EU) 2016/679 GDPR 2018, General Data Protection Regulation of the European Parliament and of the Council concerning the protection of natural persons, with regard to the processing of personal data, as well as the free circulation of data and repealing Directive 95/46/CE. A text that for all Member States of the European Union, officially entered into force on 25 May 2018.

The objective has been created, and will become a real body, with the task of ensuring the uniform application of the new regulation, thus overcoming the very fragmented and uneven approach in the EU to Data protection. It extends both to traditional telecommunications operators and to Over-the-top, such as WhatsApp, Facebook, Messenger and Skype, and also to companies and public administrations and all subjects who professionally collect personal data, and they have already been required to make adaptations.

Many innovations have been introduced regarding: information, consent, profiling and accountability.

2.1. Information

In the previous system, information obligations were envisaged for the subject who was processing the data, but these were forms containing information that was often long, incomprehensible and with complex regulatory references. The result was that often the person who consented to the processing of the data expressed a merely formal consent, driven by the need to use a specific good or

service. Now, pursuant to art. 7 GDPR, the information must be legible, accessible, concise and written with clear and simple language with a limited number of normative references.

2.2. Consent

In the context of “informed consent” the new regulation set up to provide support to weak subjects, such as minors, who do not have the mental ability to face the pitfalls of the web, is significant. Recital n.38 states that it is precisely minors who deserve specific protection with regard to their personal data, as they may be less aware of the risks, consequences and safeguards involved as well as their rights in relation to the processing of personal data (Lupton & Williamson, 2017).

Pursuant to Article 8, the legitimacy of the treatment is affirmed only if the minor is 16 years old; in other cases it is unlawful if there is no consent from the holder of parental responsibility. The same provision, according to para. 1, provides for the possibility of derogation by Member States, which have been granted the right to set a different age, not less, in any case, than the minimum limit of thirteen years provided for by the Children’s Online Privacy Protection Act. The consequence of this choice has meant that the countries which approved the adjustment discipline first, have opted for different age thresholds.

In Germany, the Bundesdatenschutzgesetz, which confirmed the sixteen-year threshold, and in Spain, art. 7 Consentimiento de los menores de edad della Ley Orgánica de Protección de Datos y Garantía de los Derechos Digitale, the limit has been set at fourteen years old, as in Austria, with the Datenschutz Anpassungsgesetz.

In Italy, the d.lgs 101/2018, has set the age limit at fourteen. The purpose of standardization, which emerges from the choice of relying on European regulations, appears betrayed: the objective of total harmonization, in itself desirable, has been nullified, since there is now complication, when one takes into account circulation without spatial data barriers.

2.3. Profiling

Much of the economic power of Over the top on the Internet derives, in particular, from profiling activity, which is the collection of a series of personal data concerning those who surf the Internet in order to trace their personal profile, and also to identify types and categories of individuals. This information is used for commercial purposes, unbeknownst to most of the data subjects. The system allows companies to segment the public in order to personalize promotional messages. This is why most advertisers now invest in the web and less in generalist television and print media. It follows that Facebook and Goog-

le, which also owns YouTube, control over half of the world's digital advertising market, which is bound to grow more and more.

However, the application of art. 22 GDPR will prevent them from using such personal data for any other purpose other than the contractual, unless explicitly authorized by the user. It establishes the obligation of good faith in the processing of data that, pursuant to art. 5, n. 1, must be treated in a "fair and transparent lawful manner". It follows that:

- 1) The purpose of data collection must be clear.
- 2) Limitation of purposes, established in letter b), item 1 of article 5, according to which "Personal Data are collected for specific, explicit and legitimate purposes, and subsequently processed in a way that is not incompatible with these purposes: Data protection authorities across Europe have made it clear that a vague or general purpose, such as "improving user experience", "for marketing purposes" or "future research", will not normally meet – without further details – the criteria to be "specific".

2.4. Data minimization

A company cannot collect more data for a purpose than it needs (principle of "data minimization") and then ask retroactively to use them for additional purposes, different from the original one.

2.5. Accountability

The principle of accountability has a central role, from which the system of privacy by design and default branches out, a central hub for data processing. Besides the responsibility of the data controller, the rights of the interested party are strengthened and expanded, as previously examined but, at the same time, the sanctioning system is intensified, especially the administrative one.

3. Blockchain in the context of digital disintermediation

However, increasingly sophisticated forms of data collection and analysis are destined to overcome the web 3.0 system: distributed ledgers, artificial intelligence, extended reality and quantum computing will not only allow new business opportunities for operators, but will affect the very life of people.

The GDPR has set itself the objective of returning to people the domain over their personal data which have been entrusted to other subjects, the data controllers, responsible for observing a series of rules and procedures. This Regulation therefore presupposes, as a minimum, two subjects: the owner of the data and the data controller.

This subjective split, in practice, both in companies and in public bodies, to which the processing of personal data is granted, means that the various user ids, passwords, and more generally, the various codes, flow into larger archives, which belong to private companies, so that, in fact, the entity or person to whom the processing of their personal data is entrusted does not, in practice, have secure control over them.

Therefore, it is not always possible to know, with certainty, how the data provided are actually used and processed and, moreover, these centralized databases are often the object of “attacks” by cyber criminals.

The liability system, provided by the GDPR, was not well calibrated, due to these connections.

There is a new way to handle data more securely: the blockchain (Mainelli, 2017). The blockchain or chain of data blocks is a digital register, a database for managing encrypted transactions, based on a decentralized network of the type peer-to-peer. For the data in the blockchain, the subjective split between the data holder and the data controller no longer exists. The nodes are the participants in the ledger, the public register, and they group the transactions into blocks, which are then transmitted to the network; each block contains a hash of the previous block, which is a unique alphanumeric string, used to identify each individual block. The hash certifies a specific and unrepeatable action relating to the transaction and transaction to which it refers. If a transaction is made, so that it can be verified, it is necessary for the nodes to validate it, evaluating whether certain parameters have been respected, for example: correct syntax, possible presence of the transaction already in the blockchain, since, in this case, the transaction is refused. To carry out this check there are the “miners”, nodes that are rewarded through c.d. fees or commissions (Fink, 2017).

The blockchain, not surprisingly, arises from a climate of distrust of traditional systems of intermediation, during the “subprime” crisis, after which, following the bankruptcy of Lehman Brothers, in order to try to save the banking system and therefore, finance, in a serious way at global level, there was intervention to the detriment of investors and savers. In this climate of distrust of investors, a subject called Satoshi Nakamoto (2008), whose identity is uncertain, and could be a person, a group or a company, created Bitcoin, offering blockchain technology in open source. Assange established a block of funding, from the USA, starting from 2010, a donation campaign was launched in 2012 on the WikiLeaks site, and Assange received Bitcoins, equivalent to about \$32,000, considering, at the time, a quotation for the cryptocurrency (Zuwala, 2018, p. 55), was around \$10, and is now worth about \$160 million. The Nakamoto project, created in open source, allowed the introduction of other cryptocurrencies (Casey & Vigna, 2015). In the blockchain two keys are used: one private and one public. The pri-

vate key is used to affix the digital signature and is not visible but necessary to decipher the information, which is known only to the authorized person. In this way, anyone can see the passage or storage of data, but is unable to decrypt it without the private key. The public key is visible to everyone.

4. GDPR and blockchain

An apparent contrast, obviously, emerges between the principles based on the GDPR framework and the blockchain: if the data in the register are inserted in an unchangeable, indelible and irrevocable manner, the GDPR allows, instead, as discussed previously, the exercise of the right to cancellation of personal data, the possibility of revoking consent to processing, as well as the right to request the correction of incorrect data (Soares, Gallman & Basil, 2017).

The data is entered, in a distributed ledger, directly by the owner, becoming unchangeable: therefore, financial data but also health, military information and other sensitive data are more solid and reliable, and citizens can control, exchange and produce personal data through a computer.

The “disintermediation”, compared to the centralized methods of data processing, so far used, allows not only greater security but also convenience in carrying out transactions, since, with the absence of third-party contacts, such as institutes of credit, with reference to the sectors in which the blockchain first developed, such as that of financial services, the cost in savings that is produced is evident.

The blockchain also ensures greater transparency in the operations carried out through it, making them more easily traceable and has the additional advantage of allowing, in practice and in a rapid way, exercise of the right to limit the processing of the data to those strictly necessary.

In Italy, as well as in other European countries, such as Malta and France, the legislator has started a course aimed at regulating blockchain technology, favoured by the action of the EU which issued the Resolution of 3 October 2018, on Distributed Registry Technologies and Blockchain: creating trust through disintermediation (2017/2772, RSP).

In some countries like Estonia, the blockchain has long established itself: in 2007 Estonia suffered a cyber attack, probably from Russia, through a Ddos that slowed down some services, through the blocking of the computer systems of banks and some means of communication, making public transport unusable.

The blockchain technology has determined a new climate of trust in the citizens with respect to the institutions and, since 2007, the Once Only Law has been issued, which governs a system based on identity cards, which perform multi-functions: a document valid for travel abroad, a driving licence, a health

card. Citizens can certify documents, public registers and land registers, vote from home and manage their personal data according to faster, more certain and more secure methods.

In Estonia, the Government does not use a Permissionless Ledger but a variant, the c.d. Permissioned Ledger that, having a governance, can be controlled. When a new data or record is added, the approval system is not tied to the majority of the blockchain participants but to a defined number of trusted nodes. In particular, Estonia uses the KSI (Keyless Signature Infrastructure) system, a variant of the blockchain that is based on the X-road, a system of governmental databases linked to each other and automated, and whose data are always available.

The platform is designed in such a way that each institution or body that joins it must share its data and, of course, the system is marked by strict security measures. The Permissionless Ledger, on the other hand, was designed to be opened, and it does not have a governance, as it was conceived precisely so as not to be controlled.

A single European register, which acts as a “connector” of the blockchain system at the level of the individual EU countries, which, in turn, act as single blocks of the chain, effectively favours true European integration through the secure circulation of data, including titles, diplomas and transactions. This unique system would have positive effects, not only in the private sector but also in the public sector.

5. Big data and artificial intelligence

Big data are at the base of artificial intelligence: objects cease to be inanimate (Teubner, 2019), they are endowed with “intelligence”, which they acquire through the ability to correlate data, calculation skills and access to aggregated information (Hussain, Yoshikawa & Ishiguro, 2016). Smart objects, with decision-making capacity, will implement the efficiency of the health system, improve energy savings, with obviously positive effects in the medical and environmental fields, just to give some examples (Sen, Datta & Mitra, 2019). The advantages will be detectable both in the public sphere, in terms of smart cities, but also in the private sector with technologically advanced realities (Alla et al., 2017).

The fields of application can be manifold: from robotics (Yokoi et al., 2004), in general, to the automotive industry, from medicine to agriculture.

In this sense, interesting profiles emerge from soft law instruments and from studies carried out in the European context: the reference is to the Resolution of the European Parliament of 2017 and to the work carried out by the Highlevel expertgroup on AI, created to draw up Ethics guidelines for trustworthiness in AI in 2018.

In the first, with regard to robotics tools and, more generally, to those with artificial intelligence, Parliament calls on the Commission to ensure the “the principles of data protection, such as the protection of private life from the planning stage and for default setting, data minimization and purpose limitation, as well as transparent control mechanisms for data owners and appropriate corrective measures compliant with EU data protection legislation, and that appropriate recommendations and standards to supplement are promoted in Union policies”.

With regard to the second of the above-mentioned acts, the draft, prepared by the group of experts, in point 7, entitled “Respect for privacy”, highlights how “privacy and data protection must be guaranteed in all phases of the life cycle of the artificial intelligence system. Therefore, not only are all the data provided by the user included, but also all the information generated about the user, during the course of his interactions with the artificial intelligence system”.

6. Conclusion

The use of data is essential to promote trade, increase scientific knowledge and develop new technologies. Big Data serves to improve the algorithm and in turn the use of the algorithm by each of us generates new data. Basically, it is a matter of adapting the principle of accountability to the new technologies that the Regulation has placed at the centre of the data processing system, exploiting the ability of the GDPR to adapt to the evolutionary dynamics of scientific progress resulting from the forecast.

The starting point is the reference to the „social function” which, in recital 4 of the GDPR, is assigned to the right to the protection of personal data, understood as a summarizing clause of both economic and social values, emerging in the legal system, and able to adapt to its content by itself. The right to the protection of personal data cannot, therefore, be considered an “absolute prerogative” (cons. 4), as it involves a super-individual assessment of the treatment. Reg. UE 2018/1807 goes in this direction, in order to eliminate the remaining obstacles, “for the proper functioning of the digital single market, to strengthen trust in cloud computing and to change or end cloud computing contracts in an easier way”.

A new phase has begun for the c.d. digital disintermediation: in the mass communication sector there are new forms of knowledge distribution that escape the traditional media, such as newspapers and televisions. The news is first conveyed through social media and in the economic sector, digital disintermediation, already announced by the advance of e-commerce and home banking, has determined the success of online travel booking platforms, as well as of Uber, AirBnB and various apps, which allow a fast coming-together of supply and demand.

The balance between the right to use data with the right to the protection of personal data (Torre et al., 2016) implies a difficult challenge for the legislator which must take into account an indisputable aspect: technologies change but values do not. Therefore, the law will always have to implement an approach in which the person must be at the centre of protection.

Bibliography

1. Alaa, M., Zaidan, A.A., Zaidan, B.B., Talal, M., & Kiah, M.L.M. (2017). A Review of Smart Home Applications Based on Internet of Things. *Journal of Network and Computer Applications*, 97, 48–65.
2. Casey, M.J., & Vigna, P. (2015). *The Age of Cryptocurrency: How Bitcoin and Digital Money are Challenging the Global Economic Order*. New York: St.Martin's Press
3. Castells, M. (2002). *The Internet Galaxy: Reflections on the Internet, Business, and society*. Oxford: Oxford University Press on Demand.
4. Fink, M. (2018). Blockchains and Data Protection in European Union. *European Data Protection Law Review*, 4(1), 17–35.
5. Hussain, A., Nakamura, Y., Yoshikawa, Y., & Ishiguro, H. (2016). Robot Gains Social Intelligence through Multimodal Deep Reinforcement Learning. [in:] *16th International Conference on Humanoid Robots*. IEEE-RAS.
6. Lupton, D., & Williamson, B. (2017). The Datafied Child: The Dataveillance of Children and Implications for their Rights. *New Media & Society*, 19(5), 780–794.
7. Mainelli, M. (2017). *Blockchain Could Help us Reclaim Control over our Personal Data*. *Business Review*. Retrieved on 05/05/2018, from: <https://hbr.org/2017/10/smart-ledgers-can-help-us-reclaim-control-of-our-personal-data>.
8. Nakamoto, S. (2008). *Bitcoin: a Peer to Peer Electronic Cash System*. Retrieved on 05/05/2018, from: www.bitcoin.com.
9. Sen, S., Datta, L., & Mitra, S. (2018). *Machine Learning and IoT: A Biological Perspective*. CRC Press.
10. Soares, S., Gallman, M., & Basil, P. (2017). *Data Sovereignty and Enterprise Data Management: Extending Beyond the European Union General Data Protection Regulation*. Information Asset.
11. Teubner, G. (2019). *Soggetti giuridici digitali? Sullo status privatistico degli agenti software autonomii*. Napoli: ESI.
12. Torre, I., Koceva, F., Sanchez, O.R., & Adorni, G. (2016). A Framework for Personal Data Protection in the IoT. [in:] *11th International Conference for Internet Technology and Secured Transactions (ICITST)*. IEEE.
13. Yokoi, K., Kawauchi, N., Sawasaki, N., Nakajima, T., Nakamura, S., Sawada, K., . Takeuchi, I., Nakashima, K., Yangihara, Y., Yokoyama, K., Isozumi, T., Fukase, Y., Kaneko, K. & Inoue, H. (2004). Humanoid Robot Applications in HRP. *International Journal of Humanoid Robotics*, 1(03), 409–428.
14. Żuwała, A. (2018). Types and Applications of Cryptocurrencies. [in:] A. Jaki & P. Wójtowicz (Eds.), *Knowledge-Economy-Society. Contemporary of Economic Resources Management*. Kraków: Fundacja Uniwersytetu Ekonomicznego w Krakowie.

Social Rights and Basic Income in Italy

Maurizio Ballistreri

1. Introduction

It was observed that the Italian social state can be defined as a mix between the employment model (in particular in the social security sector) and the universalistic one¹, placing itself as an atypical case in the context of social security systems, whose crisis is being discussed due to the change of paradigm of economy and society at an international level, marked by the advent of globalization.

In fact, the frame of the welfare state held up until the 1980s to retreat then faced with the crisis of the national state and the global economy, driven by a return to economic liberalism². We are in fact present, to a change of scenario following the processes of globalization and the financialization of the economy: the borders of the nation-states fail and great phenomena of migration of populations, of capitals, of production, of accumulation systems and decision-making centers are triggered (Beck, 1999); the latter ones, assuming the characteristics of universality have caused an erosion of statehood (Cassese, 2019, p. 36), moreover already questioned by internal problems also relating to constitutional arrangements (Graber, Levinson & Tushnet, 2018).

The crisis of economic growth and social redistribution, together with a serious and persistent economic depression, has made social rights less pressing for some, and for many others it has changed the perception of their defense and the ways of political representation. Reflect on what is happening in Europe.

If at the end of the millennium there was a mobilization against the outcomes of neoliberal policies and after 2008 the movements against austerity have

¹ For the distinction between the occupational model and the universalistic model of the welfare state, see (Ferrera, 1993).

² A first analysis on the crisis of universal electoral systems was made by the great sociologist and political scientist Dahrendorf (1984).

multiplied (Gallino, 2000), the last few years have been characterized by the re-appearance of the dark side of politics, up to questioning, today, in the center of the old continent, in Poland, Hungary, the Czech Republic and Slovakia, the assumptions themselves of the rule of law and of the independence of the judiciary, with theories and on “illiberal democracy” (among others see (Sawicki, 2018) and “post-democracy” (Crouch, 2005).

At the base it exists, time ago, a protest to neoliberal globalization (Baumann, 2001) both on the right and on the left of the political systems according to the traditional twentieth-century scheme, but with very different characters.

Against the unbridled development of the market globalized, with its devastating effects of productive dematerialisation and labor devaluation³ workers and white-collar workers joined together, students and the unemployed, elderly and young people, but also a populist right⁴, which opposes the cultural traits of globalization with often racist positions that merge into forms of neo-nationalism. This is not surprising because social movements develop parallel to both left and right, but it affects the different composition of the opposite fronts.

On one hand, precarious young people, all over southern Europe, pensioners and public employees, workers laid off due to the continuous bankruptcy of medium and large companies, professionals at the mercy of large companies. A “two-thirds” society⁵ in the past protected by a market economy and social security, now affected by austerity policies. Movements that require the

³ Allow me to point out (Ballistreri, 2008, p. 90).

⁴ Among the various contributions we highlight Lukàcs (2006); Revelli (2017), who opportunely writes: “Populism has manifested itself in very different forms throughout history, between the end of the nineteenth century and the entire short century; and even today, the new populist diffusion in Europe and the United States presents internal differences, among which they pass for example between the army and the presidential navy of Donald Trump. But there is a common denominator: populism is always an indicator of a deficit of democracy, that is of “representation”. A “childish” deficit, so to speak, for the origins of populism, a symptom of a democracy that has not yet been completed; and a “senile” deficit, when the number of citizens who no longer feel “covered” grows. Current populism – this is a kind of “senile disease of democracy”. The secret of a crisis of representation that from the crisis of the form it is the most worrying sign of the rapid downgrading of the middle classes under the weight of the economic crisis but of the change of socio-productive paradigm”.

⁵ Glotz (1986), in which the Theoretician of German Social Democracy, the 80s spoke of the “two-thirds society”, a concept which at the time was very successful. Glotz explained that the well-being had reached the majority layers of the population, that the disadvantaged third of the society, the poor, the unemployed, the precarious, the pensioners at the minimum pension were abandoned to its fate. Q of the socialsuperior riuscì a mantenere unito il tessuto sociale, garantendo, nonostante le evidenti disparità sociali, una crescita che raggiunse il secondo millennio, quando la crisi economica, con la conseguente assenza di crescita, cominciò a imperversare nei paesi del ricco Occidente.

restoration of social protections and contest the social injustice of the system, without anti-democratic attitudes, but experimenting with new forms of participation, attention to the common goods, different models of political decision-making, in Spain, in Portugal, in Italy, in Greece, up to touch England and the United States.

2. Global economy, welfare crisis, crisis of labor law

The profound social transformations, fueled by the globalization of the economy and the markets, by demographic and migratory processes and, lastly, by the general economic crisis have revolutionized, *ab imis*, as is well known, the traditional guarantees of labor law, understood as constitutive part of social law (see the classic: Lyon-Caen, 1955) and, with them, inevitably the nucleus of the relative regulation (Cinelli, 2018, p. 335). Poverty remains a problem, not less important in the Western world, where perhaps the weight of poverty is perceived by the minority that undergoes it, in an even more crude way for the daily comparison with the comfort and luxury of the majority.

This is enough to strongly oppose to those who support the sunset of the welfare state. The social state is a conquest of modernity⁶, which cannot be abdicated if we want to live in a society that is as fair and equitable as possible, based on the “dermicification capacity”, namely the measure to which the welfare state succeeds in removing citizens from the dependence of the market (Esping-Andersen, 1990).

Of course, the mechanisms of redistribution do not always work correctly, also in consideration of the growing differentiations of social demands, with the empowerment of the different perimeters of the associated life, the growing disintermediation with the problems of social representation of intermediate bodies, the growing pluralism of social roles and memberships (Touraine, 1998). Social guarantees, created to protect individuals from events that negatively affect income capacity -unemployment, illness, injury, disability, the old age, the death of a family member – often degenerate into welfarism, extremely expensive for public finance and with distortionary effects on economic dynamics, where state aid is unhooked from a prudent view of supporting the affective need by pursuing demagogic and patronage logics.

⁶ An effective representation of well-being in modernity Albert (1988, p. 456): “The term welfare state refers to a set of responses to the policy of modernization, consisting of political interventions in the sector and in the corporate distribution of life opportunities; these interventions aim to promote the safety and equality of citizens in order to increase the ,social integration of highly mobilized industrial societies”.

But, despite the budget constraints and the abnormal outcomes of the welfare state, it is really difficult to believe that economic policy can prescind in redistributive action. Furthermore, it would be even more wrong to yield to the sirens of the prevailing liberalism, to the imperatives of the neoconservative philosophy, according to which help to the weakest, discouraging individual initiative, is even immoral⁷.

It is a shared analysis that the model has by now entered into crisis, *mutatis mutandis*, in economic field it is defined “Keynes-Beveridge” (Rapini, 2012), based on public intervention for redistributive purposes through the fiscal lever, with advanced welfare state systems, adopted in the last post-war period by Labor in England and by social democracies in Germany, Austria and the Scandinavian countries in the “Thirty Glorious”⁸, for which it was opportunely observed that “The period of prosperity of Fordism generated tax revenues to finance the expansion of welfare and also provided the material basis for a class compromise between capital and labor”. Furthermore, to the measure that full employment was realized in a labor market that was relatively unified rather than split, it also reduced the volume of primary poverty among the workers’ families. This in turn created the space for more generous programs of income integration for other groups (thus generalizing the norms of mass consumption) and for an welfare expansion in other fields (often linked to the changing needs of social reproduction of Fordism). In short, if the Keynesian welfare state contributed to ensure the conditions for Fordist economic expansion, this on its part helped guaranteeing the conditions for the expansion of the Keynesian welfare state (Jessop, 1993, pp. 69–70). During the 50s and 60s of the last century a great transformation took place in the institutional structure of the social status (Paci, 1989, p. 137) but also in the same culture of welfare, with the idea of a “welfare state of opulence” (Heclo, 1993).

That Welfarist model came integrated, in the seventies and eighties of the twentieth century from the neo-corporate model⁹, for an intermediation of collec-

⁷ These are the most extreme theses of anarchy, see among others Rothbard (2017), in which he analyzes the effects of state action in the economic field. In his view, the consistency exercised by the power is always opposed to the freedom permitted by the market. For this reason, the American economist tries to imagine institutions chosen voluntarily, which also satisfy those tasks (defense, police, justice) that are now entrusted to the state in our societies. This is the topic of “private protection agencies”, as a radical alternative to the State.

⁸ Writes one of the leading scholars of welfares systems, Ferrera: This expression is soon considered by the international debate and in particular by scholars of the welfare state. In time there have been periods of prolonged boom, but the real novelty of the glorious Thirty Years, indeed, was the spectacular expansion of this new institution (Ferrera, 2007).

⁹ For all the exponents of this conception of socio-institutional relations, see: (Lehmbruch & Schmitter, 1982).

tive interests, based on the “political exchange” between wage moderation and social concessions: the dynamic compromise between State and market. Advanced models of the social status, which for almost thirty years were developed practically without pauses, in the context of economic development processes in Europe equally tumultuous¹⁰, both according to the interpretative model of TH Marshall (2002), for which he moves from political rights with gradualism to those “more substantive, economic and social” (Paggi, 1989), to extend citizenship rights, and according to Polany’s, conceived as a “self-defense movement” by the reformist workers’ movement (Polany, 1974): the welfare state as a means of stabilizing the internal economic cycle, functional to a positive correlation between production and mass demand (Perulli, 1998, p. 251).

It should also be noted that the most modern Welfarist concepts have turned to enhancing not only the state form of social security policies, but also the associative-voluntarist ones, because they are inherent to the fundamental principles of equality and social solidarity (Titmuss, 1974).

2.1. Economy vs. Social rights

Article. 3, co. 2 of our Constitution has represented the cornerstone of the building of the welfare system in Italy, but, over time, it has suffered a systematic erosion due to the progressive loss of sovereignty of nation-states as a result of the “turbo capitalism” and the austerity policies imposed by the European Union, which has favored the holding of euro and the competitiveness of European economy in the global market in the presence of the serious financial crisis (Ferrera, 2016), with the affirmation of a bureaucratic and technocratic vision and the consequent political anomie¹¹. The reform in Italy of Article. 81 of the Constitution, with the dogma of a balanced budget, is the result of the prevailing economy and finance over politics and law. This constitutional amendment undoubtedly appears to be influenced by the theories of the Constitutional Economics¹².

¹⁰ A broad and punctual general doctrinal analysis, fruitful of interdisciplinary relations, see: (Giubboni, 2003).

¹¹ Habermas (2013), with the criticism of economic and monetary according to the Ordoliberal Conceptions of the Stability and Progress Pact and conceived as the backbone of an economic constitution that should stimulate, beyond national borders, free competition from market operators and organize binding rules for all Member States, neutralizing existing differences in competitiveness in the various economies. Once the optimal conditions for a single currency have decreased, the structural inequalities of the various national economies have worsened; and they will continue to deteriorate, until European policy ends with the principle that every nation must decide for itself sovereignly, without looking at the other associated states. For a critique of the single currency, note the 2001 Nobel Prize for Economics by Stiglitz (Stiglitz & Cavallini, 2017).

¹² Buchanan (1978, 1990), among the numerous works on the subject mentioned thought Constitution constitutes the place where the self-limitations of individual freedom on the part of sub-

For the law (and for labor law) more generally the alternative is increasingly evident (if not exactly the opposition) between the reasons of the economy and social justice, marked by Law&Economics, expression of studies and theories that highlight the limits and errors of public intervention in economy, also due to legal normativism¹³. The economic examination of the law and public regulation of the market is for the exponents of Law&Economics teleologically aimed at accepting the cost of legal instruments, among them the labor lawyers (Del Punta, 2001), their effects inspired and the alteration they produce in the market situation, primarily with regard to the public debt. A topic on which this theoretical current is critically focused on, not even analyzing the negative profiles for the economy deriving from the exponential growth of private debt, which gave rise to the terrible crisis of 2008.

In this context many rights appear as intended victims of the new sovereignty of economy, the domain of a now globalized finance and hegemonic production¹⁴.

3. Citizenship income in the social policies of the European Union

The fight against poverty constitutes one of social targets in policies of European Union. The treaties of Amsterdam and Nice already attributed to the European Community at the time, the commitment to support the initiatives of the Member States in field of social policy, but with the launch of the “Lisbon Strategy”, on the occasion of the European Council held on 23 and 24 of March of the 2000 in the Lusitanian capital, it was stated that “the number of people in

jects constitute a similar social area, enter into a logic of exchange with political, economic and social rights (public goods and services).

¹³ For this theory we report among the major exponents Posner (1984), who more recently, has begun a serious reflection on it, see Posner (2014). A critical analysis of law and economics from the point of view of labor law in Speziale (2015); for an analysis of Italian legal doctrine, see (Alpa et al., 1998).

¹⁴ Ferrarese (2017) starting from the crisis generated by the stagflation of the seventies, it critically analyzes the end of the post-war world centered on national states, on political constitutions, laws, the idea and practice of an economy, yes of the capitalist market, but the states that they sought to orientate according to the priorities of parliaments and governments, in the final analysis, of popular sovereignty expressed democratically. We are dealing with a “Prometheus finance”, which on the juridical level has led to the affirmation of the minimum State, of the Constitutional Economy, of the multilateral, of the supranational, of the private law (ownership, contract, civil liability, arbitration, resolutions of alternative controversies), with a strict law and economy, limited to rationalist rationality on the basis of exclusively neoclassical economic theory. It should be remembered that the theme of the prevalence of finance (at the time understood as bank credit) on production, in the context of the contradictions of industrial capitalism, was exposed at the beginning of the 20th century, within the framework of Marxist analysis, by Hilferding (1923).

the union living below the poverty line and in conditions of social exclusion is unacceptable¹⁵. In the same year it was re-launched “The Social Policy Agenda 2001–2006”, adopted by the Nice European Council, which followed the introduction of a new “open method of coordination (OMC) relating to the protection and social inclusion policies”¹⁶. In 2010 we move to the “Europe 2020 Strategy”¹⁷, to promote “the conditions for a different kind of economic development, more intelligent (developing an economy based on knowledge and innovation), sustainable (promoting a more efficient economy in terms of resources, greener and more competitive) and inclusive (promoting an economy with a high employment rate that favors to social and territorial cohesion)”¹⁸. In November 2017, 28 heads of state and prime ministers of the countries belonging to the European Union discussed “social Europe”, with a discussion preceded by the theme of the adoption of the so-called “European pillar of social rights”, developed, in particular, from the launch of a public consultation in March 2016, from the adoption in April 2017 of a final text proposal, in the form of a Recommendation precisely in view of the Gothenburg Summit¹⁹. And more recently the European Economic and Social Committee (EESC) adopted an own-initiative opinion on “For a European framework directive on minimum income”, which urges on the European Commission to introduce a binding EU framework that establishes an adequate minimum income throughout Europe, adapted to the standard of the life of each Member State²⁰.

According to the EESC, an EU directive is needed to face effectively with the serious and persistent problem of poverty in Europe and restore the credibility of the Union, since the EU’s commitments to reduce the number of European citizens at risk of poverty by 20 million are still a long way from having produced satisfactory results.

Towards social Europe, as Giorgio Fontana has acutely written: “A decisive step forward would instead be the definitive overcoming of the European Union’s indifference towards the Social Charter, which would make the provisions of the Charter applicable within the general principles of the right of the EU³⁷. But this

¹⁵ European Council, Lisbon, 23–24 March 2000, Presidency conclusions, Item 5.

¹⁶ Scientific analysis on the subject in (Ales, Barbera & Guarriello, 2006; Bronzini & Giubboni, 2010).

¹⁷ Communication from the Commission, Europe 2020, A strategy for smart, sustainable, inclusive growth, Brussels, 3.3.2010.

¹⁸ A broad exposition in constitutional doctrine (Tripodina, 2013, pp. 164–165).

¹⁹ Buccheri (2018) states: “The European pillar of social rights aims to make citizens’ rights more effective and to promote a new concept that takes into account the historical context in which States are called to act, thus demonstrating to strengthen the process of European integration”.

²⁰ European Economic and Social Committee (EESC), own-initiative opinion on the subject of a European framework directive on minimum income, 20 February 2019.

is an apparently irresolvable problem, the indicator of how scarce the consideration of social rights in the European legal system is and how complex it remains, despite the many theoretical statements on the multilevel system, the integration between the sources” (Fontana, 2016).

The event can be commented upon as the relaunch of the commitment to identify the minimum and inviolable level of social protection, precisely through a “European pillar of social rights” (Tullini, 2018, p. 199), also in view of a recovery of the “legitimacy of the Union” and of its not only economist integration project (Giubboni, 2017, p. 953).

Even in Europe it has developed a model of unconditional monetary transfer based on the principle of citizenship and residency: the basic minimum income, particularly after the Nice European Council in December 2000, thanks to the decision of the Member States to reduce the risks of poverty and social exclusion, adopting the so-called open coordination method. This regulatory method, of the soft law type, has produced a substantial incidence in the national social security systems (Ferrera, Matsaganis, & Sacchi, 2002). And on the other hand, the art. 10 of the Community Charter of Fundamental Social Rights of Workers, despite being strongly permeated by the centric work culture in social matters, already in 1989 laid the basis for the introduction of the first forms of a minimum income guaranteed at European level, providing that “people excluded from the labor market either because they have not been able to access it or because they have not been able to re-enter it and that they have no means of support must be able to benefit from sufficient services and resources suited to their personal situation”.

In the euro-unit area there are now various types of income support that mainly take the form of a guaranteed minimum income, and not an unconditional basic income. Minimum income tends to define an economic threshold below which no individual can go. In fact, this support usually has a fixed duration, until the moment in which the individual reaches the defined threshold. The guaranteed minimum income in Europe is different between the various States, as well as for the amount disbursed, and three types can be identified:

- universal measures: Austria, Belgium, Cyprus, Czech Republic, Germany, Denmark, Finland, Holland, Portugal, Romania, Slovenia and Sweden;
- basic measures to which various integrations are added: Spain, France, Ireland, Malta and the United Kingdom;
- minimum and discretionary measure: Estonia, Lithuania, Latvia, Poland and Slovakia.

And then, only with form of unemployment benefits, Greece, Bulgaria and Hungary, and Italy before the “citizenship income”, with the “inclusion income” and the Naspi for the unemployed (and also with the disability pensions or ina-

bility). The “citizenship income”, therefore, was preceded in the Italian social security system by another institution: the “inclusion income”, through the law-delegation 15 March 2017, n. 33, included in a more general national plan to combat poverty and social exclusion.

The “citizenship income” should counteract social phenomena such as poverty, high unemployment, precariousness and more generally social exclusion, which increasingly characterize contemporary society. For some, the basic income is considered an optimal tool as a remedy for the numerous social wounds, starting from poverty, for others instead, it is only a solution that is difficult to implement as it is economically unsustainable. For the future of social protection of the European Union, it is difficult to think of an alternative without taking into account a minimum income that allows the transformation of the functioning of the social State (Van Parijs & Vanderborght, 2013).

4. The crisis of Fordism and the phenomenon of working poors

The introduction of a citizenship income has as its main ambition to reform the general framework of the welfare state, the forms of protection and support for income and consumption are currently in force. This mechanism aims to complete the guarantees related to the welfare.

The most common method of disbursement among supporters is that in the form of monetary income, which can integrate the basic subsidies or can be considered a substitute for these subsidies. However, the latter hypothesis implies an increase in the universale minimum income to meet the essential performances.

In the contemporary capitalist society we have moved from the Fordist-Taylorist productive model, where work, either permanent or full time, was a foundation and social protection depended directly on work and employment (Accornero, 1994), to a system in which the dominant mantra is the flexibility of industry 4.0 (Gallino, 2001). Flexibility, together with mobility, risk and innovation are the new words of the order of post-Fordist capitalism, which have already radically changed the paradigms of work (Sennett, 1999).

In the Fordist era, work had become a fundamental factor, was the main item to be recognized as citizens and therefore worthy to enjoy all civil rights. It had, over time, taken the form of an element that determined social inclusion and was considered a prerequisite to obtain the social status symbol of the Fordism. Through the work, it was allowed to participate in the state of economic well-being from which the social position derived. Social inclusion was a collective phenomenon, which affected the whole society and the exclusion derived from individual decisions. With the evolution that has occurred in our society, the availability of a job is no longer considered as a factor that makes it possi-

ble to guarantee social inclusion. In this regard, there is, in the present day, an increase in the phenomenon called working poors, that is, those who, despite working, cannot overcome the poverty threshold; a phenomenon that with Fordism seemed inconceivable.

5. Citizenship income or minimum insertion income?

In Italy, it was recently introduced the so-called “citizenship income”²¹, as a tool of based income for our country and, apart from the political debate, it has been debated in doctrine whether the “citizenship income” is consistent with our Constitution.

But before dealing with this issue, it should be checked whether the name behind the institute is a real tool to universal nature of support for income. “Citizenship income” means at the theoretical level “a universal transfer, addressed to all citizens without any distinction and without any offset. Not only those who do not have an income, therefore, but also the wealthier. Its amount should be sufficient to lead a dignified life even without the integration, in principle, of other income from work or transfer”²².

In reality, the citizenship income introduced in the Italian welfare system is a “guaranteed minimum income” and, that is, a non-categorical, non-contributory, selective and conditional subsidy, which is only for those who are deprived of means regardless of other criteria such as age, possible disability or unemployment status, and is linked to access routes in the world of work (Ferrera, 1993). Therefore, the institute is configured as a functional “parachute” to lead the beneficiary above poverty line, after ascertaining that the income and patrimonial conditions of the family nucleus are effectively below the limits of this threshold and who is found in a state of unemployment has the obligation of a “guided” commitment to finding a job (Boeri, 2017, p. 26). According to this framework we can evoke the concept of “alternative obligation” (Lyon-Caen, 1987, p. 205), with which the State provides, alternatively, to guarantee the right to subsistence of the citizens, favoring the occupation and, so, a remuneration, that is to say giving social subsidies, but not as a real “right to income”²³. A hypothesis that, indeed, it is claimed that must be taken into consideration as an enlargement of the perimeter of the social state (Arena, 2018, p. 45), because „The right which

²¹ Decree-law 28 January 2019, n. 4, Urgent provisions on the subject of citizenship income and pensions, in the Official Gazette, General Rule n.23 of 28-01-2019.

²² Thus one of the greatest scholars of welfare systems (Ferrera, 1998, p. 149).

²³ Ponzi (2014, p. 88), according to which: “both instruments have in common the objective of allowing a free and dignified existence, beyond the traditional working sphere”. Therefore could be considered a first step towards the recognition of the right to income.

questions the Constitution is *ius existantiae*, the right to live in a free and dignified way. The perspective of a guaranteed minimum income is the prospect of human dignity and therefore of the right to live in a free and dignified manner” (Cristofaro, 2018, p. 23; Arena, 2018, p. 44), making the freedom of choice of work effective²⁴.

6. The citizenship income and the Constitution of the Italian Republic

The “citizenship income” in Italian, therefore, is, in fact, a “minimum insertion income”. We will not focus here on the applicative aspects of this institution, which undoubtedly presents numerous contradictions and aporias, the result of legislative approximation, but we will try to verify its coherence with the guiding principles of the constitutional dictate.

From reading to art. 36, which in the matter of remuneration affirms the right to “a free and dignified existence” and to the art. 38, paragraph 2, which recognizes that workers “have the right to have adequate means for their life requirements in the event of accident, illness, disability and old age, involuntary unemployment” the conclusion can be drawn that our Charter fundamental both “labor” and “ergocentric”, centered on the working man (Mortati, 1954, p. 242); careless, conversely, to man’s destinies without employment. The citizen without a job, in fact, does not find space in the Italian Constitution, if not in the article 38, paragraph 1: “the disabled and lacking of the necessary means to live have the right to maintenance and social assistance”. Therefore, to have the right to social assistance it is not enough to simply be poor, but it is also necessary to be unable to work for some subjective disability; so are excluded from any social protection those who, in poverty, do not work for the objective impossibility of finding an employment, which, in turn, should be guaranteed by art. 4 of our fundamental Charter.

After all the paragraph 2 of article 3 of the Constitution, the Republic has the fundamental task of “to remove all economic and social obstacles which limits freedom and citizens’ equality, prevent the full development of the human person and the effective participation of all workers in the political, economic and social organization of the country”.

²⁴ Bavaro (2014, p. 186), according to which: “the doctrine of freedom of choice of work seems to renounce to solve the problem of freedom in work, where there is subjection to power”; the guaranteed minimum income therefore, “term to be functional not only (and not so much) to the strengthening of the bargaining power of labor (minimum and collective) thanks to the lower subjection to the blackmail, how much (and rather) a lubricate the transitions of the workers in the market of work, in line with the ideology of flexicurity”.

The working principle, the personal principle, the principle of equality and the solidarity principle, between them constituting a system, in the first four articles of our fundamental Charter, with the aim of ensuring the “pious development of the human person” and the “Effective participation” of citizens in democratic life, they assign the Republic, in an axiomatic way, the duty to free everyone from the oppression of need and to guarantee to everyone a free and dignified existence. In these principles, as in other significant standards of the Constitution the social and “progressive” character of the Italian Republic is defined, albeit in the continuous dialectic between substantialism and proceduralization in its most modern form of constitutional legality, of which the theoretical archetype is the legal-political conception of Kelsen’s democracy (1966).

This is the project of “emancipating democracy” (Di Giovine & Dogliani, 1993, p. 321), which excludes the abandonment and marginalization of the weakest, prescribing, instead, the remotion of obstacles to citizenship (Calamandrei, 1995, pp. 108–111).

A prospect of re-launching of the universalistic conception of social citizenship, understood as the set of expectations that every citizen turns towards the public apparatus in order to obtain security guarantees in life and work, fundamental to give dignity and freedom to the existence of individuals: “the inclusion of social rights in the area of citizenship” (Barcelona, 1988, p. 53).

Consequently, the Republic must remove social and old weaknesses and new poverty. The original and systematic reading of the Constitution therefore allows to legitimize the right to “social maintenance” of all citizens without employment or material means of support. In this perspective the Constitutional Court, with sentence n. 10 of 2010²⁵, has included in the catalog of fundamental rights that of “achieve the essential services to alleviate situations of extreme need”, as “strictly related to the protection of the essential core of the dignity of the human person”²⁶. An oriented reading of our fundamental Charter that allows to interpret and apply the principle of substantial equality, also considering that all men, to be effectively free, must have guaranteed an income while not having an occupation, thus configuring the “right to income”; a constitutionally necessary measure to combine precisely the principle of equality with that

²⁵ Constitutional Court (sentence n. 10 of 2010, deposit of the 15/01/2010, publication in the Official Journal of the 20/01/2010 n. 3.) The Judge of Law stated that the declaration of the right of retention, enshrined in Article 38 of the Constitution, cannot be separated from its “effectiveness” and, in any case, implies – as I have already observed – the need to preserve the “inalienable core of the dignity of the human person”.

²⁶ In this sense Ruggeri (2017, p. 21), according to which “solidarity and equality, together firmly together, is the first and most effective management of which the law has the best to be able to take over time, to future generations”.

of freedom²⁷, in a different perspective of the citizenship's concept, which in today's and uncertain perspective of our democracies, from the point of view of "conceptual genealogy" (Costa, 2002), can only be reinterpreted beyond traditional boundaries²⁸.

7. The *ius existantiae*

For the backward Italian context, still devoid of individual and universal social protection, it is important, in the predicted perspective, of a new fundamental social right (Rodotà, 2012), which can be defined a real one *ius existantiae*, (Casamassima & Vivaldi, 2018; Arena, 2018, p. 44) having as a cornerstone citizenship income (Bronzini, 2011) in the framework of a universalistic welfare (Ferrajoli, 1995), to counteract the impoverishment of a large part of society.

According to a growing scientific literature the recognition of a *ius existantiae* at a universal character does not end in truth, in the right to a minimum income, but, more generally, even in dignified living conditions (Bronzini, 2016, p. 451).

And this oriented and systematic interpretation of the Constitution, which legitimizes the basic income, finds at the philosophical-institutional level also a feedback in the "theory of justice" by the philosopher Harvard John Rawls neo-contractualist²⁹. The so-called freedom from want, the protection of "a vital minimum" to ensure the dignity and equal opportunities for all citizens to participate in the social and democratic game, allowing you to decline the *ius existantiae* as a fundamental right related to the citizenship's sphere, rather than to work: a fundamental right that strengthens the social protection system in the field of labor law, but whose owner is the citizen (not the employee) as appear lieutenant to a socio-political community. In other ways the contrast to poverty and social secession through the basic income and other homologous welfaristic institutes, can be ascribed to the commitment to achieve "social freedom"³⁰ and the effectiveness

²⁷ Bobbio (2009, p. 63), according to which civil liberties cannot be considered enjoyed if political and social rights are not accepted and guaranteed.

²⁸ There is a vast literature on the subject, including: Riedel (1974), Giddens, (1982), Held (1989), Heater (1990), Veca (1990), Shklar (1991), Zincone (1992), Riesenberg (1992), Bellamy (1993), Blackburn (1993), Bonacchi and Groppi (1993), Zolo (1994), Bulmer and Rees (1996), Belvisi (1997), Grosso (1997).

²⁹ Rawls (1997, p. 23) affirms, among other things: "the institutions are right, when no arbitrary distinction is made between people in the assignment of fundamental rights and duties and when the rules establish an appropriate balance between conflicting statements regarding the advantages of social life".

³⁰ Social analysis conducted by Honneth (2015) is based on the enucleation of the principle of justice which, in its elaboration, has more than any other normative ideal that stands out for the history of credits, results and normative practices of modern societies, and to which a large family

of “democratic participation” (Bronzini, 2014, p. 3), configuring a “social work”: “If the productivity of contemporary work is irreducible to the sum of homogeneous units of time, if the work done over time is not measurable in hourly terms, then the salary form is insufficient, because it only remunerates a segment of productive social work of value-utility” (Martelloni, 2014, p. 201).

It has been observed that the citizenship’s income as a soloist cannot be enough to guarantee to all citizens “a free and dignified existence”, regardless of the same work activity, since a public response to the old and new social questions will have to relate also (and especially) with the big questions of scenario (Martone, 2017, p. 409) such as globalization and economic financialization, the introduction of robotics, the fight against social dumping on a planetary scale, a different structure of the world capitalist market.

But it is not the essential contrast to poverty and social exclusion, but a real public investment to valorize the person’s spaces of freedom, allows to refuse political blackmails and social exploitation, a family addiction, patriarchal or charitable, promoting therefore a greater self-determination of their choices in life and work, in a framework of social solidarity that restores confidence in the relationship between the individual, society and institutions that develops democracy and participation (Ferrajoli, 2007). From the point of view of the labor law: “Social cohesion and social rationality are the lifeblood of traditional labor regulation” (Zoppoli, 2018, p. 5) and it is therefore axiomatic that any prospect of modernization of the social security system in Italy, can only address the issue, which prius of political culture for first, of what are the prospects of social solidarity opposite the tumultuous changes that occurred in this part of the 21st century (Ferrera, 1993, p. 272).

Bibliography

1. Accornero, A. (1994). *The World of Production. Sociology of Work and Industry*. Bologna: Il Mulino.
2. Albert, J. (1988). Continuity and Change in the Idea of the Welfare State. *Politics and society*, 16(4).
3. Ales, E., Barbera, M., & Guarriello, F. (Eds.) (2006). *Nuov e forme di regolazione: il metodo aperto di coordinamento delle politiche sociali*. Milano: Giuffrè.
4. Alpa, G., Chiassoni, P., Pericu, A., Pulitini, F., Rodota, S., & Romani, F. (1998). *Analisi economica del diritto privato*. Milano: Giuffrè.
5. Arena, A. (2018). Reddito: di inclusione, di cittadinanza, come un diritto? (Profili costituzionali). *Constitutionalism.it*, 3.

of other normative principles contained in the institutions of modernity can be reconciled: the principle of freedom or individual of self-determination.

6. Ballistreri, M. (2008). *New Economy and Work*. [in:] A. Anastasi & R. Borowiecki (Eds.), *Entreprises Mondialisation*. Kraków: Fundacja Uniwersytetu Ekonomicznego w Krakowie.
7. Barcelona, P. (1988). *Egoismo maturo e follia capitale*. Torino: Bollati Boringhieri.
8. Baumann, Z. (2001). *Inside globalization. Le conseguenze sulle persone*. Roma-Bari: Laterza.
9. Bavaro, V. (2014). Citizenship Income, Legal Minimum Wage and Trade Union Law. *Italian Journal of Social Security Law*, 2.
10. Beck, U. (1999). *Che cos'è la globalizzazione*. Roma: Carocci.
11. Bellamy, R. (1993). Citizenship and Rights. [in:] Bellamy, R. (Eds.), *Theories and Concepts of Politics: an Introduction*. Manchester: Manchester University Press.
12. Belvisi, F. (1997). Citizenship. [in:] A. Barbera (Ed.), *Le basi filosofiche del costituzionalismo*. Rome-Bari: Laterza.
13. Blackburn, R. (Ed.) (1993). *Rights of Citizenship*. London: Mansell.
14. Bobbio, N. (2009). *Equality and Freedom*. Turin: Einaudi.
15. Boeri, T. (2017). *Populism and the Social State*. Bari-Rome: Laterza.
16. Bonacchi, G.M., & Groppi, A. (Eds.) (1993). *Il Dilemma della cittadinanza: dritti e doveri delle donne*. Rome-Bari: Laterza.
17. Bronzini, G. (2011). *Reddito di cittadinanza. Una proposta per l'Italia e per l'Europa*. Torino: Edizioni Gruppo Abele.
18. Bronzini, G. (2014). The Income of Citizenship. *Italian Journal of Social Security Law*, 17.
19. Bronzini, G. (2016). The garantito un reddito minimo e la riforma dei social ammortizzatori. [in:] G. Zilio Grandi & M. Biasi (Eds.), *Il commento breve sul "Jobs Act" riforma*. Padova: Cedam.
20. Bronzini, G., & Giubboni, S. (2010). *The No eggs europ agenda e in legislazione sociale e il metodo di coordinamento aperto*. Arel.
21. Buccheri, C. (2018). La formulazione del pilastro europeo: quali effetti sui diritti sociali?. *e-Rivista Internazionale de la Protección Social*, 3(1), 215–244.
22. Buchanan, J. (1978). *Freedom in Constitutional Contract: Prospettive di un economista politico*. Texas: A&M University Press.
23. Buchanan, J. (1990). La Domai di costituzionale Economia. *Costituzionale Political Economy*, 1.
24. Bulmer, M.I., & Rees, A. (1996). *Citizenship Today: The Contemporary Relevance of TH Marshall*. London: Routledge.
25. Calamandrei, P. (1995). *Costruire la democrazia. Premesse alla Costituente*. Firenze: Valle cchi.
26. Casamassima, V., & Vivaldi, E. (2018). Ius existantiae e politiche di contrasto della povertà. *Quaderni costituzionali*, 38(1), 115–148.
27. Cassese, S. (2019). *La svolta. Dialoghi sul cambiamento della politica*. Bologna: il Mulino.
28. Cinelli, M. (2018). The Novum of providence today. *Rivista Italiana di Diritto del Lavoro*, 3.
29. Costa, P. (2002). The Discourse of Citizenship in Europe: Hypothesis of Reading. [in:] C. Sorba (Ed.), *Citizenship. Individuals, Social Rights, Collectivity in Contem-*

- porary History*. Proceedings of the SISSCO conference Padua, 2–3 December 1999. Ministry of Cultural Heritage and Activities, Directorate General for Archives.
30. Cristofaro, M. (2018). La Costituzione e il reddito minimo garantito. *Forum dei taccuini costituzionali*, 6.
 31. Crouch, C. (2005). *Post-democracy*. Roma-Bari: Laterza.
 32. Dahrendorf, R. (1984). *On the Side of the Crisis*. Roma-Bari: Laterza.
 33. Del Punta, R. (2001). L'economia e le ragioni del diritto del lavoro. *Giornale di diritto del lavoro e di relazioni industriali*, 89.
 34. Di Giovine, A., & Dogliani, M. (1993). Dall'emancipazione della democrazia alla democrazia senza qualità?. *HQ*, 2.
 35. Esping-Andersen, G. (1990). *The Three Worlds of Welfare Capitalism*. New York: John Wiley & Sons.
 36. European Council, Lisbon, 23–24 March 2000, Presidency conclusions, Item 5.
 37. Ferrajoli, L. (1995). Il futuro dello stato sociale e il reddito minimo garantito. [in:] G. Azzariti, G. Bascetta, G. Brtonzini, M.G. Campari, L. Ferrajoli, A. Gorz, G. Mazzetti, S. Mezzadra & A. Revelli (Eds.), *Ai confini dello stato sociale*. Roma: Manifestolibri.
 38. Ferrajoli, L. (2007). *Principia iuris. Theory of Law and Democracy*. Rome-Bari: Laterza.
 39. Ferrarese, M.R. (2017). *Mancato promesse*. Bologna: il Mulino.
 40. Ferrera, M. (1993). *Modelli di solidarietà. Politica e riforme sociali nelle democrazie*. Bologna: il Mulino.
 41. Ferrera, M. (1998). *The Traps of Welfare*. Bologna: il Mulino.
 42. Ferrera, M. (2007). Trento Afterwards. The European Welfare State between Crisis and Transformation. *State and Market*, 3.
 43. Ferrera, M. (2016). *Rotta di collisione. Euro contro il benessere?*. Bologna: Il Mulino.
 44. Ferrera, M., Matsaganis, M., & Sacchi, S. (2002). Open Coordination Against Poverty: the New EU social Inclusion Process. *Journal of European Social Policy*, 12(3), 227–239.
 45. Fontana, G. (2016). La Carta sociale europea e il diritto del lavoro oggi. *WP Massimo D'Antona – INT*, 132.
 46. Gallino, L. (2000). *Globalizzazione e disuguaglianza*. Roma-Bari: Laterza.
 47. Gallino, L. (2001). *The Human Cost of Flexibility*. Roma-Bari: Laterza.
 48. Giddens, A. (1982). *Profiles and Critiques in Social Theory*. London: Macmillan International Higher Education.
 49. Giubboni, S. (2003). *Diritti sociali e mercato. La dimensione sociale dell'integrazione europea*. Bologna: il Mulino.
 50. Giubboni, S. (2017). Appunti e delusioni sul pilastro europeo dei diritti sociali. *Quaderni Costituzionali*, 4.
 51. Glotz, P. (1986). *Manifesto for a new European left*. Feltrinelli.
 52. Graber, M., Levinson, S., & Tushnet, M. (2018). *Democrazia costituzionale in crisi?*. New York: Oxford University Press.
 53. Grosso, E. (1997). *Le vie della cittadinanza: le grandi radici, i miei modelli di riferimento*. Padova: Cedam.

54. Habermas, J. (2013). *In the Technocratic Spiral*. Roma-Bari: Laterza.
55. Heater, D. (1990) *Citizenship: The Civic Ideal in World History, Politics and Education*. London: Longman.
56. Hecló, H. (1993). Towards a New Welfare State. [in:] P. Flora & A.J. Heindenheimer (Eds.), *The Development of the Welfare State in Europe and America*. Bologna: il Mulino.
57. Held, D. (1989). *Political Theory and the Modern State*. Stanford: Stanford University Press.
58. Hilferding, R. (1923). *Das Finanzkapital*. Wien: Verlag der Wiener Volksbuchhandlung.
59. Honneth, A. (2015). *The Law of Freedom*. Torino: Codice.
60. Jessop, R. (1993). The Transition to Post-Fordism and the Postkeynesian Stato Sociale. [in:] M. Ferrera (Ed.), *The Welfare State and the Market*. Turin: Editions of the Agnelli Foundation.
61. Kelsen, H. (1966). *Il fondamento della democrazia e altri saggi*. Bologna: Il Mulino.
62. Lehmruch, G., & Schmitter, P.C. (1982). *La politica degli interessi nei paesi industrializzati: modelli di policy neocorporativa*. Bologna: the Mulino.
63. Lukács, J. (2006). *Democrazia e populismo*. Milan: Longanesi.
64. Lyon-Caen, G. (1955). *Manuel de droit du travail e de la sécurité sociale*. Parigi: Dalloz.
65. Lyon-Caen, G. (1987). *Le droit au travail. Actes du Colloque*. Nantes.
66. Marshall, T.H. (2002). *Citizenship and social class* (by S. Mezzadra). Roma-Bari: Laterza.
67. Martelloni, F. (2014). The Income of Citizenship in the Labor Law Discorso: the Interference with the Discipline of Labor Relations. *Rivista Italiana del Diritto della Sicura*, 2.
68. Martone, M. (2017). I the Citizenship Income. A Great Utopia. *Rivista Italiana di Diritto del Lavoro*, 3.
69. Mortati, C. (1954). *Il lavoro nella Costituzione*. Edizioni del diritto del lavoro.
70. Paci, M. (1989). *Public and Private in Modern Welfare Systems*. Naples: Liguori publisher.
71. Paggi, L. (Ed.) (1989). *Americanismo e Riformismo*. Torino: Einaudi.
72. Perulli, A. (1998). Postfordismo, forma dello Stato e diritto del lavoro: spunti di riflessione. *Lavoro e diritto*, 12(2), 251–270.
73. Polany, K. (1974). *The Great Transformation*. Torino: Einaudi.
74. Ponzi, S. (2014). Reddito di cittadinanza e salario minimo: un punto di vista sindacale. *Journal of Social Security Law*, 1.
75. Posner, R.A. (1984). Some Economics of Labor Law. *The University of Chicago Law Review*, 51(4), 988–1011.
76. Posner, R.A. (2014). *La crisi della democrazia capitalista*. Milano: Università Bocconi Editore
77. Rapini, A. (2012). The „Five Giants” and the Genesis of the Welfare State in Europe between the Two Wars. *Historicamente*, 8.
78. Rawls, J. (199). *A Theory of Justice*. Milan: Feltrinelli Editore.

79. Revelli, M. (2017). *Populismo 2.0*. Turin: Einaudi.
80. Riedel, M. (1974). Bürger, Staatsbürger, Bürgertum. [in:] *Geschichtliche Grundbegriffe: Historisches Lexikon zur politisch-sozialen Sprache in Deutschland*. AD. Stuttgart: Klett-Cotta.
81. Riesenberg, P.N. (1992). *Citizenship in the Western Tradition: Plato to Rousseau*. Chapel Hill-London: University of North Carolina Press.
82. Rodotà, S. (2012). *Il diritto di avere diritti*. Roma-Bari: Laterza.
83. Rothbard, M.N. (2017). *Potere e mercato, Lo stato e l'economia (Mercato, Legge e Libertà)*. Milano: IBL.
84. Ruggeri, A. (2017). Equality, Solidarity and Decision-making Techniques in the Most Salient Experiences of Constitutional Justice. *Rivista AIC*, 2.
85. Sawicki, J. (2018). *Illiberal Democracies? Europa centro-orientale tra apparente continuità della forma di governo e possibile mutazione della forma di Stato*. Milano: Franco Angeli.
86. Sennett, R. (1999). *The Flexible Man. The Consequences of the New Capitalism on Personal Life*. Milan: Feltrinelli.
87. Shklar, J.N. (1991). *American Citizenship: The Quest for Inclusion*. Harvard University Press.
88. Speziale, V. (2015). Il contratto per un indefinito periodo con protezioni crescenti tra l'aw ed economia e vincoli costituzionali. *WP CSDLE Massimo D'Antona - INT*, 259.
89. Stiglitz, J.E., & Cavallini, D. (2017). *Leuro: come una moneta comune minaccia il futuro dell'Europa*. Torino: Einaudi.
90. Titmuss, R.M. (1974). *Social Policy: An Introduction*. New York: Pantheon Books.
91. Touraine, A. (1998). *Freedom, equality, diversity*. Milan: Il Saggiatore.
92. Tripodina, C. (2013). *The Right to a Free and Dignified Existence*. Turin: Giappichelli.
93. Tullini, P. (2018). Competizione ed equità nel mercato europeo: una scommessa difficile (ma necessaria) per il diritto del lavoro. *Italian Journal of Labor Law*, 2.
94. Van Parijs, P., & Vanderborght, Y. (2013). *Il reddito minimo universale: Seconda edizione*. Milano: Università Bocconi Editore.
95. Veca, S. (1990). *Cittadinanza: riflessioni filosofiche sull'idea di emancipazione*. Milan: Feltrinelli Editore.
96. Zincone, G. (1992). *Da sudditi a cittadini: Le vie deUo stato e le vie delta società civile*. Bologna: il Mulino.
97. Zolo, D. (Ed.) (1994). *La cittadinanza. Appartenenza, identità, diritti*. Rome-Bari: Laterza.
98. Zoppoli, L. (2018). Solidarity and Labor Law: Fading or Polymorphism?. *WP CSDLE Massimo D'Antona -INT*, 356.

PART II **KNOWLEDGE AND INNOVATION AS DETERMINANTS
OF EFFECTIVENES AND DEVELOPMENT**

Knowledge-based Economy: New versus Old Europa

Vladan Ivanović

1. Introduction

Today a prediction made in the early 19th century by the Swiss economist de Sismondi may appear relevant, for his thesis stated that Industrial revolution would mark the beginning of an era in which life as we know it, economy and society will all be changed in unpredictable ways, as well as that it would be impossible to foresee exactly how this change will occur. And he was right. In the last two centuries, the society and economy have changed in a manner that would have been unimaginable to the economists of the early 19th century. We are on the similar crossroad today.

European societies and economies today, considering the Industrial Revolution 4.0, knowledge-based economy or, simply, new economy, are finding themselves facing a similar crossroad. In the light of this fact, there are several pivotal questions to be answered. First of all, what are necessary premises for economic success today, in new economic, technological and institutional circumstances? Do new conditions of creating economic value make it possible for new EU member states to converge faster to the old member states?

The aim of this paper is to offer answers to these questions by introducing conceptual framework for understanding value creation in new business, technological and social circumstances and applying it on the sample of old and new EU member states.

2. Knowledge-based Economy: meaning and pillars

Initially, the concept of KBE is developed within evolutionary institutional economics (Leydesdorff, 2006) and already at the beginning of XXI century it become very influential paradigm in the domain of public policies and development strategies in developed as well as developing countries. The first comprehensive

concept of KBE is introduced by OECD (1996). Two important practical immersions are made by work of APEC (2000) and World Bank (2007), but the basic construct remained more or less the same.

All of these concepts are more practical and concentrated on the domain of public policies and real economic life. They have though strong academic and scientific background, especially in the area of growth theories. Namely, KBE concept is strongly supported by the theories of human capital and its importance for economic growth both on macroeconomic and microeconomic level (De la Fuente & Ciccone, 2003). The whole range of contemporary growth theories and models are further ensuring the direct and indirect support for the economic growth led by knowledge. These theories and models emphasize the significance of inventiveness, R&D infrastructure or absorptive capacity and readiness of every society to use new technologies (Barkhordari, Fattahi & Azimi, 2018).

There is no unique and completely consistent definition of knowledge-based economy (KBE). The definitions are varying which makes analytical work very hard. But the science of “describing, understanding, and measuring knowledge will always be an imperfect one” (Brinkley, 2006, p. 3). For the purposes of this paper and according the aim of the research, although not fully precise, but useful definition of the KBE is that “knowledge-based economy as one where the knowledge is created, acquired, transmitted, and used effectively by enterprises, organisations, individuals, and communities” (Thomas & Carl, 2001, p. 3). From this definition is obvious that the term “knowledge-based” refers not only on the high-tech and new industries, although it is the most apparent within them. It is about much broader concept. It refers as well on the traditional industries and emphasizes the need within them to intensify the processes of knowledge creation, adaptation and use in order to be more competitive and create higher value. Deeply traditional industries, like the railway industry, are or at least should be based on knowledge. For example, express trains of today and those two-decades ago are not comparable if we take into account the services needed for their efficient functioning, technology they are based on, general knowledge needed to effectively and efficiently govern the system of railway. Similarly, according to one projection the forest and agricultural sector will grow until 2025 15% and gross value added will be almost 3 billion of € (Buhr, 2015).

In a sense, KBE as concept is complex construct based on four pillars or elements, which are highly interconnected and interdependent. World Bank points out on the fifth pillar, which we have excluded because of simplicity of analysis¹. It means that the potential of the KBE is only to be realised if all the pillars are

¹ It encompasses nonmaterial factors of development of every society, like the capacity to formulate the common vision of the future, level of trust and self-confidence among the mem-

in place, i.e. if all of them on the similar level and relatively developed. It is in line with the very old claim in economics about interdependences of different orders in economy and society as a whole (Ivanović, 2019). The success is not possible without taking care about this interdependences. Starting from the concepts introduced and developed by OECD (1996), APEC (2000) and World Bank (2007), we have introduced new synthesized concept of KBE and key pillars on which is based. It is shown on the Figure 1.

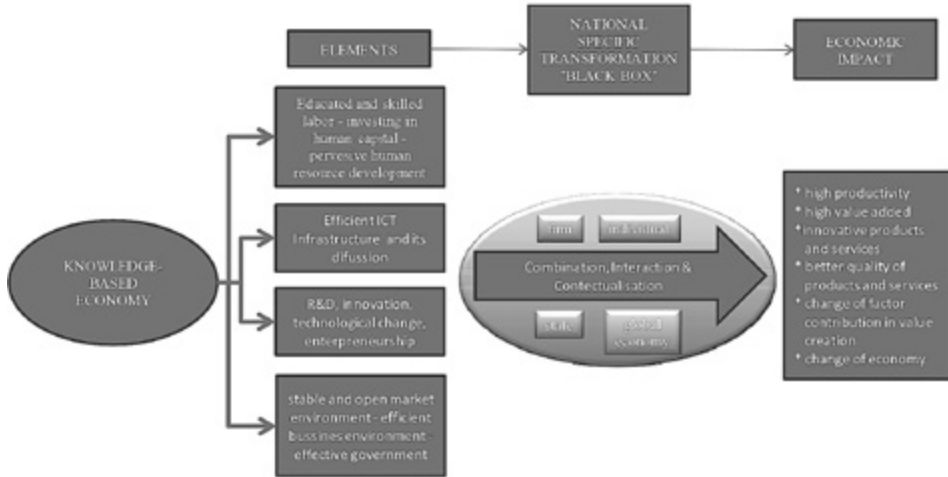


Figure 1. Knowledge, innovations and networks as the pillars of the network economy
 Source: (Ivanović, 2018, p. 4).

The first pillar refers to educational system and training of the work force. Economic development was never possible without well-educated and skilled workforce. An outcome of educational process should be human resources who are agile, adaptable, available at reasonable cost and in quantity, capable to work in decentralised structures and highly motivated to learn. The stock of knowledge in an economy comprises of codified and tacit knowledge. In every economy there are some stock of knowledge, but the key characteristics of those economies which grow fast is that they generate new knowledge using the existing much faster (Cader, 2008). Linkages and interactions between the carriers of knowledge and economy, state and society are essential in creating the economic value. The all of actors are important as suppliers of knowledge as well as consumers of it. It is highly relevant in the domain of technology, science and medicine, but

bers of the society, as well as genuine values which govern the relationships in the society (Aubert & Reiffers, 2004).

it is increasingly relevant for the social disciplines. The reason for that is the fact that production is always happening in the social context. The stock of knowledge and skills is not only crucial for the development of new technologies, it is decisive for the acceptance and absorption of new technologies. As a result it incremental innovations are emerging. These processes lead to higher productivity, better quality of products and generally to better business performances of enterprises.

However, not only higher education institutions such as universities and institutes are playing an important role in the process of knowledge creation and dissemination. Critical role belongs to the business organisations. They generate practical, commercial knowledge. They are simply in a sense a repository of knowledge. Companies which are successful are crucial because they will be carriers of innovations and growth in the future.

Information and communication technologies (ICTs) are enabling efficient exchange of knowledge and information and foster their dissemination in economic life. Through the numerous possibilities for processing and multiple usages ICTs are enhancing productivity, innovativeness and quality of products and services. New technologies are dramatically lowering the costs of collecting, processing and distribution of information. These processes are critical in generating new knowledge. Geographical determination is of less importance in that case. ICTs are relativizing comparative advantages of national economies. New technologies are contributing to the increase of productivity, but they attract (new) businesses by lowering transportation costs, costs of production and enabling easier access to markets, even if the markets are remotod in physical sense (Barkhordari, Fattahi & Azimi, 2018).

The biggest gains from the introduction of new technologies are to be expected if the introduction of new technologies is followed by organisational changes in business organisations. This domain could refer to redesign of working schemas, introduction of different systems of material incentives within organisations and/or the active participation of employees in decision making process (Powell & Snellman, 2004). The most important and in the same time most obvious contribution of ICTs to increase of revenues and profits is in the industries where ICTs are central in the economic process, i.e. in the IT industry, electronics, machine learning, robotics (Buhr, 2015). With the ICTs only one thing is sure for the future: they will play a central role in dynamizing economic activity. The technologies which constitute core of ICTs are becoming better, faster, cheaper and easier for use. This creates a ground for new applications on regular and broad base (Atkinson & Andes, 2008).

Innovation system, R&D expenditures and the development of an entrepreneurship are determining together the commercial value of innovative capac-

ities which exist in one economy, which is the third pillar within KBE. National innovation system encompasses the network of firms, research centres, universities, consultants which are possessing superior knowledge and/or are having the knowledge about edge technologies and use it. These organisations are playing a decisive role in getting the globally accessible knowledge to domestic economy, the adaptation and accommodation of these knowledge on local conditions and according to the local needs (World Bank, 2007). In a business sense, national innovation system makes a base for creation of new products and services. It creates further the knowledge needed for the reorganisation of business models and processes which is the prerequisite for more efficient production (Atkinson & Andes, 2008) as well as for differentiation of products through innovative design, effective marketing, efficient distribution (Chen & Dahlman, 2005).

Motives and interests of economic agents, whether it is about individuals or enterprises, are the fundamental dimension of KBE. Broadly understood institutional framework is the fourth pillar of KBE. Without the system of right incentives any economy will not develop. There are many examples in the history for that. Efficient institutional, regulatory and macroeconomic context in which economic game takes place is vital for creation of useful and valuable knowledge. In order to learn, to adopt new technologies, to innovate, individuals and business organisations have to be sure that such activity pays off. If the rules of the game are right, the information flow will be strengthened and will be more dynamic. Without efficient protection of property rights no one will be motivated to engage in innovative activities neither will be prone to invest and learn. Efficient rules in the domain of governance, financial system, labour market, trade and macroeconomic framework are decisive prerequisites for transformation of knowledge into the object of standard market transaction. The essence of public policies refers to motivating and encouraging individuals to accumulate human capital, to stimulating distribution of knowledge between market participants and to create conditions in which firms are prone to undertake and go through organisational changes with the aim to maximize benefits from adaptation of new technologies (OECD, 1996).

Although all of the four pillars are having their own construct and content, about their real influence on economic activity could be only correctly judged if one observes them jointly and incorporate all the existing feedbacks and complementarities between them. For example, ICTs are deeply dependant on the quality of human resources, as it is the case in educational system. The use of computers, different programs and internet rises the quality of outcome in education (Ringstaff & Kelley, 2002). Further, national innovation system and higher education are deeply interdependent. The higher education institutions are the main source of innovations in many economies. For example, the majority of patents in

USA are assigned to universities (Chen & Dahlman, 2005). If firms change technologies they use, they have to invest in better education and training of their employees. Without that new technologies will not have desirable effect or even will not pay off.

3. EU framework for KBE

Knowledge-based economy (KBE) has a relatively long tradition within EU. With the upheaval of the KBE concept, it has found its place in numerous European strategies and policies. Faced with the fundamental changes brought by globalisation, with the problems of aging population, challenges caused by dynamic technological changes and strong competition in USA and Asia, as well as with the processes of integration and reception of new member states, EU has tried to define goals and instruments in order to stay competitive in constantly changing circumstances. Key element of Lisbon Strategy (2000–2010) was the development and enhancement of knowledge. This goal required more investments in education and professional training, scientific research and innovations. The final goal was to make European economic area the most competitive and the most dynamic in the world, which will be based on knowledge and which will generate sustainable economic growth with the larger number of better jobs and with greater social cohesion (European Parliament, 2010).

Newer strategic documents of EU are in the same line. For example, Strategy 2020 EU emphasizes the importance of further development of human capital (the number of population between 30 and 34 should be minimum 40% until 2020), fight against the climate change, which should contribute to development of new sectors and deepening labour market as well as to intensify R&D investments (European Commission, 2010). Similarly, new Industrial policy strategy, renewed in 2017, aimed to enable the development of smart, innovative and sustainable industry in the future (European Commission, 2017).

4. Knowledge-based Economy: New versus old member states of European Union

4.1. Methodological notes

There are no perfect indicators which could be used to measure KBE. There are still some of indicators which we could use as an approximation or as instruments for the different dimensions of KBE we have introduced here. There are based on the Global Competitiveness Reports (Schwab & Sala-i-Martin, 2011, 2017).

There are twelve pillars encompassed by the Global Competitiveness Report (GCR). We have taken four out of them, which roughly approximate four pillars

of KBE shown on Figure 1². They refer to Higher education and training (5th pillar in GCR), Technological readiness (9th pillar in GCR), Innovation (12th pillar in GCR) and Institutions (1st pillar in GCR)³.

Countries are divided into the two groups: the old European member states (OEMSs) and the new European member states (NEMSs)⁴. OEMSs encompass states which become member states of EU before 2000, while NEMSs encompass countries which become member states in two waves of enlargement 2004 and 2007 as well as Croatia that joined EU in 2013⁵. Poland is represented separately because it represents one of the successful “transition stories” and for illustrative reasons, but without pretension to get deeper into the reasons why and how Poland reached observed levels of KBE in every domain in particular.

In order not only to measure the current state regarding the development of KBE, we have taken two periods. First period refers to 2011 and the second to 2017. This seven years should be enough to adequately appraise the dynamic regarding the development of KBE. There are new data for the 2018, but because the methodology is changed in the meanwhile and for the reasons of comparability, we have taken the values from 2017.

4.2. Knowledge-based economy: New versus old member states of European Union

Fifteen years after accession and integration of 10 new states into EU, there are still a lot of challenges Europa as a whole is faced with. They are still particularly important for the new European member states (NEMSs) and especially interesting in the domain of KBE. On the one hand, there are a variety of deficiencies regarding the KBE in the old European member states (OEMS). It means, at least in some degree, the NEMSs are not experiencing a huge lag compared with the OEMSs. On the other hand, they are lagging and there is some, not a small, probability that this could continue in the future, what will hamper their chance to catch up.

Four pillars of KBE in the OEMSs, NEMSs and Poland in 2011 and 2017 are depicted in the Figure 2. There are several very important conclusions we could reach observing the data and their dynamics in the seven years.

² More about the methodology and the construct of the indexes we are using in analysis see: (Schwab & Sala-i-Martin, 2017).

³ The frontier or the maximal value for every pillar is 7.

⁴ It is important to notice that there are important differences within the groups regarding every segment of KBE. Further and more detailed analysis goes beyond the scope of this work.

⁵ In the group of OEMSs are Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherland, Portugal, Spain, Sweden, United Kingdom and Austria. In the group of NEMSs are Bulgaria, as mentioned in text Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia.

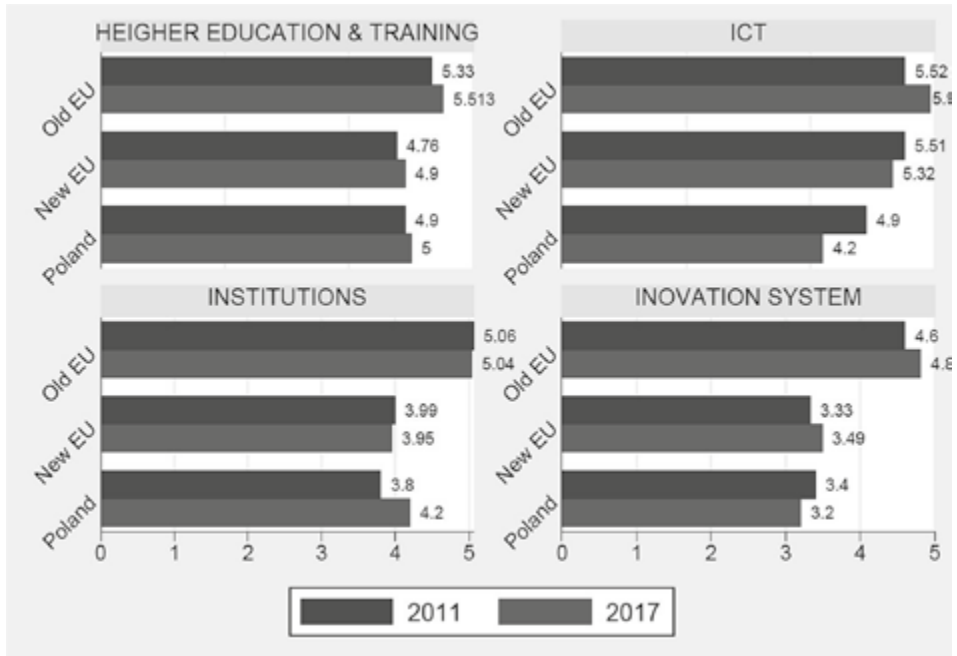


Figure 2. Four pillars of knowledge-based economy: New versus old EU member states

Source: Authors calculation based on (Schwab & Sala-i-Martin, 2011, 2018).

First and the most obvious conclusion is that neither in 2011 nor 2017 NEMSS were on average better in any of the pillars of KBE than the OEMSSs. This is a logical consequence of different level of development and long-term differences in the development path which these two group of countries experienced in the past. The majority of OEMSSs were and are today as well the most developed market economies, while some of the NEMSSs are still today far away even from the average level of development in the EU.

Second conclusion relates to the fact that OEMSSs have enhanced, in absolute terms, the values in all segments, where it came to the improvement, more than NEMSSs. The small deterioration of results happened in the domain of institutions, but it was still smaller in OEMSSs than in NEMSSs.

When we look at the individual pillars, the largest immersion between 2011 and 2017 has happened in the domain of ICT. This was a result of two simultaneous developments: the improvement in OEMSSs and the worsening in NEMSSs. There could be many explanations for this development in NEMSSs. The biggest problems arise in absorption of new technologies within the firms, in technology transfer via foreign direct investments and the problems regarding the internet bandwidth. There are several possible explanations why the diverging is so pronounced. Firms are simply not seeing as an instrument of improving business

performance, there are no real competitive pressures to invest in new technologies or the introduction of new technologies would demand additional investments in human resources, which rises the overall costs and is less payable, at least in the short run. Generally, the introduction of new ICTs is not having real impact on business performance if there are no enough skilled and educated human resources (Ásgeirsdóttir, 2006).

The absolute difference between OEMSs and NEMSs stayed almost the same by higher education and training. This happened despite important advancements which have happened in NEMSs. Still, there are a lot of problems related with general quality of educational system, quality of business schools and employees' trainings. The big differences from the past could not be overcome in short period. In order to mitigate the differences larger investments are needed as well as redesign of institutions referring to an educational system that should be more competitive.

Regarding the quality of innovation system all the countries are the most remote from the frontier values. It speaks us about the problems all the countries are facing with, whether they are more or less developed. Beside the adequate network of universities, firms, consultants, state, non-governmental institutions, research institutes and intensive interactions between them, the mostly needed steps in improving capacities in the domain of innovation system refer to state procurements of advanced technologies, availability of engineers and scientists, and especially R&D investments of private firms.

The last, but not the least important pillar refers to institutional environment. We have almost unchanged scores during the observed period. The explanation is simple: it is about the most resistant part, although probably in the long-run most important, of KBE. Institutions are changing slowly but affecting deeply economic activity. Without right system of incentives, economic agents will not be ready to make investments and engage in productive activities. The problem with making some general and in the same time more precise conclusion regarding institutions refers to many subindicators it encompasses (21). It is only true that without the improvement in this segment it will be very hard, if it will be possible at all, to make progress in other pillars. The reason is simple: all of inefficiencies in the domain of institutions are causing and strengthening the inefficiencies in other domains of KBE, whether we speak about education, ICTs or innovation system.

5. Conclusion

The KBE concept makes an important framework for understanding the developmental strategies and policies across the Europe. It has as well great im-

portance in understanding the future of development, not only in Europa than worldwide.

Comparing the OEMSs and NEMSs several conclusions could be reached. It came in the observed period event to deepening between two groups of countries. It could have long-lasting consequences for the development of NEMSs and their inclination to reach level of development of west Europa.

Although differences in some pillars are less pronounced, they are still important. Without simultaneous improvements in all the domains it will be hard to expect sustainable development in any individual segment of KBE. The challenges will stay big in NEMSs for the future. Beside important differences, the other factor is the deterioration of institutional framework. The changes in NEMSs were even backward. And everything starts with institutions: with inefficient rules is only inefficient results to expect. When this results will occur is not the question of probability, it is the question of time. This is the reason why further deterioration of institutional framework, regardless whether it is caused domestically or on European level, would generate high risk for further development in both NEMSs and OEMSs.

Bibliography

1. APEC Economic Committee. (2000). *Towards Knowledge-based Economies in APEC*. Hongkong: APEC Secretariat.
2. Ásgeirsdóttir, B. (2006). OECD Work on Knowledge and the Knowledge Economy. [in:] D. Foray & B. Kahin (Eds.), *Advancing Knowledge and The Knowledge Economy*. Cambridge, Mass: The MIT Press.
3. Atkinson, R.D., & Andes, S.M. (2008). *The 2008 State New Economy Index: Benchmarking Economic Transformation in the States*. USA: Information Technology and Innovation Foundation. Retrieved on 30/05/2019. from: https://www.itif.org/files/2008_State_New_Economy_Index.pdf.
4. Aubert, J.E., & Reiffers, J.L. (2004). *Knowledge Economies in the Middle East and North Africa: Toward New Development Strategies*. Washington: The World Bank.
5. Barkhordari, S., Fattahi, M., & Azimi, N.A. (2018). The Impact of Knowledge-Based Economy on Growth Performance: Evidence from MENA Countries. *Journal of the Knowledge Economy*, 1–15.
6. Brinkley, I. (2006). *Defining the Knowledge Economy*. London: The Work Foundation.
7. Buhr, D. (2015). *Social Innovation Policy for Industry 4.0*. Berlin: Friedrich-Ebert-Stiftung, Division for Social and Economic Policies.
8. Cader, H.A. (2008). The Evolution of the Knowledge Economy. *Journal of Regional Analysis and Policy*, 38(2), 117–129.
9. Chen, D., & Dahlman, C. (2005). *The Knowledge Economy, the KAM Methodology and World Bank Operations*. Washington: World Bank.

10. Dahlman, C., & Utz, A. (2005). *India and the Knowledge Economy: Leveraging Strengths and Opportunities*. Washington: The World Bank.
11. De la Fuente, A., & Ciccone, A. (2003). *Human Capital in a Global and Knowledge-based Economy* (562). Office for Official Publications of the European Communities.
12. European Commission (2010). *EUROPE 2020: A European Strategy for Smart, Sustainable and Inclusive Growth*. Retrieved on 30/05/2019, from: <http://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%20007%20%20Europe%202020%20-%20EN%20version.pdf>.
13. European Commission (2017). *New Industrial Policy Strategy*. Retrieved on 30/05/2019, from: https://ec.europa.eu/commission/news/new-industrial-policy-strategy-2017-sep-18_en.
14. European Parliament (2010). *The Lisbon Strategy 2000–2010: An Analysis and Evaluation of the Methods Used and Results Achieved*. Retrieved on 30/05/2019, from: <http://www.europarl.europa.eu/document/activities/cont/201107/20110718ATT24270/20110718ATT24270EN.pdf>
15. Ivanović, V. (2018). *Perspectives of Serbia in the Knowledge-based Economy*. Position paper No.1. Belgrade: Centre for Public Policy Research.
16. Ivanović, V. (2019). *From Order to Prosperity: German Model of Social-Market Economy*. Belgrade: Konrad Adenauer Foundation.
17. Leydesdorff, L. (2012). The Knowledge-based Economy and the Triple Helix Model. *Annual Review of Information Science and Technology*, 44(1), 365–417.
18. OECD (1996). *The Knowledge-Based Economy*. Paris: OECD.
19. Powell, W.W., & Snellman, K. (2004). The Knowledge Economy. *Annual Review of Sociology*, 30, 199–220.
20. Ringstaff, C., & Kelley, L. (2002). *The Learning Return on our Educational Technology Investment: A Review of Findings from Research*. Washington: Office of Educational Research and Improvement.
21. Schwab, K., & Sala-i-Martin, X. (2011). *The Global Competitiveness Report 2011–2012*. Geneva: World Economic Forum.
22. Schwab, K., & Sala-i-Martin, X. (2017). *The Global Competitiveness Report 2017–2018*. Geneva: World Economic Forum.
23. Thomas, A., & Carl, D. (Eds.). (2001). *Korea and the Knowledge-based Economy Making the Transition: Making the Transition*. Paris: OECD publishing.
24. World Bank (2007). *Building Knowledge Economies: Advanced Strategies for Development*. Washington: World Bank.

Human Capital Management as a Subsystem of Knowledge-based Management*

Bogusz Miłucha

1. Introduction

Knowledge-based economy is characterized by (Skrzypek, 2015, p. 7): increasing globalization, treating knowledge as a strategic asset and a source of competitive advantage, technical and technological progress, increasing the impact of high-class specialists, research and creating innovations, as well as allocating increased public funds for education. As demonstrated by the results of empirical research, knowledge and skills relevant to business activity not only affect labor productivity, reduce the risk of social exclusion and increase income from work. They also significantly affect social behavior, thus increasing the efficiency of investing in the development of human capital (Porubčinová, 2011, p. 28). Therefore, the time has come in organization management for a wider use not only of knowledge management, but also of comprehensive knowledge-based management, including human capital management.

It was not until the 1990s that the value of human capital was appreciated in the theory of organization management. The reason for such a late recognition of the impact of human capital on the value of an enterprise was the difficulty in demonstrating the relationship between the value of human capital and the company's financial results. The concept still causes many problems (Szopik-Depczyńska & Korzeniewicz, 2011, pp. 196–197) and is still not widely used in business practice (Morawski, 2013, p. 126; Volná & Papula, 2013, p. 605). Unfortunately, the same applies to knowledge management. The practice is *en vogue* primarily in organizations focused on increasing productivity, efficiency and innovation (Igbinovia & Ikenwe, 2017, p. 35). Many companies have implemented knowledge

* The publication was co-financed from funds allocated for maintaining the research potential of the Faculty of Management at the Cracow University of Economics.

management systems, but with a major focus on information technology (Jeon, Kim & Koh, 2011, p. 251). Nowadays, the time has come to broadly include in theory and practice of knowledge management the concept of soft factors that dynamize knowledge creation processes. This requires a relational approach to managing people within and without the organization (Morawski, 2017). Therefore, the radical development of human capital management is in perspective.

2. The essence and levels of knowledge-based management

The term “knowledge-based management” can refer to two basic levels. The first is the macro level, which refers to management at the level of national economy, or a broader system of economies, such as the economic commonwealth. The other is micro level, and it refers mainly to shaping the right macro environment conditions, including (Skarżyński, 2017, p. 48) international, political, legal, institutional, economic, social, cultural, demographic, technological, geographical, natural and ecological aspects, to facilitate business activity. Given the features of the knowledge-based economy, the main actions at the macro level should focus on improving the information and IT infrastructure, as well as research and development processes (the scientific research system), improving the education system, living and working conditions of the population and business activity conditions, along with building an information and knowledge society and ensuring sustainable development of regions. At the micro level, knowledge-based management focuses on creating knowledge-based organizations and developing them to the level of the knowledge organization.

In the knowledge-based economy another level has emerged, i.e. the mezo level. It is the result of ongoing cooperation between enterprises and the national and local institutions, science and research facilities, financial institutions, communities and even individual persons. This is a very important level of management as it can contribute to a better use of knowledge and human capital resources accumulated in the economy, thus improving the innovation processes and rationalize the processes of enterprise and economy development (Fig. 1).

Knowledge-based management focuses on generating value from knowledge-based resources by controlling processes that use these resources, and their conditions, in a way that enables efficient achievement of the company's goals. Knowledge-based management is based on many interrelated values, among which critical are: knowledge, relationships, cooperation, knowledge workers, human and customer capital, innovations and technologies, and the overall processes leading to the creation of knowledge-based products. Knowledge-based management focuses mainly on intangible assets, with no neglect towards the management of financial and material resources. However, the latter are easier

to obtain than the intangible resources, which are currently the foundation for building the competitive advantage.

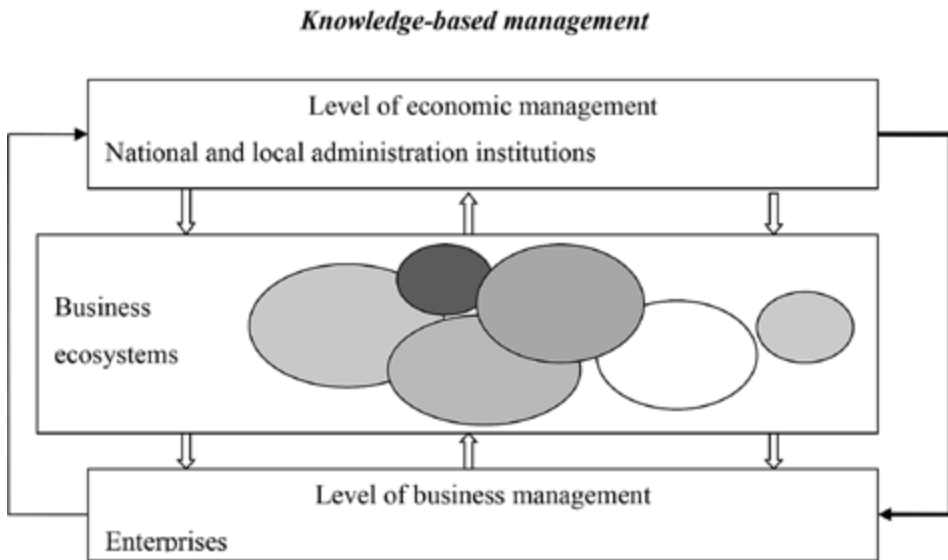


Figure 1. Levels of ecosystems as an emerging level of knowledge-based management
Source: own work.

At the core of knowledge-based management lies a different way of looking at the company’s goals than that, which is characteristic for the industrial economy. It is not primarily about profits and maximizing value for business owners any more. Such goals have led to a short-sighted perspective of the company managers who, in order to demonstrate rapid financial success (often at the request of business owners), maximized revenues and minimized costs by e.g. raising prices, violating consumer rights, using “dirty” technologies, destroying the environment, minimizing labor costs, etc. According to Š. Kassay (2016, p. 143), “the traditional understanding of business management, focused mainly on maximizing profits and seeing the company as a mechanism operating through the management board, is coming to an end”. Thus, the goal of economic activity should be to create global value, including value for (Mikuła, 2018, pp. 37–38):

- owners – by generating financial resources that enable further investments (cost reduction cannot be only a source of bonuses for top-level managers, but should be a way of obtaining funds for further investments),
- customers – by providing products which satisfy their needs at an acceptable price, and which are environmentally friendly,

- employees – by obtaining financial remuneration to meet their ongoing needs and ensuring an appropriate standard of living, which enables maintaining good health and development of the family, as well as satisfying one's aspirations, developing their personality, increasing qualifications, and obtaining satisfaction from professional and private life,
- local and global community – by creating jobs and meeting social needs as part of corporate social responsibility activities, by producing socially useful products, investing in environmental protection and creating lucrative prospects for future development,
- countries – by paying taxes and contributions to the social security system and participating in the country's economic system,
- partner and competitive companies – by the possibility of coexistence, cooperation and mutual development.

Knowledge-based management has led to the emergence of knowledge-based organizations, which are a transition phase to the so-called knowledge (smart) organization. They are the driving force for the development of the modern economy. Their attributes illustrate the character of knowledge-based management.

Knowledge-based organizations are organizations whose activities are based on knowledge and extensive relationships. The knowledge of these organizations, combined with that of their partners, is an essential source of creating value, which is directed not only at the owner or customer, but at all interacting parties, i.e. employees, the society, partner organizations and other, also competitors, through the opportunities for coexistence and development. Knowledge-based organizations create and sell products in which the value of knowledge exceeds the value of the knowledge-based product and/or service. The customer has no other option but to use the product/service, because the knowledge it contains is rare and protected, or is specialized enough that obtaining it is difficult (too expensive or time consuming). Leaning on knowledge and intellectual capital allowed knowledge-based organizations to apply mechanisms such as e.g. decentralized decision-making, flattened organizational structures, teamwork, process management, etc., which provide organizations of this type with a very high degree of adaptability and the ability to effectively apply proactive strategies. In the case of an excess of opportunities, these mechanisms also allow effectively implement emerging strategies. However, it is indisputable that the key factor in the success of a knowledge-based organization is its employees. They own the organization's key knowledge resource and are the foothold for the key internal and external relationships (Mikula, 2010, p. 14). In addition, organizations of this type are characterized by (Smolağ, 2013, p. 25): implementation of knowledge management strategies, a structured organizational learning process, subordinating and directing the organizational structure towards creating added value based on the

effective use of knowledge, ensuring appropriate conditions for employees and encouraging them to learn, effective transformation of knowledge into new solutions, and the ability to create, acquire, organize and share knowledge.

The distinguishing feature of knowledge-based organizations is cooperation with its business environment entities. The strategic forms of cooperation include strategic alliances, *joint venture*, coalitions, consortia, holdings, outsourcing, franchises and collaboration ventures. The level of formalization of this collaboration may vary. It is important, however, that the business entities involved can benefit due to the opportunity to share each other's resources. Knowledge-based management focuses on the joint use of knowledge and human capital, technology, sharing intellectual property, and on the risk and costs of ventures. Through cooperation, it also allows new market entries, increasing the scale effect or joint creation and commercialization of knowledge. Considering that each organization operates within a business ecosystem, this provides new perspectives for developing cooperation with entities in the broadly understood business environment.

In knowledge-based organizations, there is a strong focus on knowledge resources, as well as processes which leverage them, and on their conditions. This constitutes conscious and practical implementation of knowledge management. With the inclusion of the implementation of personnel activities adapted to current economic conditions and employee requirements, a new approach to human resources is practically revealed, the so-called human capital management.

3. The concept and levels of human capital

The broadest definition of human capital calls it “the values hidden within the members of the organization” (Jabłoński, 2002, p. 14). This capital is also identified directly with people, who are then defined as a collective of employees, as in “employees with certain characteristics” (Król, 2000, p. 241). The International Integrated Reporting Council defines it as “people’s competencies, capabilities and experiences, and their motivations to innovate, including their alignment with and support for an organization’s governance framework, risk management approach, and ethical values, the ability to understand, develop and implement an organization’s strategy, as well as their loyalties and motivations for improving processes, goods and services, including their ability to lead, manage and collaborate” (Trébucq, 2015, p. 32). Taking into account the perspective of managing human capital, the best approach seems to be the comprehensive one, as approached by Edvinsson and Malone (2001, p. 17), who incorporated in their definition the elements of human capital as: “the combined knowledge, skills, innovation and the ability of individual employees of the enterprise to perform tasks efficiently. It also includes enterprise values, organizational culture and philosophy”.

In the organization's human capital management, four levels of activity can be distinguished: individual, collaborative, organizational and the inter-organizational.

Human intellectual capital is nothing other than a person's intangible resources that can be used to create value. Based on the approach of Skyrme (1999), it can be assumed that human intellectual capital consists of the following elements:

- competences, which are a combination of knowledge, skills (including, e.g. talent and intuition) and attitudes towards life, work and business, which constitute an entirety in relation to the goals and conditions for action,
- structural factors – mainly relationships within the interpersonal inter-organizational network (as part of the formal and informal organization structure) reflected in the number and quality of contacts facilitating access to information, knowledge and other resources, as well as one's position in this network, along with mutual (two-way) relationships determined, e.g. by one's formal and actual authority, participation in processes and the scope of control over them,
- customer factors – an external partner (suppliers, customers, and employers) contact network and its impact (i.e. due to personal brand), connections,
- personal intellectual property (e.g. copyright, patents).

The collaborative human capital (of a team of employees) is created by the configuration of individual intellectual capitals included. It can be therefore considered on four levels: team competence, internal (interpersonal) relationships within the team, relationship of team members with the organization's environment, as well as intellectual property possessed by the team members, their subgroups and the entire team. The psychological and physical features of team members, their norms, values, views, explicit and implicit knowledge, together with internal motivation determine the attitudes adopted in the workplace, behaviors, teamwork results and effectiveness of cooperation with other teams.

Human capital of the organizational level is the configuration of all resources the carrier of which are people (on specialist and manager positions) and teams of the organization. The resources include knowledge (explicit and implicit, declarative and procedural), skills, values, norms, attitudes, views, relationships, emotional intelligence, etc. Human capital aimed at the remaining resources of the organization (both knowledge- and material-based), activates the organization to create value. Its range depends on the mutual adjustment and structure of connections between all the resources.

Each organization has its own business ecosystem. Its size and shape depends on the network of connections with other related entities. Small businesses, e.g. start-ups, may enter this network, as can large corporations, financial insti-

tutions, universities and research institutes, companies representing the knowledge-intensive business service sector, incubators, accelerators, coworking spaces, individual clients and various types of communities, e.g. clients, professionals, entrepreneurs, knowledge-based and other. Relationships with these entities allow both the human capital of the organization and human capital of the entities cooperating with them to create an inter-organizational level of human capital. These resources can significantly supplement deficiencies in a company's own human capital. The inter-organizational human capital level may multiply the use of the organization's intellectual capital in the interest of all ecosystem entities. The development of cooperation requires a willingness on the part of both parties, therefore a knowledge-based organization must have distinguishing attributes that attract partners. As a result, knowledge-based management must lead to building a positive image of the enterprise characterized by credibility, attractiveness and scarcity of its resources, a high probability of reciprocity in cooperation and offering resulting benefits.

4. Human capital management in a knowledge-based organization

Human capital management can be considered from at least three different perspectives. First, it involves the implementation of management functions (as in deciding, planning, organizing, motivating, controlling), which are focused on human capital in a way that enables efficient implementation of the organization's goals and allows high economic efficiency. Secondly, human capital management is seen as normative and disposable proceedings aimed at creating conditions for efficient use of human capital by its owners, including bringing the organization into a state of self-organization and self-management. Thirdly, human capital management consists in appropriate selection and use of organizational, technical, social, formal, legal, economic and financial instruments on which a human capital management system is based, and which it uses.

Since knowledge is the key resource in competing enterprises, human capital is a special asset because it is a carrier of personalized knowledge (contained in people's minds). With this knowledge, people activate and use the remaining knowledge resources of the organization – the codified and grounded knowledge – as well as purify and develop these knowledge resources. Therefore, human capital management should not be treated only as a set of personnel activities adequate to the organization's human resource management function. Theory and practice of human capital management should constitute a broad system of activities that are at least, or primarily, a combination of personnel activities and knowledge management tasks. In human capital management, a particularly important task is to create the right space for human work, which includes, e.g.:

- properly positioning man in the work space – not only physically, but also socially, organizationally and virtually,
- granting broad autonomy and a wide range of tasks by reducing the strength of hierarchical dependencies,
- changing leadership roles by eliminating formal leadership in favor of informal and rotating leadership,
- reducing the number of management levels and managerial positions,
- changing management styles to those characterized by partnership and broad support,
- enabling broad communication (e.g. creating chat rooms, reorganizing work spaces to remove barriers between people, equipping employees with modern telecommunications equipment),
- supporting informal intra-organizational relationships, including mutual care, friendship, trust and mutual obligations,
- enabling the development of a network of partner contacts with the organization's environment,
- support for employee initiatives, especially those created within various types of communities, e.g. of professionals, but also within formally functioning teams and employee representative bodies (committees, employee councils),
- introducing a comprehensive organizational learning process,
- developing corporate social responsibility by implementing healthy organization principles,
- shaping desired types of organizational climate and culture.

These activities can be attributed to the scope of human capital management in procedural terms as normative and dispositional proceedings.

At the personal human capital level, human capital management consists in planning personnel processes in relation to the employee's intellectual capital, as well as organizing them, managing people who implement them, controlling the course and effects of these processes, and making decisions at each stage of this management process (Mikula, 2012, p. 27). At this level of human capital management, instruments for human resource, competence and talent management are useful tools. Added to this is planning, organizing and controlling the implementation of processes involving the knowledge possessed by the employee and used at work. Therefore, human capital management is about correct implementation and optimization of the course of identification, transfer, collection, selection, creation, combining, saving, storing, assessing and applying resources of personalized, codified and grounded knowledge (Mikula, 2015, p. 25). These activities are part of knowledge management and constitute a set of processes involving knowledge.

At the employee team level, the critical goals of human capital management are to obtain a high level of competence of a cooperating group of people, lasting internal (interpersonal) relationships within the team, desirable, broad and lasting relationships of its members with the organization's environment, as well as high level of intellectual property possessed by the team members, their subgroups and the entire team needed to achieve goals. Particular emphasis in the management process at this level must be placed on:

- building team composition,
- conflict management,
- effective implementation of knowledge management operational tasks, especially the process of sharing of knowledge by key employees,
- facilitating access to knowledge resources (personalized, codified and grounded) necessary for the implementation of tasks,
- shaping interpersonal relationships within the organization and with its environment,
- support for creative, innovative processes and acquiring intellectual property,
- shaping a pro-innovative organizational climate.

The useful tools at this level of human capital management are instruments in relationship, knowledge, information, communication, innovation management and shaping organizational behavior.

They are used at the organizational level of human capital management, and include issues related to strategic management of the organization (especially regarding the selection and implementation of knowledge strategies), the knowledge management system and shaping the organizational structure. An indispensable condition for success in achieving the highest leverage for the organization's human capital is to achieve a state of self-organization and self-management, which should feed (at least in part, as there are many determining factors) into the flexibility of the organization's operation.

Compared to the lower levels of human capital management, management at the inter-organizational level may prove to be quite limited in terms of the possibility of impacting other entities and leveraging their human capital resources (unless the organization is a major player in the business ecosystem network). Therefore, on this level human capital management focuses on:

- creating, developing and maintaining appropriate relationships and conditions for the organization's cooperation with external business and institutional partners (cooperation, competition, strategic alliances);
- creating, developing and maintaining appropriate relationships and conditions for cooperation with individual partners participating in the process of creating value on a permanent, short-term or spontaneous basis. These partners are consultants, representatives of supporting partners (e.g. leased

personnel), persons from the group of suppliers, as well as institutional and individual clients who take over the implementation of certain tasks from the organization, or support their implementation, e.g. independently define product features, design elements of purchased products, collect information, create advertising slogans, participate in the implementation of ventures, etc. Depending on the contribution they make, these people can act as external knowledge workers or supporting partners;

- managing the course of cooperation with business ecosystem entities, including creation, transfer and commercialization of knowledge, as well as joint use of intellectual property.

5. Conclusion

Human capital management is a set of configured activities that should create a coherent system in the management of knowledge, human resources, skills, talents, interpersonal and business relationships, information and communication, innovation and shaping organizational behavior, including shaping organizational structure and motivation, as well as managing intellectual property. Please note that:

- human capital management should be based on proactive management attitudes that inspire employees to learn and share the knowledge, as well as to maintain a proper work-life balance. Management should skillfully implement the right incentives (Moczydłowska & Kowalewski, 2014, p. 34),
- even the most valuable human capital will not yield the expected results without appropriate organizational capital (Bayer, 2017, p. 88). Therefore, top management must integrate human and organizational capital (Mouritsen, Thorsgaard Larsen & Bukh, 2005, p. 17),
- human capital management organizations should use an open network strategy that involves frequent and intensive involvement in interaction with external partners (Zięba, 2018, p. 103). Establishing cooperation with other environment entities and generating experience from it increases the level of accumulated human capital in an enterprise. Human capital grows the faster the greater are the enterprise's resources (Jabłoński, 2012, pp. 152–154),
- education and other forms of developing human skills, including creativity, are a way to increase the value of human capital. Therefore, investing in human capital to increase its value is primarily associated with investments in education and development of human skills, as well as improvement of people's working and living conditions (Krajňáková & Vojtovič, 2012, p. 78). Ensuring high quality staff in the economic sphere is the basic duty of the headship of each country.

Bibliography

1. Beyer, K. (2017). Rola kapitału intelektualnego w kreowaniu innowacyjności przedsiębiorstw. *Studia i Prace WNEiZ US*, (48/3), 83–94.
2. Edvinsson, L., & Malone, A.S. (2001). *Kapitał intelektualny*. Warszawa: PWN.
3. Igbini, M.O., & Ikenwe, I.J. (2017). Knowledge Management: Processes and Systems. *Information Impact: Journal of Information and Knowledge Management*, 8(3), 26–38.
4. Jabłoński, Ł. (2012). *Kapitał ludzki a konwergencja gospodarcza*. Warszawa: C.H. Beck.
5. Jabłoński, M. (2002). Rola, struktura i pomiar kapitału intelektualnego organizacji. *Ekonomika i Organizacja Przedsiębiorstwa*, (11), 13–21.
6. Jeon, S., Kim, Y.G., & Koh, J. (2011). An Integrative Model for Knowledge Sharing in Communities-of-Practice. *Journal of Knowledge Management*, 15(2), 251–269.
7. Kassay, Š. (2016). *Przedsiębiorstwo i przedsiębiorczość. Uczenie się i wzrost*. Kraków: Księgarnia Akademicka Sp. z o.o.
8. Krajiňáková, E., & Vojtovič, S. (2012). Význam ľudského kapitálu a kreatívnych klastrov v rozvoji regiónu. *Sociálno-ekonomická revue*, (1), 76–84.
9. Król, H. (2000). Strategiczny rozwój kapitału ludzkiego w firmie. [in:] A. Ludwiczynski (Ed.), *Strategiczne zarządzanie zasobami ludzkimi*. Warszawa: Polska Fundacja Promocji Kadr – Zarząd.
10. Mikuła, B. (2010). Zasoby ludzkie nowej generacji. [in:] J. Stankiewicz (Ed.), *Społeczne wymiary zarządzania nowoczesnymi przedsiębiorstwami. Ludzie – kultura organizacji – społeczna odpowiedzialność*. Zielona Góra: Uniwersytet Zielonogórski.
11. Mikuła, B. (2012). Nowy wymiar zachowań organizacyjnych. [in:] B. Mikuła (Ed.), *Zachowania organizacyjne w kontekście zarządzania wiedzą*. Kraków: Foundation of the Cracow University of Economics.
12. Mikuła, B. (2015). Potencjał społeczny przedsiębiorstwa i podstawy jego rozwoju. [in:] M. Jabłoński (Ed.), *Zachowania organizacyjne w kontekście zmian*. Kraków: Department of Organizational Behaviors, Cracow University of Economics.
13. Mikuła, B. (2018). Zarządzanie oparte na wiedzy – podstawowe założenia. *Studia Ekonomiczne. Gospodarka-Społeczeństwo-Środowisko*, (2), 34–46.
14. Moczydłowska, J.M., & Kowalewski, K. (2014). *Nowe koncepcje zarządzania ludźmi*. Warszawa: Difin.
15. Morawski, M. (2013). Zarządzanie kapitałem ludzkim przedsiębiorstwa w warunkach gospodarki opartej na wiedzy. [in:] B.M. Powichrowska (Ed.), *Zrównoważona gospodarka oparta na wiedzy. Wybrane aspekty*. Białystok: Wyższa Szkoła Ekonomiczna w Białymstoku.
16. Morawski, M. (2017). *Pracownik kluczowy w procesie dzielenia się wiedzą. Motywy, warunki, metody*. Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu.
17. Mouritsen, J., Thorsgaard Larsen, H., & Bukh, P.N. (2005). Dealing with the Knowledge Economy: Intellectual Capital versus Balanced Scorecard. *Journal of Intellectual Capital*, 6(1), 8–27.

18. Porubčinová, M. (2011). Ľudský kapitál – bariéry a šance rozvoja v podmienkach informačnej spoločnosti. *Prognostické Práce*, 3(1), 27–49.
19. Skarżyński, M. (2017). Przedsiębiorstwo jako element otoczenia. [in:] J.S. Kardas & M. Wójcik-Augustyniak (Eds.), *Zarządzanie w przedsiębiorstwie. Środowisko – procesy – systemy – zasoby. Wydanie 2*. Warszawa: Difin.
20. Skrzypek, E. (2015). Zarządzanie wiedzą i zaufaniem w warunkach nowej gospodarki. [in:] M. Cisek & K. Wąsowska (Eds.), *Wiedza i doświadczenie w zarządzaniu przedsiębiorstwem*. Siedlce: Wydawnictwo Uniwersytetu Przyrodniczo-Humanistycznego w Siedlcach.
21. Skyrme, D.J. (1999). *Knowledge Networking. Creating the Collaborative Enterprise*. Oxford: Butterworth Heinemann.
22. Smołąg, K. (2013). Modele współczesnych przedsiębiorstw i determinant ich rozwoju. [in:] A. Czech & A. Szplit (Eds.), *Nauki o zarządzaniu dla przedsiębiorstw i biznesu*. Katowice: Wydawnictwo Naukowe Uniwersytetu Ekonomicznego w Katowicach.
23. Szopik-Deczyńska, K., & Korzeniewicz, W. (2011). Kapitał ludzki w modelu wartości przedsiębiorstwa. *Studia i Prace Wydziału Nauk Ekonomicznych i Zarządzania Uniwersytetu Szczecińskiego*, (24), 177–204.
24. Trébucq, S. (2015). La mesure du capital humain: nouvelles perspectives ouvertes per la chaire «capital humain» de l'Université de Bordeaux. *Vie sciences de l'entreprise*, (2), 26–48.
25. Zięba, M. (2018). *Wiedza i jej przepływy w firmach oferujących wiedzołchonne usługi biznesowe*. Gdańsk: Gdansk University of Technology.

Leadership Concept for Industry 4.0*

Zora Arsovski, Slavko Arsovski, Aleksandar Djordjević

1. Introduction

Concept of Industry 4.0 is relative new (Smidt et al., 2015). It is based on optimized traditional industries with cutting edge of Internet technologies. This combination enhances supply chains, and business processes. It is reason why many companies try to develop own business strategy based on Industry 4.0 as so-called Cyber-physical system that describes the integration of digital with physical workflows. In this system production processes are accompanied by computer-based processes, dominantly Artificial Intelligence (AI) supported by Internet of Things (IoT), defined as the ubiquitous access to entities in the internet. On this way is possible to generate smart products, processes and technologies as means for better profitability and sustainability. A concept of Industry 4.0 uses much more previous industrial concepts and sensors technologies connected with computer capacities in Internet environment.

Using a significantly higher processing capacity images, sounds and video files on computer systems is possible to trigger production, maintenance, quality control and other production activities.

Industry 4.0 has generally two sides. On the left side is production process with computer based: (1) state identification, (2) life cycle management, (3) sensors, and (4) intelligence for process management. The right side are users connected with production processes with Big Data through Cloud computing and the internet. On this side are networked data Analytics, Cloud Integration, and other Networking resources. Through feedback is accomplished process innovation and product innovation.

* The research presented in this paper was supported by the Ministry of Science and Technological Development of the Republic of Serbia, Grant III-44010, Title: *Intelligent Systems for Software Product Development and Business Support based on Models*.

Potential benefits of Industry 4.0 concept are: (1) production time reduction, (2) lower business process complexity, (3) high level of automatization, (4) higher mass customization, (5) reduction of idle data, (6) needs for new technologies in future.

In condition of fast changes and bigger complexity of business a Smart Technological Solutions (STP) based on AI (Artificial Intelligence) do not avoid leaderships (Fray, 2003). It now has to be more grounded on spirituality which is until now not available for machines including augmented by AI. A leader has to be “renaissance” type of person with a lot of different knowledge (especially related to Industry 4.0) and much more with expressed spirituality which allows him/her access to mind field and Noetic Field Science of Being (Amoroso, 2015). Also spiritual leaders have to have high Spiritual Intelligence (Silingiene & Skiriene, 2006).

The subject of the paper is review of concept of spiritual leadership (Merry, 2017) for purpose introduction of concept of Industry 4.0. The objective of the paper is to define elements of spiritual leadership, leadership/management, and quality leadership, as basis for competitively and sustainability of industrial enterprises in 21. Century.

The paper is organized on following chapters. After introduction in chapter two is presented literature review from different research areas, as leadership ICT, and business performances. In chapter three is presented model of spiritual leadership for Industry 4.0, business performances model, and integrated model. Results of the verification of the proposed model is presented in chapter four, started from description of sample, description of methodology based on Mat Lab software for ANN modeling, results of analysis, and discussion about results of research. In chapter five is presented conclusions.

2. Leadership for Industry 4.0

For the research are analyzed three sub-concepts of leadership:

- spiritual quality leadership
- spiritual leadership in the Triple Bottom Line,
- meta-leadership.

2.1. Spiritual quality leadership

Base for spiritual quality leadership is quality leadership. Leader traits in *TQM (Total Quality Management)* concept are:

- driver (energy),
- motivator,
- honest and integrity,

- self confidence,
- cognitive traits,
- business skills,
- charisma etc.

A behavior of leaders in TQM concept is focused on stakeholder's satisfaction, based on four groups of activities:

1. information giving,
2. deciding,
3. impact on people, and
4. building the relations.

In standard ISO 9001:2015 is declared that top management must to have leadership and dedicated related to quality management system. Between “*classical*” and spiritual leadership concept are differences. One of them is “*nature is stable*” vs. “*nature is chaotic*”, next is “*world is linear and predictable vs. uncertain*”.

One aspect of difference is related to synchronicity. Hockey (2012) expressed that synchronicity gives hope that our internal experience corresponding to objective reality. The theory of synchronicity founded Jung in area of psychology, but it is reflects on spiritual leadership Lorenc (2006) expressed five questions about synchronicity:

- What characterized experience about synchronicity?
- What told Jung regarding synchronicity?
- How is related theory of complexity and chaos regarding synchronicity?
- Which existed interdisciplinary theories can help in understanding synchronicity on a new way? and
- Which questions can express Jung concept for a new sensibility regarding synchronicity?

Based on literature in leadership theory (Fray & Matherly, 2006) in Figure 1 are presented factors related to synchronicity.

Jaworski (2012) included creativity in this area and stated six factors of synchronicity:

1. power of perspective,
2. magic of metaphors,
3. role of resonance,
4. using of uncertainty,
5. conceptual complementarily, and
6. inner self-control.

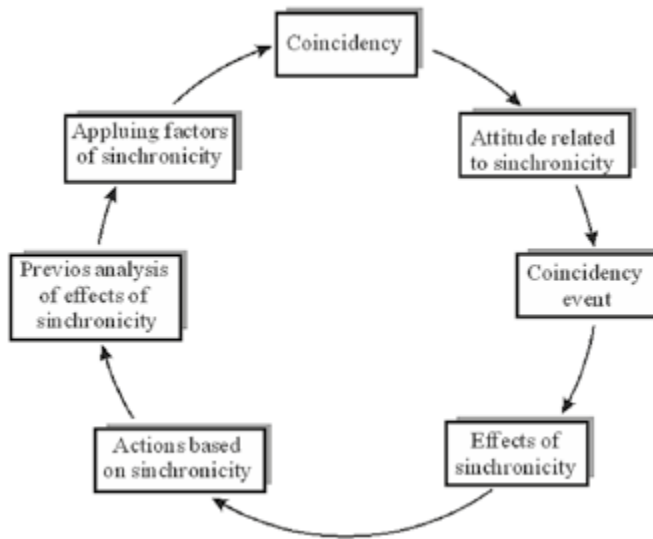


Figure 1. Synchronicity in leadership theory

Source: own study.

In area of spiritual quality leadership authors based research on seven variables v_i , i.e.:

1. strategic management level (v_1),
2. quality management level (v_2),
3. quality leadership level (v_{16}),
4. synchronicity level (v_{14}),
5. spirituality level (v_{15}),
6. process-product quality level (v_4), and
7. spiritual quality leadership level (v_6).

Relation among them is presented in Figure 2.

Among variables using Grounded theory (Glaser & Strauss, 2006) and related references (Joshi, 2018; Sharma & Sharma, 2016) are stated relations. For purpose of simulation of variable v_4 (process-product quality level) is used method of Artificial Neural Network (ANN). Using referent literature in this field (Reave, 2005; Hacker, 2016) independent variables are v_1 (strategic management), v_{16} (quality leadership), v_{14} (synchronicity level), and v_{15} (spirituality level). In the middle of the base model are variables v_6 (spiritual quality leadership), and v_2 (quality management). In the base model are used relationships in one direction among variables. For purpose of simulations variables are differentiated. So independents are v_1 , v_{16} , v_{14} , and v_{15} dependent, and depended v_2 , v_6 , and finally v_4 .

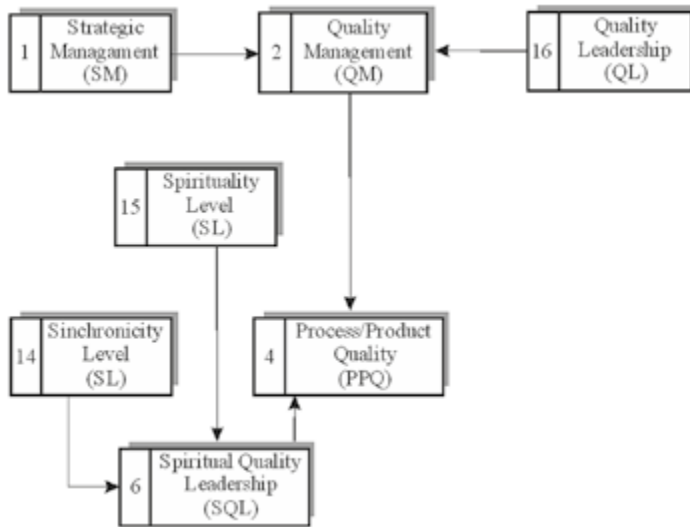


Figure 2. Base model

Source: own study.

All variables are composite, i.e. construct from different sub-variables. In Figure 3 is presented author’s model “Cube of leadership”.

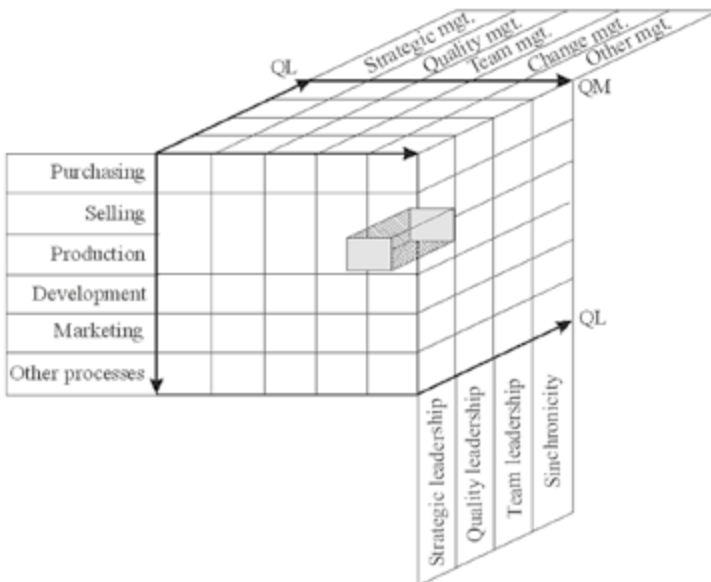


Figure 3. “Cube of leadership”

Source: own study.

In first research of spiritual leadership average level of it was 3.665 on scale 1–10, what is low level. Especially are low levels of spirituality and synchronicity (Fig. 4).

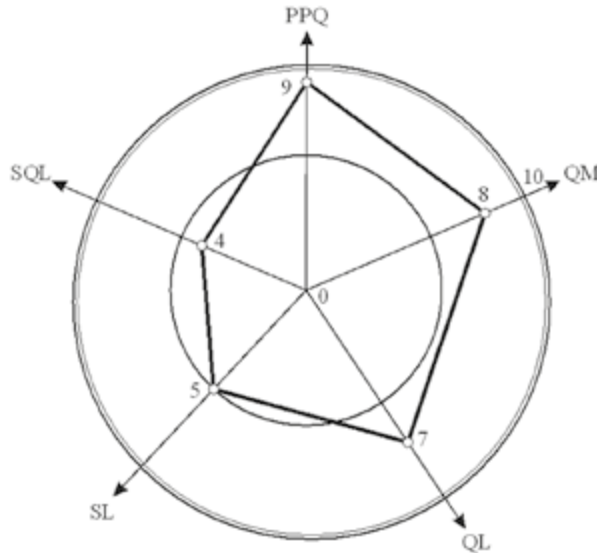


Figure 4. Radar diagram for one enterprise's mean values of variables in the base model
Source: own study.

In this research are analyzed 20 enterprises in Serbia and find relation between variables quality leadership (v16) and spirituality (v15).

Results of this research is upgraded for 40 medium enterprises in next period and become has for predicting quality level in function of spiritual leadership in era of new paradigms as Industry 4.0 and Industry 5.0.

2.2. Spiritual leadership in the Triple Bottom Line

This concept starts with spiritual leadership (Hope/Faith, Inner Life, Altruistic Love, and Vision), and through Spiritual Well-Being (Understanding/Appreciating, Meaning of Life/Purpose) defined by Singh & Sinha (2013), Lepage (2006), Hacker (2016), Reave (2005), Corry et al. (2013), and Pór (2008) connects to Triple Bottom Line (Fig. 5). In this model are included:

- Personal spiritual leadership,
- Organizational spiritual leadership,
- Sustainability, and
- Triple bottom live, and
- Social system as environment.

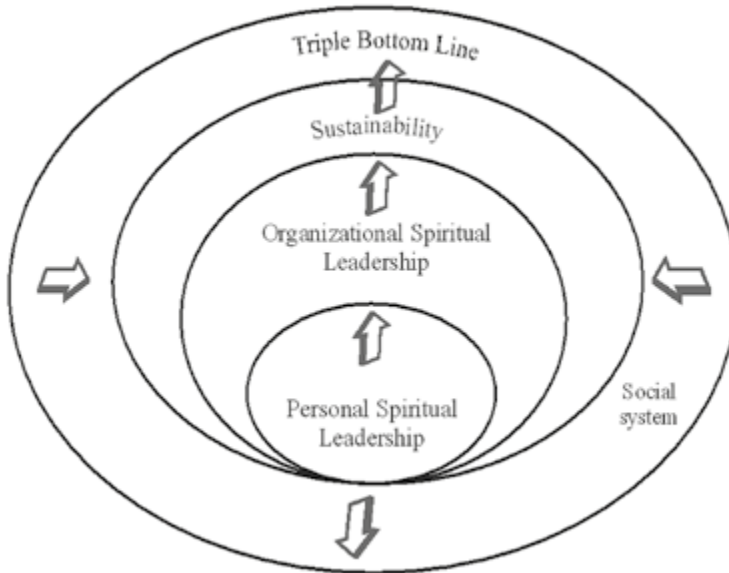


Figure 5. Embedding sustainability in social system

Source: own study.

In theory of leadership are emphasized more Personal Spiritual Leadership which has impact on Organizational Spiritual Leadership (Pielstick, 2005). On the upper level is achieved sustainability which has impact on social system. On this way is possible to connect this concept to Society 5.0 concept, Quality 4.0 concept, and Quality 5.0 concept (Arsovski, 2019).

A concept of Society 5.0 consists from four systems:

1. Common basic functions,
2. ICT (Information and Communication Technologies),
3. Basic cyberspace technologies as AI (Artificial Intelligence), Big Data Analysis, etc as pillar, and
4. Incorporated social and production systems.

A spiritual leadership business model is connected with BSC (Balanced Score Cards) from Kaplan and Norton (2006). In Figure 6 are presented elements of this model according Malone, Laubacher and Dellarocas (2010).

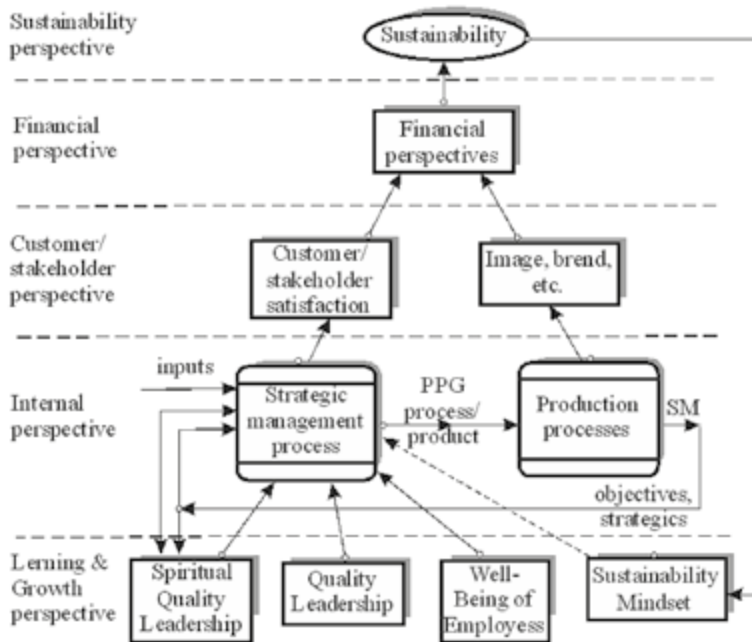


Figure 6. Spiritual Leadership Triple Bottom Live Business model

Source: own study.

2.3. A Meta-leadership concept

A meta-leadership concept is new concept based on meta physical approach. It is very broad and is developed as crisis leadership and solution for complex problem solving in which are included multiple stakeholders requirements. This concept is based on unifying mission, vision and purpose that connect people in their activities with linking activities of meta-leaders which “galvanize” connection of thinking and action in all organizational entities or functions. On this way performance fellow practice and meta-leaders see it and do more than managers.

A concept of meta-leaders reframes a business processes and preparation of leaders in three functions: (1) a comprehensive organization of mission and integrate it in leadership, (2) a method for engaging collaborative activities, and (3) as cause and purpose for improvement organizational functions and resilience.

Personally the meta-leader must have Emotional Intelligence (EI) with self-awareness and self-regulation. It is necessary in situations with often incomplete information, in which meta-leaders have sense what will or is happening, and define action and lead people to effectively resolve problems (Mc Nalty et al., 2018; Groot, 2017; Chopra, 2015; Saucier & Skrzypinska, 2006; Malone, Laubacher & Dellarocas. 2010).

The key element of concept of meta-leadership is connectivity (Fig. 7).

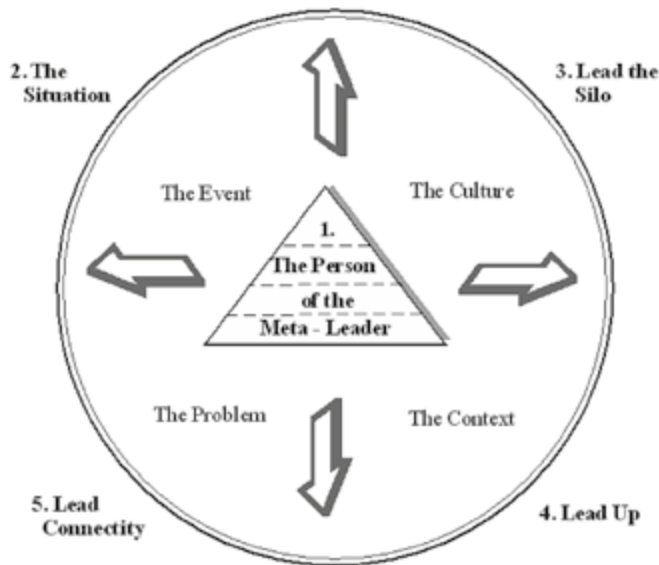


Figure 7. A connectivity leadership problem

Source: own study.

In this concept meta-leader is able to simultaneously:

- Lead Down,
- Lead Up,
- Lead Across (Marcus et al. 2014).

In center of this model is person of the meta-leader with higher level of Emotional Intelligence, including self-awareness and self-regulation. His role is crisis leadership and complex problem solving with including multiple stakeholders. His mission and purpose is connection of people across a wide number of activities. For it significant impacts have different perspectives and information integrated to shape a wider view on assets, options, and actions (Marcus et al., 2014).

3. Model of spiritual leadership for Industry 4.0

3.1. Base model

Based on Grounded Theory (Glaser and Straus, 2006), concept of Industry 4.0, and Quality 4.0 is defined base model for Spiritual Leadership (SL) for Industry 4.0 and Quality 4.0 (Fig. 8).

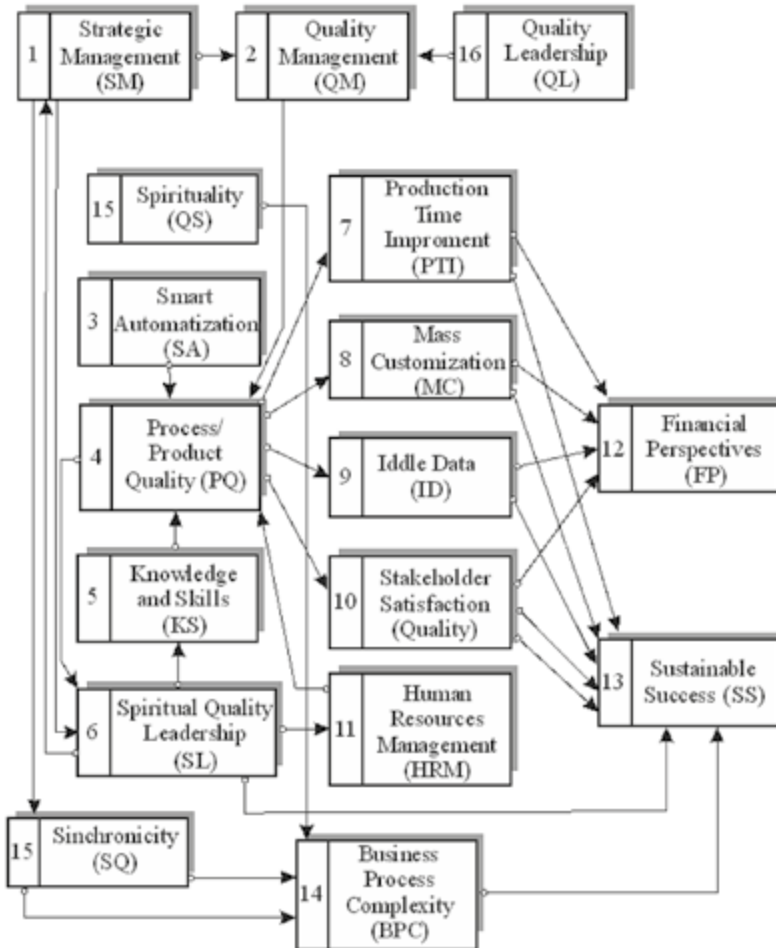


Figure 8. Extended base model

Source: own study.

In this model variables are:

- **v1**– SM (Strategic Management) with: (1) vision, purpose, and mission, (2) internal and external stakeholder analysis, (3) objectives and strategies, (4) implementation, and (5) evaluation,
- **v2** – QM (Quality Management) with: (1) quality planning, and other requests,
- **v3** – SA (Smart Automatization),
- **v4** – PQ (Process/Product Quality),
- **v5** – Knowledge and skills level,
- **v6** – Spiritual quality leadership,

- v7 – Production time improvement,
- v8 – Business mass customization,
- v9 – Idle data,
- v10 – Stakeholder/customer satisfaction,
- v11 – Human resources level,
- v12 – Financial performances,
- v13 – Sustainable success,
- v14 – Synchronicity level,
- v15 – Spirituality level, and
- v16 – Quality leadership.

In next step are analyzed relationships among variables. After analyzing is concluded that relation v14–v6, and v15–v6 are positive.

In the third step are analyzed relations (v6–v4 and v1–v4). We find that they have positive impact on v4 as dependent variable in the base model.

After analyzing impact of variables in the model we decide that is necessary to use ANN for purpose of simulation of expected impact of variables on v4 as crucial for Industry 4.0.

4. Case study

Through analyzing referent literature and low availability of data for extended model, authors started with base model presented in Figure 2. For it are analyzed 40 industrial enterprises in Serbia. Problem was about subjectivity of top managers and in some cases wrong and not real assessment. Because that this assessment is correct with assessment of consultants working in these enterprises. For assessment of synchronicity and spirituality are used verified questionnaires for business sector. For Quality leadership is used model of Arsovski (2017), for Quality management ISO 9001:2015, and for Strategic Management model of W. Pietersen (2008). For second group of variables is used appropriate metrics. As example, in Table 1 is presented metric for Quality Management.

For each enterprise are selected four key processes and one key product. Through Technique of Nominal Group (TNG) are defined weights which sum is equal one for each analyzed enterprise.

Table 1. Metric for Quality management

	Quality of process 1	Quality of process 2	Quality of process 3	Quality of process 4	Quality of product	Value
1	10	10	10	10	10	10
2	9	9	9	9	9	9
3	8	8	8	8	8	8
4	7	7	7	7	7	7
5	6	6	6	6	6	6
6	5	5	5	5	5	5
7	4	4	4	4	4	4
8	3	3	3	3	3	3
9	2	2	2	2	2	2
10	1	1	1	1	1	1
Weight/ponder	0.2	0.15	0.15	0.10	0.4	

Source: own study.

4.1. Simulation effects of spirituality and synchronicity level on quality

For purpose of the article in this part is presented simulation of quality (PPQ), as crucial variable for concept Quality 4.0 and Quality 5.0. For it is used method of Artificial Neural Networks on sample of 40 medium enterprises in Serbia.

This analysis is conducted by Mat Lab software, and methodology is based on research of Villarrubia et al. (2018), artificial neural networks used in optimization problems, neurocomputing (Hajian & Styles, 2018), artificial neural networks in application of soft computing and intelligent methods in geophysics (Da Silva et al., 2017).

Based on relations presented in Figure 2 is defined model presented in Figure 13. In this model variables v16 and v1 has impact on variable v2 and v15, and variable v14 on variable v6. Both variables v2 and v6 are intermediate. Finally variables v2 and v6 have impact on variable v4.

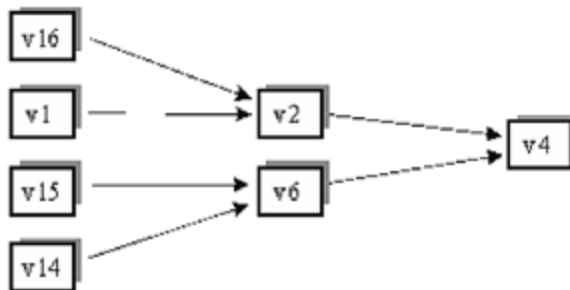
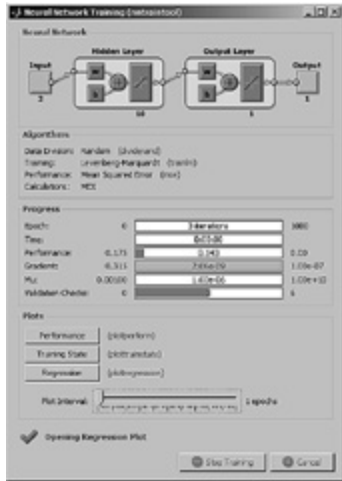


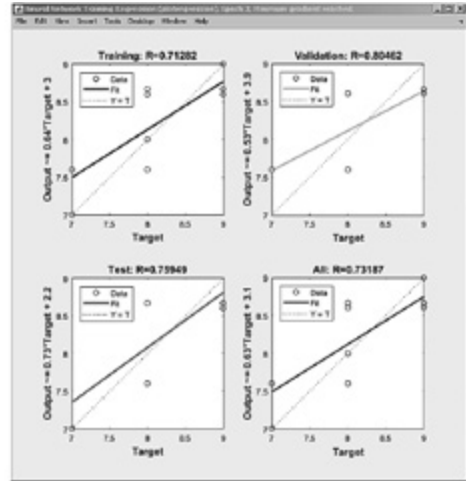
Figure 9. ANN model

Source: own study.

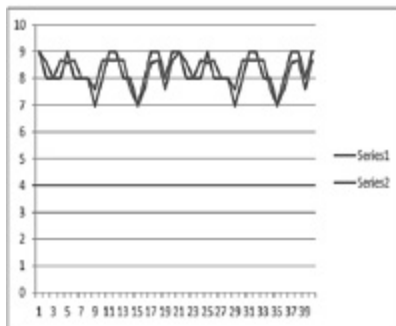
Using of ANN method is conducted in three steps. In first step is created net for predicting values of v2 based on values of independent variables v16 and v1 (Fig. 14a).



a) Creation of net for predicting value v2



b) Regression among expected and real values of v2



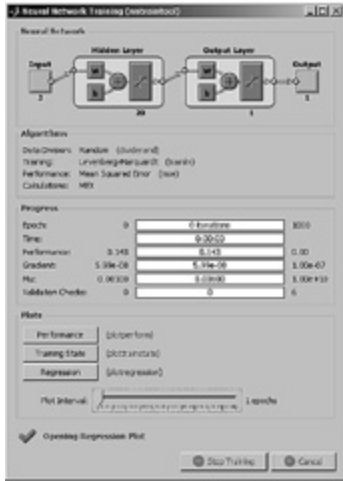
c) Compare among expected and real values of v2

Figure 10. The first step in using ANN for values v2

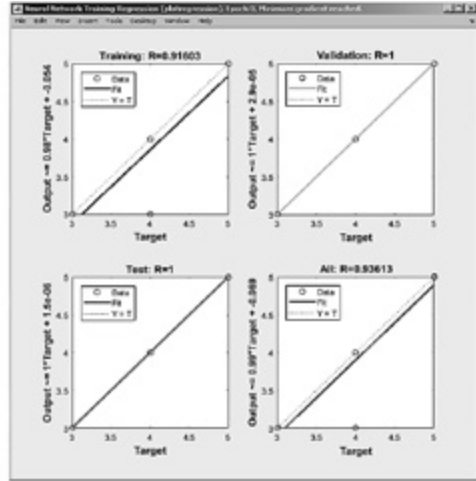
Source: own study.

In this prediction are two inputs and one output with 10 hidden layers and one output layer (Fig. 14b). In this step are also calculated regression coefficients. In all cases between test values and output value are calculated high levels of regression coefficients ($R = 0.75949$). It indices exists high conformity level between expected and real values of v2 (Fig. 14c).

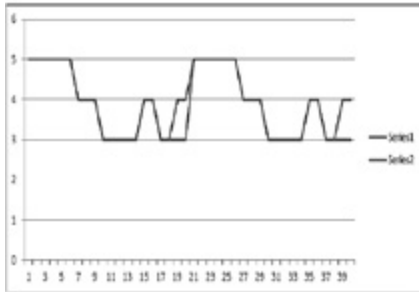
In second step is conducted the same methodology for predicting values of v6 based on values of variables v15 and v14 (Fig. 15a).



a) Creation of net for predicting value v6



b) Regression among expected and real values of v6



c) Compare among expected and real values of v6

Figure 11. The second step in using ANN for values v6
Source: own study.

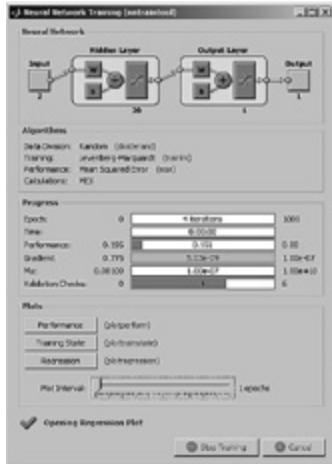
In this step are used two input variables, twenty hidden layers, one output layer, and one output. In Figure 15b is calculated regression coefficients ($R = 1$ and $R = 0.93613$). At the end of this step are compared expected and real values of v6 (Fig. 15c).

In third (final) step is predicting value of v4 based of two input variables (v2 and v6). Hidden layer has twenty inputs for each variable and output layer only one variable (Fig/ 16a).

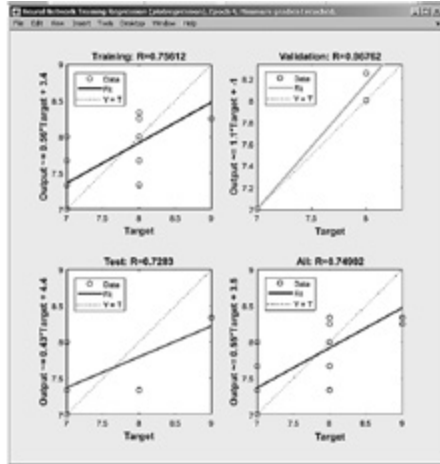
In Figure 16b is presented plot of regression coefficients ($R = 0.7283$ and $R = 0.74902$) among expected and real values of v4, which confirm base hypotheses about relations in stated model.

At the end of application of ANN in Figure 16c is presented comparison of expected and real values of v4.

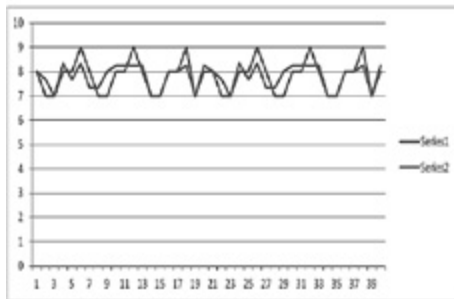
In all steps of conducting ANN in the proposed model is performed good conformity among variables ($R > 0.7$). It implies that this base model can be used for next improvement especially with including other variables in the model and using higher sample. For it is necessary to analyze more of the 200 industrial enterprises.



a) Creation of net for predicting value v4



b) Regression among expected and real values of v4



c) Compare among expected and real values of v4

Figure 12. The third step in using ANN for values v4
Source: own study.

5. Conclusion

A new business arena 21. century changes role and structure of leadership. In new business context regarding higher complexity, higher risks, higher implementation of Artificial Intelligence and Big Data system existing concept of leaderships are not satisfied. Objective of the study which results are presented in the article is spiritual leadership as effective answer on the new requests in 21. century.

For research is used two steps methodology, i.e.: (1) theoretical analysis of spiritual leadership, synchronicity, its structure needed for defining the base model for next step, (2) statistically analysis of level of spiritual leaderships in enterprises in Republic Serbia and relationships among variables.

The main findings of research are: (1) spiritual leadership becomes a new and very important aspect of quality performances in enterprises, (2) there are relationships among quality praxis, quality management, quality leaderships, spirituality in quality, and synchronicity in quality area. Quality is key enabler of competitiveness and sustainable success of enterprises based on these relationships are important for Industry 4.0 and industrial enterprises.

The research limit is related to: (1) relative low level of management and leadership in existing enterprises in Serbia, (2) relative small sample, (3) high impact of requested personal attitudes on depend variable, (4) high number of variables internal and external types, and problems of „mining“ of statements and its reliability. Results presented in the article is now in progress and in the next research will be more precise and reliable for industry generally, and some industrial sectors.

Practical implications of the research presented in the article are manifold i.e.: (1) general model for further research in other industrial environments, (2) base for upgrading the model with new variables related to quality of life, virtuality of production and consuming a produced goods, etc., (3) prediction of goal function for each industrial enterprise, etc.

Originality of the research is very high because in concept Industry 4.0 there not enough defined leadership concept and practically there are not included aspect of spirituality.

Bibliography

1. Amoroso, R. (2015). *Completing Epistemology: The Utility of Transcendence as a Tool in Scientific Theory Formation*. Beril, UT, USA: The Noetic Advanced Studies Institute.
2. Arsovski, S. (2017). *Quality of Science*. Serbia, Kragujevac: University of Kragujevac, Faculty of Economics.
3. Chopra, D. (2015). *The Soul of Leadership*. India, Bengalunu: Infosys.
4. Corry, D.A.S., Mallett, J., Lewis, C.A., & Abdel-Khalek, A.M. (2013). The Creativity-spirituality Construct and its Role in Transformative Coping. *Mental Health, Religion & Culture*, 16(10), 979–990.
5. Da Silva, I.N., Spatti, D.H., Flauzino, R.A., Liboni, L.H.B., & dos Reis Alves, S.F. (2017). *Artificial Neural Networks. A Practical Course*. Cham: Springer International Publishing.
6. Fray, L. (2003) Toward a Theory of Spiritual Leadership. *The Leadership Quarterly*, 14, 693–727.

7. Fry, L., & Egel, E. (2017). Spiritual Leadership: Embedding Sustainability in the Triple Bottom Line. *The Graziadio Business Review*, 20(3), 39–40.
8. Fry, L., & Matherly, L. (2006). *Spiritual Leadership and Organizational Performance: An Exploratory Study*. Texas: Tarleton State University.
9. Glasser, B., & Straus, A. (2006). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. London: Aidine Transaction.
10. Gloor, P. (2017). *Swarm Leadership and the Collective Mind: Using Collaborative Innovation Networks to Build a Better Business*. UK: Emerald Publishing.
11. Hacker, S. (2016). *How to Coach Individuals, Teams, and Organizations to Master Transformational Change: Surfing Tsunamis*. Business Expert Press.
12. Hajian, A., & Styles, P. (2018). *Artificial Neural Networks in Application of Soft Computing and Intelligent Methods in Geophysics*. Springer.
13. Hockey, J. (2012). *The End of the Age of Entitlement*. London: The Institute of Economic Affairs.
14. I.S.O. (2015). *9001: 2015 Quality Management Systems-Requirements*. ISO: Geneva, Switzerland.
15. Jaworski, J. (2012). *Source: The Inner Path of Knowledge Creation*. Berrett-Koehler Publishers.
16. Joshio, M. (2018). *Leadership in the Age of AI: Adapting, Investing and Reskilling to Work Alongside AI*. India, Bengaluru: Infosys.
17. Lepage, A. (2016). *The Quality of Life Model as Attribute of the Sustainability Concept*. Campus Helsingborg: Lund University.
18. Lorenz, H.S. (2006). Synchronicity in the 21st Century. *Jung: the e-Journal of the Jungian Society for Scholarly Studies*, 2(2), 1–13.
19. Malone, T., Laubacher, R., & Dellarocas, C. (2010). The Collective Intelligence Genome. *MITSloan Management Review*, 51(3), 21–28.
20. Marcus, L.J., McNulty, E., Dorn, B.C., & Goralnick, E. (2014). *Crisis Meta-Leadership Lessons from the Boston Marathon Bombings Response: The Ingenuity of Swarm Intelligence*. White Paper. Boston, MA: National Preparedness Leadership Initiative.
21. McNulty, E.J., Goralnick, E., Serino, R., Flynn, L.B., Cheers, M., & Marcus, L.J. (2018). Swarm Intelligence: Establishing Behavioral Norms for the Emergence of Collective Leadership. *Journal of Leadership Education*, 17(2), 19–41.
22. Merry, P. (2017). *Synchronicity and Leadership*. PhD Dissertation. Tilburg University.
23. Pielstick, C.D. (2005). Teaching Spiritual Synchronicity in a Business Leadership Class. *Journal of Management Education*, 29(1), 153–168.
24. Pietersen, W. (2002). *Reinventing Strategy*. New York: John Wiley & Sons.
25. Pór, G. (2008). Collective Intelligence and Collective Leadership: Twin Paths to Beyond Chaos. *University of Amsterdam, Netherlands. Sprouts: Working Papers on Information Systems*, 8(2), 8–2.
26. Reave, L. (2005). Spiritual Values and Practices Related to Leadership Effectiveness. *The Leadership Quarterly*, 16, 655–683.
27. Saucier, G., & Skrzypinska, K. (2006). Spiritual But Not Religions? Evidence for Two Independent Dispositions. *Journal of Personality*, 75(5), 1257–1292.

28. Schmidt, R., Möhring, M., Härting, R.C., Reichstein, C., Neumaier, P., & Jozinović, P. (2015). Industry 4.0-Potentials for Creating Smart Products: Empirical Research Results. [in:] *International Conference on Business Information Systems*. Cham: Springer.
29. *Seven Steps for Effective Leadership Development*. (2012). Oracle Corporation, USA.
30. Sharma, S., & Sharma, O.P. (2016). Spirituality Leads to Happiness: A Correlative Study. *The International Journal of Indian Psychology*, 3(2), 50–54.
31. Silingiene, V., & Skiriene, S. (2016) Links between the Spiritual Intelligence of the Leader and an Organizations Service Quality: a Theoretical Approach. *Inzinerine Ekonomika-Engineering Economics*, 27(1), 56–65.
32. Singh, M.P., & Sinha, J. (2013). Impact of Spiritual Intelligence on Quality of Life. *International Journal of Scientific Publications*, 3(5), 1–5.
33. Villarrubia, G., De Paz, J.F., Chamoso, P., & De la Prieta, F. (2018). Artificial Neural Networks Used in Optimization Problems. *Neurocomputing*, 272, 10–16.

Industry 4.0 and the Development of Ukraine's Priorities

Anatolii Mazaraki, Ganna Duginets

1. Introduction

The analysis of innovative technologies, which is being conducted by a number of various researchers in the recent time, suggests that the timeframe of 2025–2028 will be a milestone for global technological development. In this period, the world economy will factually embark on a new path of its technological development, where the effective management of resources, not their volume used, will become the dominant factor of the world's economic development. This transition is primarily associated with the intentions of technologically developed countries to implement the so-called “Industry 4.0” paradigm, which represents the widespread use of industrial AI technologies, under the influence of which, large-scale revolutionary changes will manifest in the industry worldwide. Many analysts believe that it is during the aforementioned period that the fourth industrial revolution will occur. Also, the active discussion of this concept at the World Economic Forum in Davos and the publication of a correspondingly titled paper by the Forum's head, Klaus Schwab, helped catalyze the interest in this topic (Schwab, 2017).

The concept of Industry 4.0 was first mentioned publicly at the industrial exhibition in Hannover in 2011. This is one of the ten “Future Projects” defined by the German government within the framework of its “High-Tech Strategy 2020” (*Industrie ...*, 2013).

The pressure to introduce decentralized autonomous production in real time was first manifested in Germany for two reasons: the leading role of Germany in the global manufacturing market, and its technical leadership in the field of industrial research and production development. A significant advantage of the Industry 4.0 project is the possibility of phased, step-by-step implementation in industrial enterprises. At the initial stage, re-equipment can be started with mod-

ernizing only several pieces of machinery, later to be continued through the further introduction of cybernetic systems. This feature of the paradigm enables the transformation of an entire enterprise without stopping it.

In this context, an enterprise's transformation is understood as the modification of all equipment with sensors, data processing and communication components, gradually replacing the control scheme in use. Such enterprises would use semi-intelligent robots of a new generation, working together with the staff and not creating additional safety risks. With this in mind, in order to ensure not only that Ukraine "fits in" with the future technological leap expected in 2025–2030, but also economically benefits from it, it is necessary to clearly define the priorities of the country's economic development in the present.

2. Problem statement

The publications studied by the author in the implementation of this work can be categorized in the following manner: i) The Industry 4.0 platform (Platform «Industrie 4.0»), which is, essentially, the original source and reference point for all other publications and researches; ii) analytical reviews and reports of organizations of various spheres and forms of activity, such as audit firms of the Big Four, consulting companies, world automotive manufacturers, software developers etc. (in particular: Lorenz et al., 2015; Schläpfer et al., 2015; Rüßmann et al., 2015); iii) materials from various conferences, forums, seminars, etc. (WEF, 2015; Davis, 2015); iv) journalistic and scientific articles (in particular: Duginets & Mazaraki, 2018; Jaruzelski, 2015; Majstorovic, 2016). In these and other works, various aspects of the new trend, challenges associated with its implementation in real production etc. are highlighted. We would like to note that, although the Industry 4.0 concept has been around for only about ten years, only recently have scientists and specialists in Ukraine begun to explore this new trend of economic development.

3. Results

Countries with a high level of both economic and technological development are the leaders in the introduction of Industry 4.0 – associated technologies; the most advanced in the use of these technologies are the research and development sectors in Germany (25%), France (8%) and the Netherlands (3%), all countries with strong positions in production and innovation (see Tab. 1). These countries provide a high level of education, decent living conditions and a relatively high standard of living, while using knowledge efficiently for development and able to create, accept and disseminate knowledge well.

Table 1. Key Indicators of EU Innovation Activity in 2016–2018

Year	Global Index of Competitiveness			Global Innovation Index			Doing business Index		
	2016	2017	2018	2016	2017	2018	2016	2017	2018
Germany	4	5	3	10	9	9	15	17	20
Netherlands	5	4	6	9	3	2	28	28	32
France	22	21	17	18	15	16	27	29	31
Hungary	63	63	60	33	36	33	42	42	48
Poland	36	36	37	39	38	39	25	25	27
Bulgaria	50	50	51	38	36	37	38	39	50
Ukraine	79	85	83	56	50	43	83	80	76

Source: compiled by the author author on (The World Bank, 2019).

It is forecast that the first enterprises operating on the principles of Industry 4.0 will appear in Germany already by 2021–2022, and by 2025, large-scale industrial introduction of cyber-physical systems will be taking place. As a result, Germany will become one of the world's leading suppliers of these systems, if not the main one. As a result of the implementation of the Industry 4.0 program in Germany over the next four years, it is planned to increase labor productivity by an average of 18%. At the same time, the degree of “digitization” in the country's economy and the creation of digital business models is supposed to increase to 82% by 2021 (33% now). Decision-making on the basis of digital data models is planned to be increased to 90% by 2020, compared to 52% in 2016 (The Global Innovation Index 2011–2018).

For the goal of implementing the Industry 4.0 project in Germany, financing in the amount of about 900 billion USD will have been provided by 2020. The funds are to be invested in digital technologies, sensors and communication devices, programs and applications, production management systems, employee training etc. (Plattform «Industrie 4.0»).

The newly founded innovation and technological impulse, which is to be implemented in Germany by 2025–2026, is precisely the beginning of the fourth global industrial revolution related to the implementation of the Industry 4.0 paradigm.

There are factual positive achievements in this direction also in other countries. For example, in the United States, a consortium of the industrial Internet was formed back in 2014, tasked with promoting the Internet of Things in the practical direction (Duginets & Mazaraki, 2018). Recently, American enterprises have been planning to channel more funds into the development of revolutionary business models by introducing digitalization projects for their goods and services. Similar programs have also been developed in the UK, China, Japan,

France, Denmark etc.; e.g. in China, the industrial concept “Chinese production 2025” was approved and is in operation, with the task of modernizing the entire industry, including the coal industry, to a level corresponding to the third technological order, and to break through to the fourth by 2025. It is possible for China to benefit from automation and digitalization of production processes to the greatest degree.

In Japan, at the government level, the concepts of “Connected factories” are being discussed, implying the use of Internet networks connecting smart computers embedded in equipment in “smart” enterprises; Japanese and German companies have achieved the most in the digitalization of their internal operations. They have developed digital compatibility that supports end-to-end processes with partners along horizontal value chains. By investing huge amounts of funds and research capacity in staff training, they look at digital transformation mainly in terms of increasing operational efficiency, quality control and cost reduction.

Industry 4.0’s priority technologies are industrial biotechnology, micro- and nanotechnology, adaptive and intelligent production systems, as well as digital, virtual and resource-efficient production.

Also, there is an active attraction of investments to research and scientific and technical development, and to the introduction of innovative ideas into production, which is one of the key factors of economic growth. But on the other hand, the introduction of intelligent technologies may cause a number of problems (Tab. 2).

Table 2. Potential risks from the introduction of Industry 4.0

Risks		
Economic	Legal and political	Social
The complexity of funding	Infrastructure mismatch	Loss of jobs
High-risk investments	Difference between legal nuances	Absence of qualified personnel
Competition	Information security threats	Lack of social interaction
Changes in business models	Differences in international standards	Pressure on the staff

Source: compiled by the author on (The Global Innovation Index 2011–2018).

In the case of Ukraine, one should take into account the negative impact on its socio-economic development of military confrontations in the east and the occupation of part of its territory by forces of the Russian Federation, which has served as an impetus for the reorientation of the economy to other markets for resource supply and product sales. All this has manifested in the reduction of GDP and, consequently, the reduction of expenditures on conducting research. At the same time, as evidenced by the experience of developed European countries and innovative Asian countries, Ukraine has all the opportuni-

ties for economic growth through the stimulation of innovation activity. The impetus for this should be the use of the achievements of the Fourth Industrial Revolution, namely the tools of Industry 4.0 (cyber-physical systems, Internet of Things, Big Data, Smart Factory, Product Lifecycle Management, Cloud computing, Smart City, Additive Production etc.). Many of these tools have already been used successfully and function in select few domestic enterprises. It is, however, their integration into a comprehensive independent system would allow to fully implement the concept of Industry 4.0 and increase the efficiency of production, which would increase Ukraine's competitiveness in the international space and become an equal actor in the international market – first of all, in the EU market.

The Ukrainian economy has certain beneficiary conditions for the implementation of Industry 4.0 innovation potential, but there are problems with creating the conditions necessary for efficient use of resources. This thesis is confirmed by the place of Ukraine in the Global Index of Innovation, which has been at a rather low level in recent years (Tab. 3).

The Global Innovation Index is an objective indicator of the success of a country's innovation policy. It has been published annually since 2007 as the main tool for assessing the state of innovation and represents the relation of costs to the effects, and thus contributes to the objectivity of assessing the effectiveness of a country's efforts to promote innovation.

Table 3. Ukraine's ranking in the main components of the Global Index of Innovation, 2011–2018

Subindex	2011	2012	2013	2014	2015	2016	2017	2018
Innovation resources	67	78	83	88	84	76	77	75
Results of innovations	52	47	58	46	47	40	40	38
Coefficient of innovation efficiency	40	14	32	14	15	12	11	10
Place on the Global Index of Innovation	60 of 125	63 of 141	71 of 142	63 of 143	64 of 141	56 of 128	50 of 127	43 of 126

Source: compiled by the author on (The Global Innovation Index 2011–2018).

A low level of innovation resources can be explained by the existing low level of stimulation of innovative development within the country. According to statistics, there has been a negative dynamic of state support for this sphere in the recent years (Fig. 1a). For comparison, Poland has been experiencing a rapid increase in the spending on scientific and technological development (Fig. 1b).

In Ukraine's economy, there is also little innovative activity of industrial enterprises, which results in a low share of innovative products in the volume of industrial produce (Fig. 2).



Figure 1a. Share of expenditures on R&D, % of GDP – Ukraine

Source: compiled by the author according to (State Statistics Service of Ukraine, Statistics Poland).

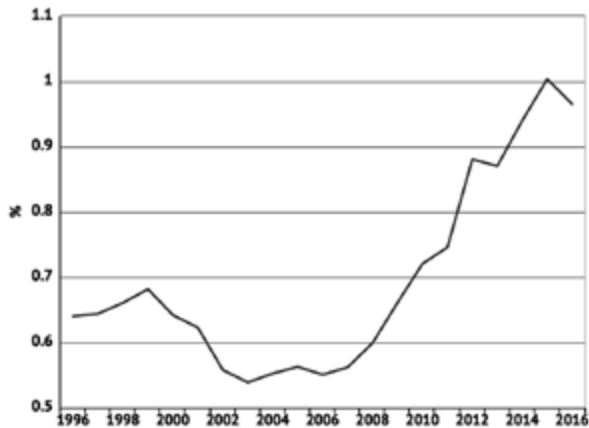


Figure 1b. Share of expenditures on R&D, % of GDP – Poland

Source: compiled by the author according to (State Statistics Service of Ukraine, Statistics Poland).

It is the knowledge-intensive industries that are of greatest importance to the development of a country's economy and form the potential for further introduction of Industry 4.0 technologies. The characteristic features of knowledge-intensive industries are: growth rates that exceed those of other industries by a factor of 3–4, a large share of value added in the final product, significant export volumes and a high innovative potential capable of supporting not only that industry itself, but also related ones (Omelyanenko, 2016).

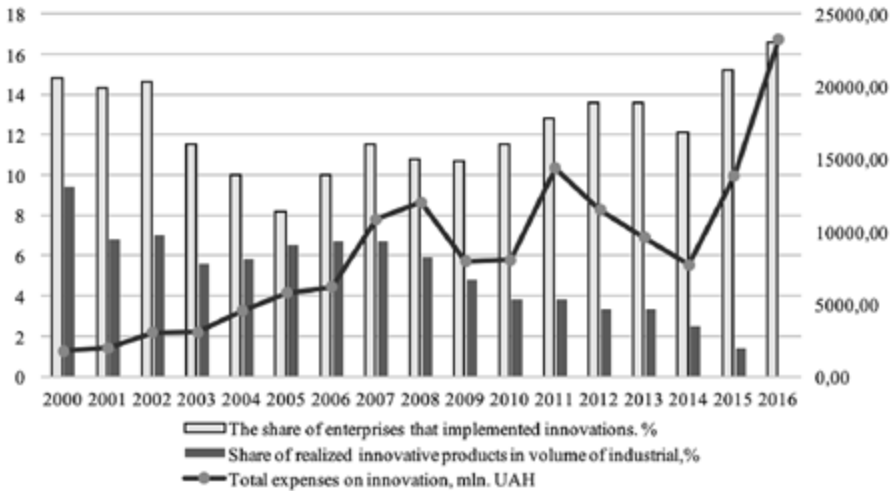


Figure 2. Innovative activity in Ukraine's industrial enterprises, 2000–2016

Source: compiled by the author on (State Statistics Service of Ukraine).

One example of the use of innovative technologies for inclusion in global production processes is the way small and medium-sized enterprises collaborate with leading TNCs in the automotive industry (Tab. 4).

Table 4. Contribution of Ukraine to the world automotive industry

	Enterprise	Product	Customers
1.	Association "Carpathians"	wiring	Porsche, Mercedes, Volkswagen, Skoda
2.	Bader Ukraine	car covers	Volkswagen Group
3.	"Tochprylad"	wiring, sound systems electronic components	BMW, Mercedes, Land Rover, Volkswagen
4.	Costal Ukraine	electronics	Ford, Audi, BMW Volkswagen, Mercedes, Renault,
5.	W.E.T Automotive Ukraine	electronic seat heaters, touch car cables and sensors	Ferrari, Porsche, Opel, Mercedes, Volkswagen, BMW,
6.	Kromberg&Schubert Ukraine	electronics	Volkswagen, BMW, Audi, Mercedes
7.	Tayko Electronics Ukraine Limited	wiring, convectors	BMW, Opel, Fiat, Mercedes, Skoda,
8.	Sumitomo Electric Bordnetze Ukraine	car cables	Volkswagen, Audi
9.	SEWS Ukraine	car cables	Nissan Motor
10.	Bosch Ukraine	starters	Volkswagen, BMW, Mercedes and others

Source: compiled by the author by (Cardiagram, 2015).

The functioning of such industries results in a synergistic effect from spreading innovations in the national and global economy. These key qualities of high-tech industries make them a priority field for innovation activity, as well as the main target of capital investments.

4. Conclusion

At the beginning of the 21st century, technologically advanced countries of the world, including Germany, the US and others, are actively developing and implementing the Industry 4.0 paradigm. To this end, they have embarked on a large-scale process of restructuring employee training programs, including those of higher qualification. This will allow them not only to “fit in” with the future technological leap expected in 2025–2030, but also to receive substantial economic benefits.

With regard to Ukraine, given the limited financial resources and a shortage of time, we consider rational the designation of priority sectors of the economy, taking into account their degree of readiness for the implementation of Industry 4.0 technologies and the scale of potential benefits arising from this. In particular, Ukraine can be at least a regional leader in the field of complex and high-tech engineering services, such as:

- software development for the high-tech industry (creation of new software products, including within the framework provided by the Industry 4.0 technologies);
- design (digital, electrical, mechanical, electronic, technological, construction etc.);
- industrial automation and integrated engineering (including the commissioning of industrial facilities);
- development and production of complex, limited-series or unique products.

In order to ensure the development of technologies of the fourth industrial revolution in Ukraine, it is necessary to primarily concentrate on the formation and development of an innovative model of economic development. Accordingly, there must be productive cooperation in the relationships between the state, the science community and industry for the creation of innovations and their use in the economy. The theory and practice of the “triple helix” (Etzkowitz & Leydesdorff, 1995) show that the joint efforts of the participants create greater benefits to all three than attempts to independently handle their issues do.

Bibliography

1. Cardiagram (2015). *Ukraine's Contribution to the Global Auto Industry*. Retrieved on 30/05/2019, from: <http://cardiagram.com.ua/vklad-ukrainy-v-mirovoy-auto-prom-4790.html/2>.

2. Davis, N. (2015). Ways of Understanding the Fourth Industrial Revolution. [in:] *World Economic Forum*. Retrieved on 30/05/2019, from: [http://www.weforum.org/agenda/2015/11/5 ways of understanding the fourth industrial revolution/](http://www.weforum.org/agenda/2015/11/5-ways-of-understanding-the-fourth-industrial-revolution/).
3. Duginets, G., & Mazaraki, A. (2018). "Internet of Things" in the Global Production: Experience for Ukraine. [in:] B. Mikuła & T. Rojek (Eds.), *Knowledge – Economy – Society. Reorientation and Transformations of Economy and Organization Management Concepts*. Kraków: Fundacja Uniwersytetu Ekonomicznego w Krakowie.
4. Etzkowitz, H., & Leydesdorff, L. (1995). The Triple Helix--University-Industry-Government Relations: A Laboratory for Knowledge Based Economic Development. *EASST Review*, 14(1), 14–19.
5. *Industrie 4.0. Smart Manufacturing for the Future* (2013). Berlin: Germany Trade and Invest Gesellschaft für Außenwirtschaft und Standortmarketing GmbH.
6. Jaruzelski, B., Schwartz, K., & Volker, S. (2015). *Innovation's New World Order. Strategy+Business*. Retrieved on 30/05/2019, from: [http://www.strategy-business.com/interactive/ Where-Companies-Spend-Their-RD-Money](http://www.strategy-business.com/interactive/Where-Companies-Spend-Their-RD-Money).
7. Lorenz, M., Rüßmann, M., Strack, R., Lueth, K.L., & Bolle, M. (2015). *Man and Machine in Industry 4.0: How Will Technology Transform the Industrial Workforce through 2025*. The Boston Consulting Group.
8. Majstorovic, V. (2016). Mass Customization and Sustainability – an Assessment Framework and Industrial Implementation. *Journal Production Planning & Control. The Management of Operations*, 27(3), 236–236.
9. Opanasiuk, V. (2018). Industry 4.0: the Place of Ukraine in the Inter-country Cooperation and Specialization. *Scientific Notes of Ostroh Academy National University, "Economics" Series*, 4(32), 67–71.
10. Omelyanenko, V. (2016) Technology Package Optimization in Space Industry in Case of Integration into the Global Value Chain. *GISAP: Economics, Jurisprudence and Management*. 10, 10–13.
11. *Plattform «Industrie 4.0» – Startseite* (2019). Retrieved on 30/05/2019, from: <http://www.plattform i40.de/>.
12. Rüßmann, M., Lorenz, M., Gerbert, P., Waldner, M., Justus, J., Engel, P., & Harnisch, M. (2015). Industry 4.0: The Future of Productivity and Growth in Manufacturing Industries. *Boston Consulting Group*, 9(1), 54–89.
13. Schwab, K. (2017). *The Fourth Industrial Revolution*. NY: Crown Business.
14. Schläpfer, R.C., Koch, M., & Merkofer, P. (2015). *Industry 4.0 Challenges and Solutions for the Digital Transformation and Use of Exponential Technologies*. Zurich: Deloitte.
15. Skitsko, V. (2016). Industry 4.0 as Industrial Production of the Future. *Investments: Practice and Experience*, (5), 33–39.
16. *State Statistics Service of Ukraine* (2019). Retrieved on 30/05/2019, from: <http://www.ukrstat.gov.ua/>.
17. Statistics Poland (2019). *Science and technology in 2017*. Retrieved on 30/05/2019, from: <https://stat.gov.pl/en/topics/science-and-technology/science-and-technology/science-and-technology-in-2017,1,13.html>.
18. The World Bank (2019). Data and Research, World Bank Statistics Database. Retrieved on 30/05/2019, from: <http://data.worldbank.org>.

19. The Global Innovation Index 2011–2018. The Human Factor in Innovation. Retrieved on 30/05/2019, from: <http://www.globalinnovationindex.org>.
20. WEF (2015) Industrial Internet of Things: Unleashing the Potential of Connected Products and Services. Retrieved on 30/05/2019, from: http://www3.weforum.org/docs/WEFUSA_IndustrialInternet_Report2015.pdf.

Logistics 4.0: Technology of the Future

Valeriy Sai, Nataliia Ilchenko

1. Introduction

The development of e-commerce in the context of globalization and integration processes requires enterprises the introduction of new technologies. There has been a shift from the traditional approach to digital supply chain making it smarter, widely networked, and technologically advanced. The fourth industrial revolution and its associated technological changes today fundamentally change business models and business practices that allow you to respond promptly to persistent and sometimes unpredictable changes in the business environment, significantly reducing operating costs, and enhancing the efficiency and quality of customer service. Logistics 4.0 is the key to the future. Logistics 4.0 makes it possible to integrate and optimally coordinate processes across corporate boundaries. When successful, the logistics issues related to both inbound and outbound material flows can then be streamlined significantly. It is Logistics 4.0 that has made integration and coordination possible across corporate boundaries. With technology involvement, the logistical issues related to both inbound and outbound material flows are easily and instantly streamlined in a significant manner, resulting in increased competitiveness of enterprises.

The level of achievement of Logistics 4.0 standards is due to quite a lot of technical and organizational challenges and difficulties. The article was analyzed potential opportunities for logistics companies implementing Logistics 4.0, which contribute to increasing the competitiveness of logistics companies through the introduction of digital transformations.

2. Purpose and basic research problems

Theoretical and practical aspects of the problem under investigation are reflected in the works of such scholars: Mazaraki and Ilchenko (2018, pp. 171–178),

Fedulova (2017, pp. 21–40), Mazaraki and Kharsun (2018, pp. 3–12), Jeschke (2016), etc. The analysis of scientific papers and business practices in a transitional period has shown the influence of the latest technologies on the activity of logistics enterprises and the development of logistics concepts. However, attention is not paid to the problems and prospects of the development of the concept Logistics 4.0

3. Research the trends of development of Logistics 4.0

Let's consider in more detail, what is logistics 4.0 and what are the prospects for implementing this new approach at the enterprises. Logistics 4.0 is narrower than Industry 4.0, despite the presence of similar assumptions. Jeschke (2016) defines the term “Logistics 4.0”, based on two approaches:

- Short-Term Approach, Logistics 4.0 is defined as the interaction of logistics processes between independent supply chain participants,
- Medium-Term Approach, Logistics 4.0 is defined as the autonomous self-organization of the system in other systems, that is, logistic systems consisting of independent subsystems. This term also means automation and process coordination and support for Industry 4.0.

Definition of Logistics 4.0 combines two approaches: process (in the supply chain processes are the subject of Logistics 4.0) and technical (tools and technologies that support internal processes in supply chains). Logistics 4.0 aims to increase the efficiency and performance of the supply chain participants. In the table 1 shows Evolution of the concept of Logistics.

Table 1. Evolution of the concept of Logistics

Stages	Importance	Results
1	2	3
Logistics 1.0 (End of 18 th Century)	With the development of Industry 1.0 introduced the era of Industrialization into production, the era of mechanization appears – the invention and introduction of the steam engine. The Logistics era 1.0 has begun – MECHANIZATION OF TRANSPORT	From animal force to development of railway network and steamer/aircraft ship
Logistics 2.0 (1800–1969 years)	With the development of Industry 2.0 introduced the era of Electrification – it is electricity that has driven out steam engines, and production lines can produce goods in large series. Electric power and the mass production. The Logistics era 2.0 has begun – AUTOMATION OF HANDLING SYSTEM	Application of logistics equipment as automatic warehousing and sorting Mechanization of port cargo

Stages	Importance	Results
1	2	3
Logistics 3.0 (1969–2000 years)	With the development of Industry 3.0 introduced the era of Digitization — increasingly powerful computers and data processing systems made it possible to control machines using software. Thus, the machines received greater productivity, accuracy and flexibility, and the digitization process made it possible to achieve ever higher degrees of automation. Planning and control systems began to emerge, the purpose of which was to coordinate actions in the framework of production. With development Computers and IT introduced the era of SYSTEM OF LOGISTICS MANAGEMENT.	By use of WMS, TMS as well as IT spread NACCS as progress in the development of infrastructure systems
Logistics 4.0 (2000–Nowadays)	Industry 4.0 brings people common with digital control with the Internet and information technology. The materials produced or used in production, you can always determine, in addition, they have the ability to independently communicate with each other. The flow of information is implemented vertically: from individual components to the IT department of the enterprise and from the IT department to components. The second direction of information flow is realized horizontally: between the machines involved in the production process and the production system of the enterprise. Industry 4.0 – ERA SYSTEM INTEGRATION AND NETWORKING. Use of Internet EVOLUTION IoT AND IoS in Logistics 4.0	Logistics 4.0 is the progress of “labor saving and standardization by the evolution of IoT”. Technologies as warehouse robots and automatic driving are trying to replace processes that do not require operation and determination by human labor. The aim is the perfect equilibrium between the automation and the mechanization.

Source: compiled by the authors.

The following table 2 shows main components and results of Logistics 4.0 implementation at enterprises.

Table 2. The main components and results of Logistics 4.0 implementation

Type of technology	Importance
big data	<i>data warehouse:</i> data received during processing of transport applications; data appearing during loading / unloading schedule management; additional settings and statuses, which want to fix the consignee, etc. <i>results:</i> supplier rating rating of carriers cost accounting accounting work warehouse
Blockchane	<i>importance:</i> Blockchain explores more and more industries every day. Due to a popularity of Bitcoin, this technology has already demonstrated countless opportunities for the financial area. <i>results:</i> The logistics industry involves many parties: manufacturers, customers, suppliers, auditors, etc. The blockchain technology offers benefits for everyone in this chain. It allows customers to track the product and trace the whole chain of product manufacturing. Auditors can easily verify and check any transactions. Information stored in blockchain is unalterable, it cannot be changed by any third party, which makes this technology more secure than any existing solution

Type of technology	Importance
Internet of things (IoT)	<p><i>importance:</i> The IoT is a global network connection to the Internet of physical objects, which are equipped with sensors, sensors and other devices for transmitting information.</p> <p><i>results:</i> The ability to receive and process data using cloud-based services in real-time with a simple system of management in the areas of transport companies, warehouse logistics. For instance, use of drones for the delivery of goods, self-destructive vehicles, intelligent transporters, gates, forklifts, etc.</p>
3D printing	<p><i>importance:</i> The method for creating a large range of physical objects based on a single platform implemented in digital form</p> <p><i>results:</i> Reducing the cost of 3D printing in the form of reducing outputs than traditional methods of production, increasing the standardization of objects, warehouse</p>
Cybersecurity	<p><i>importance:</i> Protection of information in the global Internet</p> <p><i>result:</i> Protection against cyber-attacks of databases, protection against machine and mechanism crashes</p>

Source: compiled by the authors based on (*Industry 4.0...*, 2018; *Logistics ...*, 2017; *Big data...*, 2017; *The Internet ...*, 2015).

So, in the logistics industry, drones can ensure business process automation by providing smart inventory tracking, fast transportation of goods, and instant in-store delivery. What's more, they enable to solve last-mile delivery problems. The market is quickly developing, according to Gartner forecasts, it is expected to reach \$11.2bn by 2020 (Fig. 1).

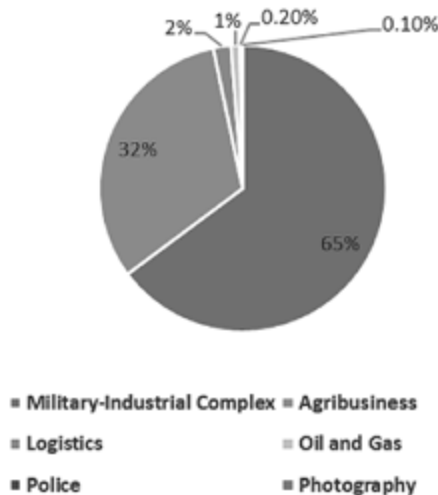


Figure 1. The spheres where drones are used (%)

Source: own research.

Accordingly, we can distinguish three main development vectors: i) transport exchanges; ii) IT products for logistics automation; iii) the digitization of machinery and equipment for handling cargo at all stages of the supply chain management. There is a transport electronic exchange in Ukraine <https://www.trans.eu>, where you can access more than 5 million offers of freight and transport from all over Europe each month. However, none of the existing transport exchanges in the world can fully realize their advantages because of the lack of a mechanism for guaranteeing the availability of goods at the time of acceptance by the bidder.

And there is still a significant role of imitation modeling as a way of checking and comparing the options for organizing processes in shops, warehouses, as well as in intra-industry transport systems of industrial enterprises, when implementing the principles of Industry 4.0 and Logistics 4.0 at enterprises.

4. Experience in implementing Logistics 4.0 at enterprises

So, active elements of Logistics 4.0 Logistic 3PL operator are actively implemented by LLC “ZAMMLER Ukraine”, which opened the first fulfillment center near Kiev and continues to develop in this direction. In Ukraine, the market for postal logistics began to grow actively. So, the innovative SMART branch of the new postal and logistic company Justin, which is part of the holding company Fozzy Group, will provide services for receiving, issuing and sending goods. The company plans to meet growing demands for both the e-commerce market and the P2P market, individuals who send packages to each other nationwide. To conclude contracts and get comprehensive answers can be found at <https://www.edeliveryday.com.ua>. In particular, the residence of the Justin project at Omni Sampus allowed the launch of a comprehensive logistics automation project from idea to implementation in less than 8 months (*JUSTIN ...*, 2018).

Delivery Group provides comprehensive solutions for the B2C segment of the cargo transportation “turnkey”: from letters and parcels – to shipments of combined cargoes and pallets, as well as loading full tanks. The company has an online Delivery-Shop platform, which is designed to purchase goods in online stores in the USA and Europe. On the site of the Delivery-store, there are about 90 foreign online stores, among which such as Amazon, Walmart, Zappos, aimed at the sale of real goods of mass consumption, as well as less known in Ukraine niches brands of clothing, footwear and perfumes, such as Belk, Levi’s, Victoria’s Secrets, Ralph Lauren, COS and others. The process of selecting, ordering and paying for the goods, as well as payment for delivery, is carried out in just a few clicks through one delivery-shop site. Due to the fact that all stores are already integrated into the service, you can simultaneously make purchases on

several foreign online sites. All selected items “get” into one basket, and you only need to register once and pay for the Delivery-Shop order. Thus, you can make a purchase from several stores in one basket, carry out the calculation of the cost together with the delivery, pay, and the goods come to us in the warehouse, we check it and deliver it to you (*Delivery...*, 2018).

All transactions in logistics are carried out based on multiple documents to ensure trustworthiness of the transactions. In global trade, work is done based on standard trade documents, whereas in face-to-face exchanges, there are usually no trust issues as the buyer would pay after seeing the product for himself. Thus, the risk is often high, as you're not sure if the other party will send you the products, or if the importer will make a payment. Blockchain technology creates a trusted environment by making sure that transaction information on blocks is resistant to forgery or modification.

Danish transport and logistics company A.P. Moeller-Maersk A/S and US software maker IBM in August 2018 years announced the launch of TradeLens blockchain platform for cargo tracking. More than 90 companies and organizations participate in the platform, including operators of large terminals – PSA Singapore, International Container Terminal Services Inc., Patrick Terminals, Modern Terminals, Port of Halifax, Port of Rotterdam, Port of Bilbao, PortConnect, PortBase and Holt Logistics, and the customs authorities of the Netherlands, Saudi Arabia, Singapore, Australia and Peru. The State Marine and River Transport Service of Ukraine (Maritime Administration) plans to use blockchain technology to automate business processes related to the provision of administrative services.

In Ukraine, companies that assist in conducting secure transactions have started to actively develop in Ukraine. Yes, the UAPAY Escrow Box provides a secure agreement for the seller and buyer and is based on the principle of a smart contract. The solution increases the number of transactions in e-commerce, creating additional client traffic for the logistics operator. UAPAY Logistics – technological processing of all financial transactions of the logistics operator: payment for the operator and Cash-On-Delivery. The solution includes a front-line cash register, synchronization of financial and logistics modules, as well as an API for postal networks.

5. Conclusion

Thus, Ukraine's potential for participation in global processes of market transformation is rather high, but Ukraine at the present stage does not use it sufficiently due to incomplete reforms. There is a need to establish new, efficient logistic supply chains between the EU and Ukraine and create the appropriate climate for the implementation of the concept Logistics 4.0 and Industry 4.0.

According to the results of the research, we determined that for effective implementation of Logistics 4.0 in our country there is a need to solve a number of problematic issues, such as: raising the investment climate in Ukraine, which is extremely important for the development of the country's economy and introduction of the latest technologies, since the concepts Logistics 4.0 and Industry 4.0 require significant investment in development. It is necessary to establish the compliance of the Ukrainian logistics system with the ecological requirements and standards of the EU and to determine the perspective directions of its development in the context of ecologization of logistic processes, requires competent regulation of the activity of logistics enterprises by the state, Logistics 4.0 will allow to identify unscrupulous carriers, suppliers, etc. and to control the further their activities.

Bibliography

1. *Big Data Analysis in Logistics* (2017). Retrieved on 30/05/2019, from: <https://www.transporeon.com/blog/ru/%D0%B0%D0%BD%D0%B0%D0%B-%D0%B8%D0%B7-%D0%B1%D0%BE%D0%BB%D1%8C%D1%88%D0%B8%D1%85-%D0%B4%D0%B0%D0%BD%D0%BD%D1%8B%D1%85-%D0%B2-%D0%B-%D0%BE%D0%B3%D0%B8%D1%81%D1%82%D0%B8%D0%BA%D0%B5/>.
2. *Blockchain in Logistics and Supply Chain* (2017). Retrieved on 30/05/2019, from: <https://groozgo.ru/blog/blokcheyn-v-logistike-i-tseepochke-postavok/> (in Ukr.).
3. *Delivery Group. Decision. Development* (2018). Retrieved on 30/05/2019, from: <https://www.delivery-auto.com.ua/ru-ru/GroupCompany/News?page=28&records=10>.
4. Fedulova, L. (2017). *Influence of World Technological Trends on the Formation of "smart" retail*. Retrieved on 30/05/2019, from: http://zt.knteu.kiev.ua/index.php?option=com_content&view=article&id=2190&catid=239&lang=uk.
5. *Industry 4.0: Time to Bring Business Process Robotization to the New Level* (2018). Retrieved on 30/05/2019, from: <https://dms-solutions.co/ru/blog-ru/robotic-process-automation-industry-4-0-leadership-summit-hong-kong-2/>.
6. Jeschke, S. (2016). *Quo Vadis Logistik 4.0*. Retrieved on 30/05/2019, from: https://cybernetics-lab.de/uploads/PDFs-Mediathek/Quo_Vadis_Logistik_4_HannovermesseApril2016.pdf.
7. *JUSTIN – Innovative Poshto-Logistic Operator in Ukraine* (2018). Retrieved on 30/05/2019, from: <https://logistics-ukraine.com/2018/07/11/justin-%D1%96%D0%BD%D0%BD%D0%BE%D0%B2%D0%B0%D1%86%D1%96%D0%B9%D0%BD%D0%B8%D0%B9-%D0%BF%D0%BE%D1%88%D1%82%D0%BE%D0%B2%D0%BE-%D0%BB%D0%BE%D0%B3%D1%-96%D1%81%D1%82%D0%B8%D1%87%D0%BD%D0%B8%D0%B9/>.
8. *Logistics 4.0: Trends for Digitally Automated Supply Chains* (2019). Retrieved on 30/05/2019, from: <https://www.hannovermesse.de/en/news/key-topics/logistics-4.0/>.
9. *Logistics Digital Review* (2017). Retrieved on 30/05/2019, from: <http://www.logistics-minded.com/what-is-logistics-4-0/>.

10. Mazaraki, A., & Ilchenko, N. (2018). Prospects for Implementing an Omni-channel Strategy at the Wholesale Trade Enterprises of Ukraine. [in:] A. Jaki & P. Wójtowicz (Eds.), *Knowledge-Economy-Society. Contemporary Aspects of Economic Transformations*. Kraków: Fundacja Uniwersytetu Ekonomicznego w Krakowie.
11. Mazaraki, A., & Kharsun, L. (2018). Development of Ukraine's Logistics System: Environmental Challenges. *Economy of Ukraine*, 9, 3–12.
12. *The Internet of Things in Logistics: a Joint Report by DHL and Cisco 2015* (2015). Retrieved on 30/05/2019, from: http://json.tv/tech_trend_find/internet-veschey-v-logistike-sovmestnyy-otchet-dhl-i-cisco-20160511113055.

Messina and the Development of New E-commerce Activities

Fabio Fragomeni, Rosalba Rizzo

1. Introduction

The advent of e-commerce in the 1990s with the first online sites and its rapid growth with real boom of sites and platforms have caused a digital disruption in the retail world. Online shopping is now an activity that has come overwhelmingly into our daily lives. From animal products to design pieces, from clothing to food: there's nothing better than buying them with a click.

As reported by CorCom¹, in Italy e-commerce is growing rapidly and transforming the way many companies do business. According to ISTAT data, in July 2018 there was an increase by 13.6% compared to July 2017 for online sales, the traditional trade declined by 0.6% on total of sales in value and by 1.8% in volume and the value of retail sales shows a slight decline for large retailers (-0.1%) and a more substantial decrease for small-scale businesses (1.5%), explains the Institute. According to these data of the business register, it is clear that the e-commerce in Italy grew by 9% in 2018 and registered 17,432 companies active in the country.

In just the past eight years, e-commerce has expanded from the desktop to mobile devices, in fact more than half of online shoppers arrive from their smartphones. From the analysis carried out by the *Consorzio Netcomm and Di- ennea*, a digital marketing company, emerges exactly how e-mail, SMS and app notifications are the most effective tool to reach the customer and make him the first step in the buying process: 22% of online purchases are direct consequences of that. It is also true that the customer, after being reached by the first direct marketing tools, before buying products, searches as much information as possible on the product through the search engines (19%), the website of the brand

¹ See more at: www.corrierercomunicazioni.it.

itself (17.3%) and price comparator sites (17.1%). An equally interesting element in consumer decision-making is the increasingly important role of shops. The visit to the store or branch before or after the online purchase is more frequent in the case of purchases and banking products (42.5%), food (35%) and clothing (31.7%) while it is more limited in case of trips (17.2%) and insurance (18%). Such behavior could be attributed to the fact that the travels and insurances represent the first developed fields on e-commerce in fact, the online sales on the total retail turn out among the highest ones.

The research also presented at *Netcomm Forum 2019*, shows that the *customer journey* of online purchases is, on average, more articulated than the purchase path that is developed for the offline channel, in relation to the same product categories. Before proceeding with an online purchase, in fact, consumers activate on average 1.6 touchpoints, a number that for offline purchases is around 0.9. This is particularly relevant for retailers, who must take into account the importance of the channels they control, from websites to social channels, to blogs and forums, all strategic channels to get in touch with the digital consumer. Companies, therefore, have to develop a strategy to accompany consumers in their purchasing path, in which the personalisation of the relationship is becoming one of the keys to the success of their marketing actions.

The e-commerce as it was conceived a few years ago is changing because the consumer was first and foremost to change and the concept of e-commerce is giving way to that of digital commerce, “which takes account of all the transformations that have occurred and are still taking place in the process of buying consumers” (Roberto Liscia, Presidente Netcomm).

In this sector, start-ups play a leading role: it is not by chance that *exit*, *funding* and *acquisitions* are registered, often among young companies dedicated to the new electronic commerce (Serarols, 2008).

In evolutionary terms, the history of organizations and small business is full of experiences and evidence (Simon, 1993) but there is not enough literature focusing on the very early step of a company, the startup phase (Salmzadeh, 2015a). So, it is reasonable the question: “What are the startups and how they develop?”. To answer this question, three main issues are discussed: the new market environment with start-ups, the economic and social impact of the Italian policy framework for innovative start-ups (Start-up Act) and the lifecycle of startups.

2. Start-up phenomenon: a glance

In recent years in Italy, following the economic crisis and the bankruptcy of many small and medium-sized enterprises, a new business model has emerged:

the Start up. This term has traditionally been used to indicate the period immediately following the start of a business. Now, however, it has lost its temporal meaning and specifically defines a certain type of enterprise. The term Start up means a company aimed at creating innovative products and services, the results of a creative idea and a business model configured for rapid growth, according to a scalable and repeatable scheme (Kaiser & Muller, 2013). With the term start up two distinct realities are identified. On the one hand, reference is made to a revolutionary new activity present in a company already established in the target market. On the other hand, there is a reference to an innovative new company, focused mainly on the need for start-up in the target market (Salamzadeh, 2015). In the paper will be made reference to the start-up of second type, that is enterprises of new constitution, centralized on a high technological and scientific level.

The concept of start-up originated in the 1990s in the United States of America and quickly spread throughout the world. It has developed mostly in the California area known as Silicon Valley, where the large and efficient cluster of research centers, universities and laboratories has allowed the rapid development of many innovative realities. The start-up phenomenon stems from the need to focus on the exploitation of research, in particular with regard to innovative phenomena. Start-ups often originate from two triggers: an idea and its market analysis. First of all, there is a creative and revolutionary idea, which often coincides with the result of the thought of a group of entrepreneurs, typically young, who have a great desire to get involved. Moreover, it is an idea that arises from scientific research and a careful analysis of a given phenomenon: usually, if the idea is considered scientifically valid and complies with the specifications of feasibility, from project to spin-off.

The term spin-off technically defines the transition of a phenomenon. In the case of start-ups, the spin-off is the moment of the constitution of the company, in support of the innovative idea, in order to guarantee the development and the relative creation of value. Once the intrinsic value of the idea or scientific research has been consolidated, then, we move on to the actual constitution of the start-up. In a dynamic and flexible place like Silicon Valley, therefore, start-ups could find all the necessary support for the development of entrepreneurial activity. The American government has fully understood the importance of the phenomenon that was exploding and has decided to invest and support it. In January 2011, US President Barack Obama introduced the “startup initiative America”, in order to support the phenomenon of start-ups and encourage the domestic private sector to invest more. One of the main manoeuvres of the programme was the establishment of a \$2 billion fund to support the creation of innovative new businesses. In addition to the abolition of the capital gain tax for

small businesses, the programme introduced a change to the patent registration procedures needed to set up an innovative start-up².

In the Italian panorama, on the contrary, also due to the economic crisis and the absence of a system to support the entrepreneurial youth, the market was going to stagnate and it was necessary to consider countermeasures at the ever higher default rate. One of the projects planned to invest time, resources and money in the start-up sector. Many Italian entrepreneurs have decided to take an example from some well-known realities of Silicon Valley, starting new business. Unlike a company S.R.L., for example, the start-up has the advantage of enjoying more facilities from the government, as it is an alternative entrepreneurial form to the traditional ones, less protected and more risky. For example, to the start-up the Italian State offers greater possibilities for the realization of its revolutionary idea, because they are considered to be more at risk than other types of enterprise and tend to have little financial resources and technical knowledge.

Innovative start-ups are a source of employment, a positive stimulus for the whole industrial system and they defend innovations within many sectors. Thanks to start-ups, young entrepreneurs can give life to their dreams and ideas, putting themselves at stake, using their skills and those of the collaborators working to support the project. The number of start-ups started and certified in 2016 has reached the threshold of 6,000 units, with a rate of growth that is accelerating more and more, thanks to a strong regulatory system and increased interest in the sector by donors. However, it is important to consider that today the start-ups rate that fail, even before being launched, is very high, even more than the success rate. This trend indicates that there is still much to improve in the sector, especially at the level of management strategies.

Although this is a recent and evolving phenomenon, we do not have a single definition of startups. On the contrary, in literature we find many notions. We can start by considering the English translation of the term, which identifies the start of certain activity in general. A first definition means the start up as the operation and the period during which you start a business (*Startup*, 2016).

Initially, the term start-up was strongly linked to new business realities in the IT and technology sectors. Today, however, start-ups are defined all new and growing activities, belonging to every type of sector. With the term start up, therefore, we mean the start of a new entrepreneurial activity, whatever it may be, with the aim of leading it to success. These are, in fact, business projects characterised by intense innovation and very well-structured growth plans. According to an economic vision, as we will go to consider it, with the term start up it is

² See more at: <http://www.whitehouse.gov/economy/business/startup-america>.

identified a new enterprise in the forms of a temporary organization or a society of capital in search of a repeatable and scalable business model (*Startup*, 2016).

According to Thiel, a prominent entrepreneur, co-founder of *PayPal* and a great start-up scholar, “The technology is miraculous because it allows us to do more with less, bringing our core capabilities to a higher level” (Thiel & Masters, 2014, p. 68). From this notion we can understand how technology is a key and distinctive element for successful start-ups. According to the founder of *PayPal* could not exist a civilized world like ours without technology. He argues that “In a world of scarce resources, globalization without technology is unsustainable” (Thiel & Masters, 2014, p. 134) and that “The new technology tends to come from new enterprises: start-ups” (Thiel & Masters, 2014, p. 150). According to Thiel, technology is not typical of large companies already developed in the market, but rather small, new and flexible companies, such as start-ups (Thiel & Masters, 2014, p. 150 e ss). Often, it is difficult to develop new projects when organisations are large and inflexible. The start-ups, however, can enjoy several advantages thanks to their small size, which makes them much more dynamic. It is clear, however, that without third-party support, start-ups would not be able to achieve success. Therefore, they operate on the principle that working with others, in order to realize their project, is the best way, but we do not have to forget to remain small, flexible and dynamic enough to be able to really do it (Thiel & Masters, 2014, p. 155). According to Thiel, therefore, start-ups are those new flexible and young organisations that use technology to create something innovative.

In the literature we find other notions of start up. It is important that one given by Ries, young entrepreneur and author of the “*Lean Method Startup*”, of which we do not discuss in this context. He defines the start-up as “a human institution designed to create new products and services in conditions of extreme uncertainty” (Ries, 2011, p. XVII). From this definition one might think that it is enough to have a good idea, structure it and proceed with the implementation. Actually, the process is much more complex: you need to identify a winning business idea, find the necessary funding, assess the market and the risks associated with it, structure an efficient communication plan and much more.

The start-up is also defined as a human organization with a particular innovative purpose or goal. It is understood that the start-up, in addition to having an innovative idea winning, has to also pursue an effective purpose. It’s about finding a tailor-made market, between product and customer, that is innovative and that allows you to start a successful business model. To do this, it is fundamental to know in depth the customers and their real needs, in order to be able to relate them and to relate with the innovation that you want to propose³.

³ See more at: www.iltweet.it/close-una-startup-cerchiamo-di-fare-chiarzza/.

Therefore, the start-ups are first of all, human organizations, that launch a new product or a new idea, in an unknown context. For this reason it is essential to know well what are the tools that each startupper has at its disposal to enter a new market, in particular communicative ones.

Today, in addition to the IT and high-tech sector, new innovative business realities are emerging in every market sector, such as the agri-food and clothing sector. However, the technological sector is still considered the most important, as it based on dynamic business and characterized by rapid rates of innovation. To be precise, the industrial sectors considered high-tech are those defined as high-intensity investment in innovation and research and development and, for these characteristics, are considered the best for the creation of start-ups. It is not necessary for an innovative enterprise to have only technology and high-risk finance as its key features. The essential and distinctive aspect for a start up is, instead, the exponential and dynamic growth both from an economic and dimensional point of view⁴. Moreover, because start-ups are businesses that are created from scratch, they have the risk of being denied fundings because they lack entrepreneurial credibility.

While all these factors make start-ups as structures with a high risk rate, on the other hand, they also guarantee a greater profit perspective, thanks to the high dynamism and flexibility typical of the young structure and still in the definition phase. This is a fundamental characteristic since it allows them to implement non-conventional and economic communication strategies, which have a greater impact than traditional communication tools. To avoid errors and easily overcome market risks, start-up theorists say that they have to always make a thorough market analysis before starting their business. Specifically, they must identify the objectives to be achieved, the characteristics of the market and the real needs of customers, monitor the actions of competitors, but also the strategy to be implemented and the resources needed to put them into practice. Usually start-ups were born and started in complete autonomy, but in this way they risk to get bogged down in front of the first management problem. It is therefore advisable to consider entrusting oneself or being assisted from the outset by experts in the sector, such as accountants or entrepreneurs, in order to minimise the risk of failure. An important supporting role for start-ups is given, above all, by *business incubators*, a place where spaces and services are shared and businesses have access to them and shared networking. Great support for the start of the business is also offered by the *company's accelerators*, which support the company with mentorship, a physical place to operate and the services necessary for its growth (Freear et al., 2002, pp. 275–287). The first management task of a start up

⁴ See more at: <http://www.ideastartup.it/>.

is to make itself known, to circulate its name and its offer in the market, through a good plan of communication. To achieve this goal it is essential to succeed in growing and climbing the business, with the aim of acquiring market shares and customers increasingly important for their economy, through the use of communication strategies low cost and unconventional.

3. The Italian “Startup Act”

The Italian Government with the Decree-law 179/2012 introduced some measures in a view of creating a favourable environment for small innovative start-ups through a number of complementary instruments, including “fast-track” and zero cost incorporation, simplified insolvency procedures, tax incentives for equity investment, and a public guarantee scheme for bank credit. In this way Italy has set up an organic regulation aimed at promoting the birth and growth of new companies with high technological value. The policy objective is to support the development of an innovation-oriented entrepreneurial ecosystem, capable of creating new employment and attracting human and financial capital from the world. The artt. 25–32 of decree law 178/2012 can be considered the nucleus of a real “Startup Act Italian”. Art. 25 introduces a specific notion of “new technological enterprise”: the innovative startup. Following a completely new approach, in favor of this type of enterprise has been prepared a vast body of legislation (art. 26 and later) which provides for new tools and benefit measures that affect the entire life cycle of the company, from its inception to the expansion and maturity phases.

Support for new innovative entrepreneurship is motivated by various industrial policy objectives. *The Startup Act* aims first and foremost to promote a model of sustainable growth: an effort that cannot be separated from the development of an ecosystem (small and medium-sized enterprises, large corporations, specialized service providers such as incubators and accelerators, and of course the world of university and research) driven by an entrepreneurial culture dedicated to innovation. Through economic growth and the creation of new business opportunities, the legislator aims to encourage employment, especially youth, and to stimulate social mobility. Moreover, it is assumed that a more dynamic and innovation-oriented business environment is an essential component for attracting and retaining human and financial capital from around the world in Italy.

More than seven years after its entry into force, the policy has become increasingly rooted in the Italian business environment: referring to the report of 8 July, 2019 published by the Ministry of Economic Development, the registered innovative start-ups has exceeded quota 10,000 representing approximately 3% of all the new companies of capitals in active state started in the last five

years. Including companies that in the meantime have ceased or have lost the status of a new innovative company, the companies that have benefited from the policy since 2013 are more than 15,000. Independent studies – OECD in 2018 – have shown how the facilities have had a decisive and significant impact on the growth and innovation potential of companies that have used the facilities offered⁵.

The Organisation for Economic Co-operation and Development (OECD), with the contribution of the Bank of Italy, has also carried out and published the first evaluation report of the Italian national strategy for innovative startups, “The Evaluation of the Italian Start-up Act (ISA)”. The data show that the ISA has a considerable positive impact both on input and output variables of the companies involved: the book value of capital, turnover, added value, and tangible and intangible assets of innovative startups are about 10–15% higher than other new companies with similar characteristics that have opted not to enter the policy, or that accessed it at a later stage. Labour productivity and the propensity to file a patent application also increase.

The positive effects of the policy are even stronger for startups that have had access to bank credit through the Public Guarantee Fund for SMEs (small-medium size enterprises) which startups can access free of charge and through a streamlined procedure: innovative startups have better opportunities to obtain loans (the probability of acceptance is about one third higher), for a higher amount (the net flow of loans increases by about 14 percentage points), and with lower interest rate (about 1 percentage points.) The effects on the propensity to invest – especially in intangible assets such as patents – are also very significant.

Startups that did not use the credit guarantee scheme show a relative increase in their net worth, suggesting a greater inclination to obtain venture capital financing. In fact, empirical analysis shows that the participation in the policy by startups is strongly correlated to a higher probability of receiving financing from VCs (Venture Capitalists) in their first three years of life (Boeker & Wiltbank, 2005, pp. 123–33).

The Startup Act as intended in its original layout has been affected over time by several regulatory updates, which have upgraded the overall plant without affecting its main points. Measures such as Decree-Law January 24, 2015, No. 3, Law December 11, 2016, No. 232 (Budget Law, 2017), and Law December 30, 2018, No. 145 (Budget Law, 2019) have refined, strengthened and expanded the offer of facilities provided. Further measures, not attributable to the original core of the policy on innovative startups, then intervened to enrich the overall framework of measures in favour of innovative entrepreneurship: these include “The Industrial Plan 4.0” and the launch of the new “Innovation and Emerging

⁵ See more at: www.ocse.org.

Technologies Funds”. This document focuses on measures specifically dedicated to innovative startups, but also provides a glimpse of the wider panorama of national innovation policies mentioned above.

4. The lifecycle of startups

For start-ups the intensity, quality and typology of the relationships that a company establishes with the world of finance depend on the phase of the life cycle of the enterprise. Each phase has different characteristics and the financial needs of the company depend on them. The latter is influenced by variables such as the trend of sales, the intensity of absorption of invested capital and the capacity for self-financing. The economic life of a Start-up can be divided essentially into five stages as follows in the figure 1 (Tsai & Lan, 2006).



Figure 1. Lifecycle of startups

Source: own elaboration.

BOOTSTRAPPING STAGE EXPLORATION

First phase characterized by the identification of a problem. Once identified, it is necessary to understand how much this latter is actually felt by customers through *customer discovery*. It is important to intercept the “early adop-

ters”, which will be willing to help in finding the solution and then implement it. At the moment therefore, investments are not needed, but only many tests and the production of the Minimum Viable Product (MVP)⁶.

PRE-SEED STAGE

It's typically the initial period, following the conception of the idea in which the entrepreneur assesses the feasibility of the project and begins to examine the market opportunities and his skills. At this stage the levels of risk are high and therefore the investments are lower. In particular, funding comes from personal savings and investments by friends or family. Most of the time this stage ends with the drafting of a business plan, a document that is used as a guide for the development of subsequent activities.

SEED STAGE

A phase in which it is not possible to demonstrate the adequacy of the entrepreneurial idea and funding is also required to demonstrate the technical validity of the innovation that you want to propose to the market. In other words, it is the period of time necessary for the technical and qualitative development of the project.

CREATION STAGE ROUND A (START-UP)

The executive phase in which the company launches itself on the market. The product or service is already in production: the product can be sold and it is possible to count the first customers and the first revenues but, its commercial validity has yet to be verified.

ROUND B (GROWTH)

The stage at which the number of customers and sales increase and with them the turnover. At this stage a further capital injection may be needed to meet the growing demand. The risks associated with the company tend to be reduced, as at this point you have multiple data to analyze and study our reference market.

MATURITY EXIT

Period of transition from the start-up stage to another phase, not necessarily in a company itself:

⁶ MVP is the first concrete step when you start your own activity that we could call a working “prototype”.

- IPO: the start-up becomes public and is then listed on the stock exchange,
- Acquisition of the holding by third parties,
- Buyback: the entrepreneur re-purchases the quotas of the startup (yielded previously during the phase of collection of the investments) remaining therefore the only owner of the company,
- Secondary rises: the entrepreneur sells the shares of the company to third parties, but retains some of them,
- Write-off: Investors withdraw from the investment as they see the company close to bankruptcy.

A start-up is therefore born from an idea but, an idea however beautiful, it is not enough: first of all you have to start a company and find someone who believes in this company. The former are usually FFFs (Family, Friends and Fools) or non-repayable funding provided by corporate or public authorities. These initial investments should make it possible to set up the startup and validate the market and be able to move to the creation of the product or at least to the prototype. At the moment when the company and the team exist, crowdfunding is used or people who invest in companies in exchange for participation, present or future, in the capital (business angels), incubators or accelerators (Lambin, 2012). Again, access to credit facility is never a bad idea, if well weighed with the loans received through venture capital to have a balanced credit exposure and that does not force the company in the medium/short term to burn too much cash to pay large interest. As soon as the production activity is complete, the product is on the market and you begin to see the first revenues, the main objective is to climb and continue to grow the business by drawing on investments from Venture Capital or to resort again to crowdfunding, a good method to grow quickly, also exploiting the communication lever of a campaign (Manchanda & Muralidharan, 2014). So, you work on business model, marketing plan and business strategy to acquire customers to expand, starting to think about internationalization. The number of users and customers is growing exponentially, and turnover is increasing. If everything goes as planned, you should move towards the stage where investors get a return on their investment: listing on the stock exchange (the company is now so successful as to make an IPO and then to be listed on the stock exchange, allowing previous investors to sell their shares/shares on the market); acquisition (the company is sold to third parties, usually large competitors who decide to acquire innovative start-ups allowing investors to sell their shares and realise a capital gain); distribution of dividends, which however remains at the discretion of the company, and that in the case of innovative start-ups cannot happen as long as the status of innovative start-up (i.e. 5 years) is maintained; the founders buy back the shares which they had previously sold to investors.

5. Start-ups: A case study

The case study represented in this paper focuses on working conditions among self-employed and in particular it concentrates on start-up reasons of the self-employed. The research was carried out in January-April 2019 in Messina using a sample of microenterprises provided by Camera di Commercio of Messina. The sample covers microenterprises (employing 0–10 persons) including also small enterprises with a low business activity. Telephone interviews were conducted with randomly selected microentrepreneurs from the province of Messina, yielding a total of 900 interviews. Data analysis has been carried out with the statistical software SAS (Statistical Analysis System).

According to their socio-demographic profile, one-quarter of participants are under 40 years of age, half were aged 40–50 and the remainder 51 year and older. All the sample are males, and majority of the microentrepreneurs were born in Messina and the province of Messina. Most of the participants are well educated, with two-thirds having a university degree. The microentrepreneurs do not have a business partner, and almost one-third have empolesse. Almost half are involved in retail (sale and communication) and the remain are business service. It is relevant the gender variable: the data show that men start a business activity more than women. This reason is built on the fact the men are breadwinners, they want to earn money while women consider their buisness venture as an opportunity work with family (Delmar & Davidsson, 1997).

6. Conclusion

According to the literature review, the motivation driving entrepreneurs for self-employment seems to be high degree of independence explained as the desire to be free from formal, bureaucratic organisations (Deakins & Whittam, 2000; Yusuf, 1995; Chay, 1993; Eden, 1975). Other features that attract individuals to self-employment include personal achievement, economic rewards, high job security, the potential for experiencing challenging opportunities (Carter et al., 2003; Jamal, 1997; Birley & Westhead, 1994; Shane, Kolvereid & Westhead, 1991) and individual, psychological, and environmental aspects (Shane, 2003). The result of this research reveals that the reasons, previousuly mentioned, prevail in starting self-owned businesses in Messina and the government supports microentrepreneurs in order to contribute to economic development of the country (Bruton et al., 2008).

Bibliography

1. Birley, S., & Westhead, P. (1994). A Taxonomy of Business Start-up Reasons and their Impact on Firm Growth and Size. *Journal of Business Venturing*, 9(1), 7–31.
2. Boeker, W., & Wiltbank, R. (2005). New Venture Evolution and Managerial Capabilities. *Organization Science*, 16(2), 123–133.
3. Bruton, G.D., Ahlstrom, D., & Obloj, K. (2008). Entrepreneurship in Emerging Economies: Where Are we Today and where Should the Research Go in the Future. *Entrepreneurship Theory and Practice*, 32(1), 1–14.
4. Carter, N.M., Gartner, W.B., Shaver, K.G., & Gatewood, E.J. (2003). The Career Reasons of Nascent Entrepreneurs. *Journal of Business Venturing*, 18(1), 13–39.
5. Chay, Y.W. (1993). Social Support, Individual Differences and Well-being: A Study of Small Business Entrepreneurs and Employees. *Journal of Occupational and Organizational Psychology*, 66(4), 285–302.
6. Deakins, D., & Whittam, G. (2000). Business Start-up: Theory, Practice and Policy. [in:] S. Carter & D. Jones-Evans (Eds.), *Enterprise and Small Business. Principles, Practice and Policy*, Financial Times. Harlow.
7. Delmar, F., & Davidsson, P. (1997). *Who Starts New Firms in Sweden: How Many are They and How are They?* Swedish Foundation for Small Business Research, Jönköping, Swe.
8. Eden, D. (1975). Organizational Membership vs. Self-employment: Another Blow to the American Dream. *Organizational Behavior and Human Performance*, 13(1), 79–94.
9. Freear, J., Sohl, J.E., & Wetzel, W. (2002). Angles on Angels: Financing Technology-based Ventures – a Historical Perspective. *Venture Capital: An International Journal of Entrepreneurial Finance*, 4(4), 275–287.
10. Jamal, M. (1997). Job Stress, Satisfaction, and Mental Health: an Empirical Examination of Self-employed and Non-self-employed Canadians. *Journal of Small Business Management*, 35(4), 48–57.
11. Kaiser, U., & Müller, B. (2013). Team Heterogeneity in Startups and Its Development over Time. *ZEW-Centre for European Economic Research Discussion Paper*, (13–058).
12. Lambin, J.J. (2012). *Market-driven Management. Marketing strategico e operative*. McGraw-Hill.
13. Manchanda, K., & Muralidharan, P. (2014). Crowdfunding: a New Paradigm in Start-up Financing. *Global Conference on Business & Finance Proceedings*, 9(1), 369–374.
14. Ries, E. (2011). *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*. Crown Books.
15. Salamzadeh, A. (2015). New Venture Creation: Controversial Perspectives and Theories. *Economic Analysis*, 48(3–4), 101–109.
16. Serarols, C. (2008). The Process of Business Start-ups in the Internet: a Multiple Case Study. *International Journal of Technology Management*, 43(1–3), 142–159.

17. Shane, S. (2003). *A General Theory of Entrepreneurship*. Cheltenham (UK): Edward Elgar.
18. Shane, S., Kolvereid, L., & Westhead, P. (1991). An Exploratory Examination of the Reasons Leading to New Firm Formation across Country and Gender. *Journal of Business Venturing*, 6(6), 431–446.
19. *Startup* (2016). Retrieved on 30/05/2019, from: <http://www.professionisti.it/enciclopedia/voce/1824/Startup>.
20. Thiel, P., & Masters, B. (2014). *Zero to One: Notes on Startups, or How to Build the Future*. Crown Business.
21. Tsai, S.D., & Lan, T.T. (2006). *Development of a Startup Business — A Complexity Theory Perspective*. Kaohsiung: National Sun Yat-Sen University.
22. www.corrierercomunicazioni.it. Retrieved on 30/05/2019.
23. www.ideastartup.it/. Retrieved on 30/05/2019.
24. www.iltweet.it/close-una-startup-cerchiamo-di-fare-chiarezza/. Retrieved on 30/05/2019.
25. www.ocse.org. Retrieved on 30/05/2019.
26. www.whitehouse.gov/economy/business/startup-america. Retrieved on 30/05/2019.
27. Yusuf, A. (1995). Critical Success Factors for Small Business: Perceptions of South Pacific Entrepreneurs. *Journal of Small Business Management*, 33(2), 68–73.

The Effectiveness of Civil Service as a Factor in the Development of Innovation Infrastructure in Ukraine

Anastasia Ilna

1. Introduction

Today there is a big problem regarding to the public authorities, whose effectiveness depends on many factors. Firstly, it concerns the strategic planning of the development of various programs aimed at increasing the sustainable development of a certain territory (district, city, region, country), governed by the relevant state authority (district, city, regional state administration – at local level; ministry, agency, committee etc. – at national level). Secondly, based on authority powers report, the number of positions in certain structural unit according to the newly approved organizational structure of public authority is not always of a qualitative nature. It consists in extension of staff in some units, whose activities do not include the urgency in social relations, and reduction of those, who could serve the effective development of innovation infrastructure. Thirdly, there is a problem in using the state budget, when the actual funds for implementing innovation projects should have a certain effect, for example, the creation of new workplaces, which allows the state to replenish the budget. And, finally, the fourth most important issue for today is the slow transition of public authorities towards the electronic governance. And so for that, the bureaucratized system of public administration creates large barriers for timely and, above all, high-quality enforcement of control orders by civil servants. It becomes a disincentive factor in the interaction between public authorities and business entities and creates gaps in the civil service, which primarily affects social relations, since the timely execution of the assignments not always satisfies the actual needs of the population.

2. Literature review

Recently, there were published many research papers, the content of which is connected with the importance of a public servant career, whose role should

be leading in the implementation of reforms related to the development of the electronic governance and its mainstreaming to the work of not only public authorities, but also private enterprises in order to ensure the effective interaction and opportunities for further partnerships (Chaltseva & Lavryshcheva, 2017; Ta, 2017). However, despite the enormous achievements in the field of e-governance study, a little attention is paid to the study of a comprehensive assessment of civil servants, including not only the knowledge of the legislative framework and scope of its activities, but also the ability to deal with situations during the exercise of powers, applying the latest information and communication technologies (ICTs).

In addition, some scholars, for example, Melnik and Kononenko (2012), Sokolova (2010), Spector and Park (2018), focused on the study of higher education issues, highlighting the particular problem of civil servants' graduation in educational field of public administration. And this is one of the reasons for the civil servants' disorientation in public space, which creates conditions for slowing down their career growth and, consequently, becomes a factor in the "stagnation" of public authorities due to the lack of highly skilled management personnel. Here, the scholars emphasize the need for the regular training of civil servants, taking into account the results of their assessment over a certain period of time. However, there is a shortage of research in development of state/local targeted programs for training, retraining and advanced training of civil servants in different fields of activity that would incorporate the knowledge sector in the field of public administration and substantive activities with the use of ICTs.

Other researchers, in particular Novak (2017), Tickner (2016), consider the corruption to be the main reason for the decline in the effectiveness of public authorities, based on the analysis of results of the verification of electronic declarations filed by civil servants. However, there is almost ignored the study of causes of corruption and issues related to the development of measures to cancel these causes and prevent their appearance in the future.

As mentioned above, the relevance of the research topic reinforces the necessity of using the foreign experience, taking into account Ukraine's European integration aspirations. This requires to reform the civil service of Ukraine in terms of electronic governance, personnel management and corruption prevention.

3. The state of innovation infrastructure development in Ukraine in comparison with foreign competitor countries

According to data obtained from Global Innovation Index (2018), Ukraine has ranked the 43rd position, increasing by 7 steps in comparison with last year. However, an evaluation of the current state of the development of its innovation

infrastructure necessitates a comprehensive analysis of the level of innovation effectiveness in different areas of Ukraine in comparison with foreign competitor countries (Tab. 1).

Table 1. Ukraine's position in Global Innovation Index (2018) compared to the most 10 innovative countries

No	Country	Innovation level, score/rank							
		Institutions	Human capital and research	Infrastructure	Market sophistication	Business sophistication	Knowledge and technology outputs	Creative outputs	Overall
1	Switzerland	88.94/11	63.96/5	65.31/8	67.49/8	62.64/4	74.88/1	59.38/1	68.40/1
2	Netherlands	89.98/7	56.49/12	62.44/14	58.25/20	65.09/1	63.70/2	56.67/3	63.30/2
3	Sweden	89.63/9	62.16/7	67.07/3	64.70/12	62.47/5	60.09/3	53.80/6	63.10/3
4	United Kingdom	87.36/14	61.33/8	65.75/7	71.98/5	53.03/12	48.21/13	56.52/4	60.10/4
5	Singapore	94.65/1	73.28/1	65.80/5	72.36/4	65.08/2	51.27/11	39.60/35	59.80/5
6	USA	87.69/13	51.32/21	58.78/24	85.12/1	56.14/8	55.59/6	48.03/14	59.80/6
7	Finland	92.85/2	64.19/4	61.99/17	59.76/15	60.59/6	53.50/8	49.25/11	59.60/7
8	Denmark	91.09/6	63.02/6	62.31/15	68.32/6	52.45/14	46.93/15	51.74/9	58.40/8
9	Germany	85.87/16	58.71/10	60.54/19	58.46/19	52.79/13	52.24/10	53.34/7	58.00/9
10	Ireland	85.71/17	53.80/17	66.72/4	54.85/29	54.61/10	56.59/4	45.91/19	57.20/10
11	Ukraine	49.09/107	37.93/43	38.08/89	42.68/89	34.48/46	36.69/27	36.49/45	38.50/43

Source: author's study based on website of Global Innovation Index (2018).

So, the analysis of Global Innovation Index (2018) showed that Ukraine lagged significantly behind the foreign countries in the innovation development, which resulted in ranking the 43rd position of the country and its slight increase compared to last year.

If the overall innovation plan implementation amounts to 38.50%, then the country ranked 10th position among the top 10 countries (Ireland) has reached the innovation effectiveness up to 57.20%, exceeding Ukraine's figure by 18.7 pp. This is also indicated by the result of innovation activities of Switzerland as the innovation leader (68.40%) exceeding the corresponding indicator of Ireland by 11.20 pp.

Considering the position of Ukraine in some areas of innovation, the highest rank is observed in knowledge and technology outputs (27th position) and human capital and research (43rd position). At the same time, the rank of institutions (107th position) and infrastructure (89th position) remained low. However, the relevant rank does not mean there is the innovation effectiveness in the country in these areas.

For example, in the area of knowledge and technology outputs, the overall innovation plan implementation of Ukraine was 36.69%, when Denmark ranked

15th position executed this plan for 46.93% exceeding Ukraine by 10.24 pp. In Ukraine, the main factor influencing this rank was the country's ranking of 1st position with 100% plan implementation in utility model applications by origin. As for the human capital and research, in Ukraine its innovation plan implementation was 37.93%, when in the USA the lowest indicator of the volume of implemented innovations in this area was 51.63% (21st position), which significantly affected the country's downgrade to 6th position. In this direction Ukraine was distinguished by a high pupil-teacher ratio (3rd place), which consists in applying the innovation teaching methods, with a plan implementation of 68.26%.

At the same time, 107th position in the development of institutions was influenced by a considerable lagging behind the competitor countries. This confirms that the innovation plan implementation in the institutions' development in Ukraine was significantly higher than other indicators (49.09%). However, taking into account that its index in Ireland amounted to 85.71% (17th position), exceeding the figure of Ukraine by 36.62 pp, Ireland is lagging behind the innovation leader (Switzerland) only by 3.23 pp. Here, its position was particularly influenced by the result of political stability and absence of violence/terrorism, where Ukraine ranked 123rd position among 126 countries of the world, executed this plan only for 20.89%. The same concerned the government effectiveness, where Ukraine ranked 102nd position, and the execution of the government plan was 30.70%. In the regulatory environment (107th position), the weak spot was the rule of law, while the actual results in this direction represented 22.94%. The barrier of Ukraine's innovation development in business environment became the ease of resolving insolvency (118th position) and its plan implementation for 28.24%.

A similar situation in Ukraine is observed in the field of infrastructure development, when its innovation plan implementation was 38.08%, while in the USA (24th position) the indicator of its innovation effectiveness is the lowest and represented 58.78%. However, if this indicator lagged behind Switzerland by only 6.53 pp, then it exceeded Ukraine by 20.70 pp. Here, Ukraine has the most disadvantages in ecological sustainability (115th position), which was significantly influenced by the GDP per unit of energy use, which resulted in 5.55%, and also in the use of ICTs (95th place), resulted in 31.70%. The overall development of infrastructure (89th place) in most cases was influenced by the logistics performance (79th position), resulted in 31.15%.

As for above, Ukraine, on the one hand, is a country that seeks to improve its effectiveness in the field of innovation development, on the other hand, there is a number of problems in the country preventing it to reach the innovation level of competitor countries.

Firstly, there is a high level of corruption in Ukraine by government officials trying to use budgetary funds to meet their own needs, rather than in-

vesting them in the creation of various innovation infrastructure objects, which would be oriented towards meeting the state and population needs. As a result, the inactivity of law enforcement authorities, political instability and failure to fully implement the sustainable development programs due to the lack of funds for the implementation of innovation projects, including those related to the defense sector, often increase the level of crime and possibility to encroach upon country's territorial integrity by the neighboring states. All of this entails an increase in unemployment, decrease in meeting the population needs and, consequently, people's trust in authorities.

Secondly, there is an ineffective system of training, retraining and professional development of employees of state authorities and local self-government bodies in Ukraine. This is reflected in the low level of their use of ICTs, which impedes the introduction of the electronic governance system into the process of service activity, the application of which would ensure the effective interaction between public authorities and local self-government bodies, private institutions, citizens; constant link between civil servants of various categories and, consequently, timeliness of document receiving and quality of fulfilling applications. In addition, civil servants often violate the ethical norms of conduct associated with collecting information, executing and sending completed documents to the addressees.

Thirdly, in Ukraine there is a number of de-motivating factors for the exercise of civil servants' powers, which primarily includes the disqualification of civil servants holding senior positions and, as a result, bureaucratic system of requirements for the task performance by their subordinates. It also played a huge role in disregarding the standards of ethical conduct of employees of state authorities and local self-government bodies. As a result, the weakness of the quality (clarity and accuracy of information), efficiency (number of jobs created on the basis of implemented projects) and effectiveness (meeting the citizens' needs by obtaining public services) in the execution of service assignments reflects violations of the principles of state regulatory policy. It causes the impediments to the innovation development of business entities because of market disequilibrium.

4. The ways to improve the effectiveness of civil service

As the innovation infrastructure is a spectrum of various public and private institutions, including those providing administrative, educational, cultural, ecological, tourist, transport, and other services, the nature of public authorities' work plays an important role in the sustainable development of the country. At the same time, the level of public confidence depends, first of all, on the quality, efficiency and effectiveness of civil servants' powers. However, based on the analysis of the

state of innovation infrastructure development in 2018, Ukraine is significantly behind the most innovative foreign countries of the world. According to data obtained from Blavatnik School of Government (2017) Ukraine is not among the countries in which the evaluation of the civil service effectiveness is based on the International Civil Service Effectiveness (InCiSE) Index, developed in 2017. It once again confirms the country’s non-compliance with foreign standards. Thus, the approach to these standards and, accordingly, ranking of innovative countries require the development of its own innovation model of public administration (Fig. 1).

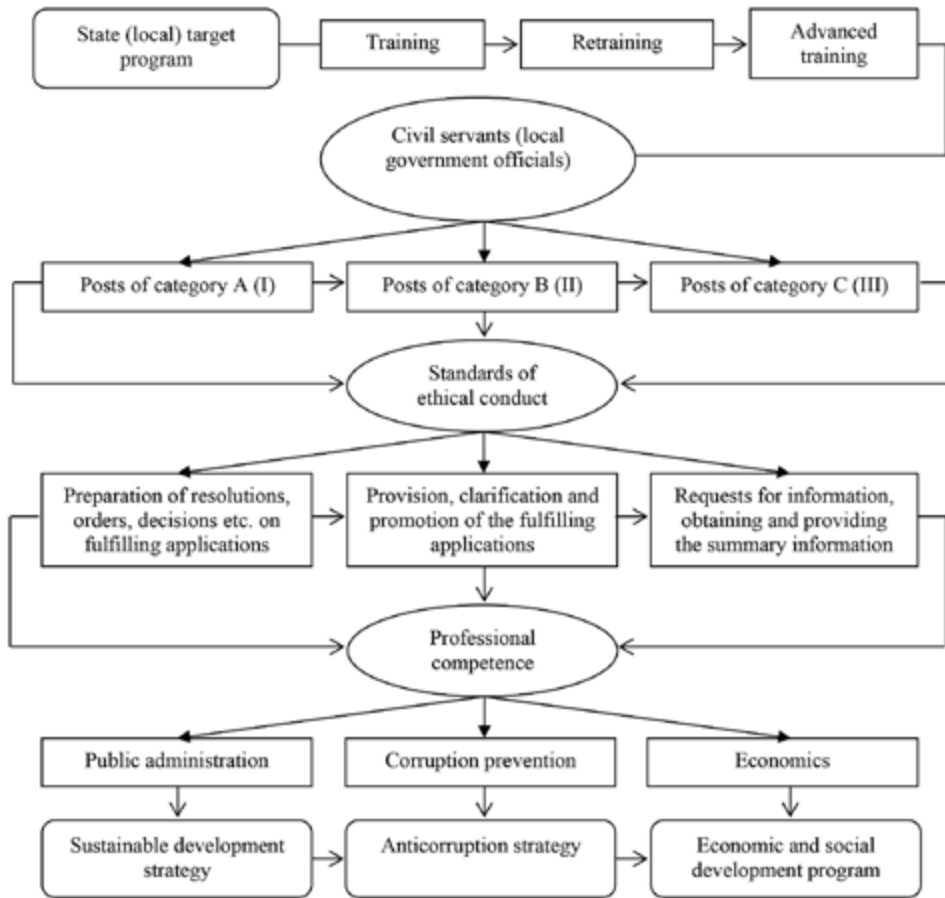


Figure 1. The innovation model of public administration

Source: author’s study.

Speaking about the foreign experience, the main factor in improving the work of public authorities is the effectiveness of the promotion system, operating in various countries in different ways. For example, in the USA, it is associated

with the selection of the best specialists by the results of the competition and annual assessment. In the UK, it is connected with the complicated procedure for verifying civil servants for corruption offenses. In Germany, it is built on increasing the professional competence, moving from easier to more difficult one. In France, the training and advanced training are a prerequisite for the career development of civil servants (Melnik & Kononenko, 2012; Sokolova, 2010). Taking into account the aforementioned, the initial solution of problems related to the work of public authorities and local self-government bodies is the development and approval of a state/local target program, the stages of implementation of which include the training (receiving an education on the specialty of public administration), retraining (obtaining another adjacent specialty) and advanced training (improving the process of exercise of public functions) of civil servants/local self-government officials.

Thus, the legislative framework, in particular the Laws of Ukraine No. 889-VIII “On Civil Service” dated 10 December 2015 (Supreme Council of Ukraine, 2015), No. 1700-VII “On Prevention of Corruption” dated 14 October 2014 (Supreme Council of Ukraine, 2014) and draft Law of Ukraine No. 8369 “On Amendments to the Law of Ukraine “On Service in Local Self-Government Bodies” dated 17 May 2018 (Supreme Council of Ukraine, 2018), requires amendments in the need for regular passage of this program implementation stages for the relevant period. In accordance with these amendments, the program should be applied primarily to persons holding special responsibilities for the activities of state authorities (category A) and local self-government bodies (category I). The State Secretary of the Cabinet of Ministers of Ukraine, state secretaries of ministries, heads and deputy heads of executive bodies and their structural divisions, whose activities extend throughout the territory of Ukraine, and also managerial affairs of executive committees, apparatuses of local self-government bodies and heads of these departments should possess the intricacies of the development, approval, use and storage of regulatory documents (resolutions, orders, decisions etc.) with applying the special rules of ethical conduct. However, this procedure requires the passage of such a stage as the state policy analysis based on the analysis of the report on the exercise of powers of public authorities/local self-government bodies for the previous period, transforming the identified advantages and disadvantages into a strategic plan of the development of a certain territory (district, city, region) and the whole country.

In addition, officials with special responsibility should be able to plan the amount of state/local budgets necessary for the allocation to innovations within the framework of the economic and social program in accordance with the sustainable development strategy. However, to pass this stage it is necessary to implement an anticorruption strategy plan, which requires, firstly, a thorough in-

spection of newly-recruited officials of the categories B (II) and C (III) according to the Law of Ukraine No. 1682-VII “On Purification of Government” dated 16 September 2014 (Supreme Council of Ukraine, 2014); secondly, use of measures to accelerate the process of verifying electronic declarations of such officials; and thirdly, optimization of the work of state authorities/local self-government bodies by approving the new organizational structure, workforce and personnel reserve.

At the same time, persons holding responsible positions for the work of public authorities (category B) and local self-government bodies (category II), headed by separate departments of secretariats, apparatus, divisions, etc., should primarily know the rules of ethical conduct regarding the provision, clarification and promotion of fulfilling applications by persons who do not hold senior positions in state authorities (category C) and local self-government bodies (category III). The latter, in turn, should know ethical standards for addressing with requests for information and its obtaining for the synthesis. Secondly, the correct application of ethical norms of conduct requires knowledge of the Constitution, laws of Ukraine and primarily activities in structural unit. This also applies to persons who are not responsible for the work of state authorities/local self-government bodies, since their fulfilling application can significantly affect the ranking, level of public confidence and, consequently, work of public authorities/local self-government bodies in the future.

Accordingly, those who hold senior positions of public authorities/local self-government bodies should also have issues related to the implementation of the plan of measures for the sustainable development and anticorruption strategies within the framework of providing to personal administration unit proposals for acceptance, dismissal, improvement and promotion of persons who do not hold senior positions. The latter, in turn, should be especially attentive during the fulfilling applications, especially related to the economic and social development program implementation. In this case, the main directions of the disciplines under the state/local target program for training, retraining and advanced training of public officials should be connected with public administration, corruption prevention and economics. The study of such disciplines will help trainees to gain basic knowledge and mastering their skills in the preparation, approval and implementation of a sustainable development and anticorruption strategies, the outcome of which involves the formation of economic and social development programs for the next year.

5. Conclusion

An analysis of the current state of innovation infrastructure in Ukraine has shown that Ukraine lags significantly behind innovation development in foreign

countries from different sectors, whose activities are particularly relevant to the interaction between public and private organizations, and use of ICTs. The main reason is the disqualification of employees of state authorities/local self-government bodies and its high level of corruption. This is reflected in the lack of strategic thinking among officials of category A (I) when developing and approving a sustainable development strategy; interest of officials of categories A (I) and B (II) in officials of categories B (II) or C (III) who would perform service assignments in the interests of their own; ignoring the rules of ethical conduct by civil servants during the preparation, provision and fulfilling applications. All of this reduces the level of quality, efficiency and effectiveness of the work of public authorities/local self-government bodies, which leads to a decrease in public confidence, as due to the lack of funds from the state/local budgets, citizens appealing to them do not receive a satisfactory result. Thus, Ukraine's current legislation needs to be amended to include regular training by officials of public authorities/local self-government bodies, with compulsory study of disciplines in the field of public administration, corruption prevention and economics.

Bibliography

1. Blavatnik School of Government (2017). *The International Civil Service Effectiveness (InCiSE) Index 2017*. Retrieved on 30/05/2019, from: <https://www.bsg.ox.ac.uk/about/partnerships/international-civil-service-effectiveness-index-2017>.
2. Chaltseva, O.M., & Lavryshcheva, A.O. (2017). E-uryaduvannya: perspektyvy vprovadzhenya v ukrayinskomu prostori [E-governance: prospects for implementation in the Ukrainian space]. *Political Life*, 4, 48–53.
3. Global Innovation Index (2018). *Analysis/Explore Economy Reports from the GII 2018*. Retrieved on 30/05/2019, from: <https://www.globalinnovationindex.org/analysis-economy>
4. Melnyk, A., & Kononenko, T. (2012). Zarubizhnyy dosvid pidhotovky ta pidvyshchennya kvalifikatsiyi derzhavnykh sluzhbovtziv: problemy implementatsiyi v Ukrayini [Foreign experience of training and advanced training of civil servants: problems of implementation in Ukraine]. *State Administration and Local Self-government*, 1(12). Retrieved on 30/05/2019, from: [http://www.dridu.dp.ua/vidavnictvo/2012/2012_01\(12\)/12mafpiu.pdf](http://www.dridu.dp.ua/vidavnictvo/2012/2012_01(12)/12mafpiu.pdf).
5. Novak, A. (2017). Natsionalna antykoruptsiyna polityka: osoblyvosti ta osnovni chynnyky rozvytku v umovakh suchasnoho derzhavotvorennya [National anticorruption policy: peculiarities and main factors of development in the conditions of modern state formation]. *State Administration and Local Self-government*, 3, 62–66.
6. Sokolova, T.A. (2010). Pidvyshchennya efektyvnosti derzhavnoyi sluzhby – yak vazhlyvyi chynnyk innovatsiyno-investytsiynoho rozvytku Ukrayiny [Improving the civil service effectiveness – as an important factor in the innovation and invest-

- ment development of Ukraine]. *Public Administration: Improvement and Development*, 9. Retrieved on 30/05/2019, from: <http://www.dy.nayka.com.ua/?op=1&z=191>.
7. Spector, J.M., & Park, S.W. (2018). *Motivation, Learning and Technology: Embodied Educational Motivation* (Third Avenue). New York: Routledge.
 8. Supreme Council of Ukraine (2015). *Pro derzhavnu sluzhbu* [On Civil Service]. Law of Ukraine, adopted on 2015, December, 10, No. 889-VIII. Retrieved on 30/05/2019, from: <https://zakon.rada.gov.ua/laws/show/889-19>.
 9. Supreme Council of Ukraine (2014). *Pro ochyshchennya vlady* [On Purification of Government]. Law of Ukraine, adopted on 2014, September, 16, No. 1682-VII. Retrieved on 30/05/2019, from: <https://zakon.rada.gov.ua/laws/show/1682-18>.
 10. Supreme Council of Ukraine (2018). *Pro vnesennya zmin do Zakonu Ukrayiny "Pro sluzhbu v orhanakh mistsevoho samovryaduvannya"* [On Amendments to the Law of Ukraine "On Service in Local Self-Government Bodies"]. Draft Law of Ukraine, 2018, May, 17, No. 8369. Retrieved on 30/05/2019, from: http://search.ligazakon.ua/l_doc2.nsf/link1/JH6GH00A.html.
 11. Supreme Council of Ukraine (2014). *Pro zapobihannya koruptsiyi* [On Prevention of Corruption]. Law of Ukraine, adopted on 2014, October, 14, No. 1700-VII. Retrieved on 30/05/2019, from: <https://zakon.rada.gov.ua/laws/show/1700-18>.
 12. Ta, A.D. (2017). A Cloud Computing Adoption Framework for Developing Countries. [in:] *Sustainable ICT Adoption and Integration for Socio-Economic Development*. IGI Global.
 13. Tickner, P. (2016). *Fraud and Corruption in Public Services* (Third Avenue). New York: Routledge.

The Characteristics, the Role and the Functioning of Startups in the Economic Structure of the State*

Tomasz Rojek

1. Introduction

The business environment and the conditionings of conducting business activity are constantly changing, thus facing entrepreneurs with new challenges which force them to search for new products, services, organisational and technological solutions. At the same time, owing to globalisation processes, progressing computerisation and an increase in the access to information, the world of business is evolving all the time. In such conditionings, where the speed of making decisions, adaptation skills, flexibility, mobility are becoming the indicator of the effectiveness of operations, small business entities function very well as most often they have all the aforementioned qualities. Such small entities, in accordance with the valid classification, are entities operating in the small and medium-sized enterprise (SME) sector and having the status of microenterprises.

The growth of the role of the SME sector in the global economy has been marked since 1970s. The development of the world economy has caused the reinforcement of those trends and the growth of the signs of business activities in this sector. Factors which have contributed the quantitative increase in micro, small and medium-sized enterprises are as follows (Skowronek-Mielczarek, 2002, pp. 36–37):

- changes in the techniques of production and providing services,
- dynamic development of the services sector,
- changes on the markets for the factors of production,
- promotion of innovativeness and entrepreneurship,
- the growth of demand for products and services adopted to individual preferences of consumers.

* The publication was financed with subsidies granted to the Faculty of Management of the Cracow University of Economics for maintaining the research capacity.

At present, microenterprises are the most numerous category of enterprises in Poland and play an important role in the creation of the national economy. Over the recent years not only has the number of microenterprises been growing but also their revenues, the value of production, the number of employees, as well as their capital expenditures have been going up. According to the data from the Central Statistical Office (Cmela & Płatek, 2019), in 2017 microenterprises constituted in Poland 96.5% of all enterprises and employed 37% of people working in enterprises, which depicts the scale of their activities on the Polish market.

According to the legislator, “a micro-entrepreneur is an entrepreneur who during at least one year out of the last two trading years fulfilled the total of the following conditions (Entrepreneurs’ Law Act, 2018):

- employed on average fewer than 10 workers annually,
- achieved annual net turnover on the sales of goods, products and services and on financial operations which did not exceed the equivalent of 2 million Euros in Polish zloty, or the sums of the assets of its balance sheet drawn up as at the end of one of these years which did not exceed the equivalent of 2 million Euros in Polish zloty”.

To define the status of an entrepreneur volumes expressed in Euros are converted into Polish zloty according to the average exchange rate on the last day of the trading year as announced by the National Bank of Poland (NBP). The annual average employment is determined as full time equivalent and does not consider workers on maternity leaves or child care leaves or employees hired on vocational training.

Microenterprises is a very fast developing sector, affecting the dynamics of the development of the region through engaging workforce from the local market. Owing to flexibility, the possibility to observe needs and preferences, as well as the ability to adapt to the current needs of the market microenterprises are more innovative than larger enterprises, however, their activity is connected with higher risk (Sztando, 2008, p. 237). The owner of a microenterprise cannot use procedures, patterns of behaviour or rules in specific situations, as it happens in larger firms, but he must create them himself, therefore, he should have the knowledge of law, economics, IT, etc. Financing microenterprises is to a great extent based on equity, and to a lesser extent on credits and loans. Microenterprises often rely on one key supplier or receiver, which may result in the dependence on its financial standing or imposing unfavourable conditions of cooperation.

The significance of microenterprises for the local labour market, the region, economy, consists in:

- creating new jobs,
- the share in creating local influences, Gross Domestic Products (GDP),
- meeting local needs through investments,

- the use of local resources (raw resources, infrastructure, workforce),
- adjustment to the market situation owing to flexibility,
- fast and easy contact with customers,
- accumulation and use of the financial, economic, social or intellectual potential of the local economy,
- promoting the development of human capital, making use of programmes and subsidies, engaging private and public capital.

The smallest enterprises are to the greatest extent exposed to bankruptcy risk, however, owing to higher flexibility, they can restore lost positions more effectively. Microenterprises are often family firms running shops or offering services and are characterised by the engagement of family equity, as well as the participation of the family members in the activity (Brażgiel & Dykiel, 2016, p. 26).

Due to the fact that the current turbulent environment and the economic situation favour the development of new initiatives and innovative ventures, more and more often new, innovative forms occur among microenterprises characterised above, namely startups. They are young enterprises, set up to offer innovative products and address modern needs, which are characterised by the search for a scalable and profitable business model. Startups, if they are run responsibly in business terms, and products or services they offer are regarded innovative by the market and enjoy demand, are projects which are characterised by high profitability and considerable development rate. The conditionings indicated here are the reason for which startups have become a very popular and common form of conducting business activity in the Polish market environment.

In the light of the signalled problem referring to the conditionings of the functioning of startups in the contemporary economy, an attempt was made to identify the features of the functioning of startups in the economic area, positive and negative determinants of conducting activity and the prospects of development. The goal of the author was to analyse selected functional areas of the functioning of startups in Poland.

2. The characteristics of the functioning of a startup

An attempt to define the term of a startup brings a lot of doubts as the literature of the subject does not define the term unambiguously. There are numerous definitions but most often an enterprise of this type is identified with a small firm in the initial stage of development or an entity connected with new technologies. According to Blank and Dorf (2013, p. 19), a startup is “a temporary organization in search of a scalable, repeatable and profitable business model”. Ries (2011, p. 8) treats a startup as “a venture created to produce new products and services in the conditions of extreme uncertainty”, whereas Guillebeau (2013,

p. 12) defines a startup as “a micro business revolution, a way of earning a good living while crafting a life of independence and purpose”. Moreover, Blank and Dorf (2013, pp. 19–21) distinguish five types of startups:

- Small firms – typical service-providing entities, that is: dry-cleaner’s and petrol stations, for which success means a proper return on investment or a profit for the owner. Their ambition is not to dominate the industry or build a large enterprise,
- Scalable startups – technological firms set up with the vision that their innovative product will conquer the market and allow to generate huge profits. They are often established in technological centres. Enterprises of this type constitute a small part of all startups but their potential concentrates the majority of risky capital around them,
- Startups for sales – are businesses set up by investors with the thought in mind that large entities will take over their startup and the workforce employed in it, thus bringing them a profit which will be several times higher than the expenditure incurred. A relatively low cost related to the creation of Internet and mobile applications enables the financing of those ventures with a small capital,
- Entrepreneurship within large firms – is in a way a scalable startup created within an organisation. Large entities develop by launching new products to the market, which are a variety for the main product or in order to win new customers. However, their size and the organisational culture often are often the reason for which the creation of groundbreaking innovations within the entity is very difficult,
- Social entrepreneurs – are people building innovative non-profit organisations. Their activity is focused on solutions rather than profits. They address various thematic areas, including agriculture, healthcare or micro-financing.

The above classification indicates that there are various types of startups, thus, there are identifiable differences among them. However, we can also distinguish common features in this group of entities. These are primarily: innovativeness, scalability, a short history of activity, operations in the conditions of extreme uncertainty, low costs of starting the activity, the creation in order to offer new and innovative products and meeting such needs.

Formally, startups are registered business entities operating on a small scale or planning to launch sales, regardless of the size. The highest percentage of startups are micro and small enterprises. They are characterised by a large economic potential, but on their way they come across numerous barriers and threats.

The literature of the subject claims that in spite of considerable differences, startups are able to compete with large business entities. They are character-

ised by a dynamic approach to the environment and flexibility which gives them an advantage over large entities in the situations of (Onak-Szczepanik, 2006, pp. 615–616):

- fast reaction to changing requirements of the market,
- using business opportunities by the owners ready to take a risk and able to use their competitive advantage,
- information flow within the entity,
- the use of specialists with broad knowledge,
- entering cooperation networks,
- using a privileged position in projects concerning the support for the development of local economy.

In the areas of the market where startups are not able to compete, they often collaborate in the form of cooperation or subcontracting goods and services used by larger entities. The economic system characterised by the saturation with small entities is flexible and easily adapts to the changing market conditions and, what follows, it is more resistant to fluctuations of the economic situation. The environment in which startups operate is undoubtedly important to economy. It activates local and regional development and develops initiatives favouring the reduction of unemployment. In industry, trade and services it plays a complementary with regard to the public sector and large entities.

The market of startups is a specific market – it has a limited effect on the external environment but changes undergoing in it play a significant role in its functioning. The development of this market is hindered by barriers and threats which can be divided into two groups – external and internal ones (Ziemia & Świeszczak, 2013, p. 491).

External threats are market, financial, educational, personnel barriers, arising from the economic policy, lack of access to information and those connected with the condition of infrastructure. Market threats include a decrease in demand, which results in the decline in turnovers of microenterprises, which may be brought about by the drop of the purchasing power of the society. For the development of enterprises a significant threat consists in aggressive operations of competitors and the growing number of rivals. Financial barriers are a special problem as their development depends on the value of capital which may be equity (self-financing) or a capital from external sources (credits, loans). An obstacle are difficulties in the access to capital from external sources, caused by the high cost of capital (interest rates), necessary possession of credit guarantees and the time-consuming process of considering credit applications. As legal barriers complicated regulations of economic law concerning the launch and conducting business activity are mentioned. Also corruption and crime threat, which increases costs, particularly in preventive activities, are a barrier to devel-

opment. Bad condition of roads, no wastewater treatment plants, failures of electricity networks, general availability and quality of infrastructure also affect costs (Lachiewicz, 2003, p. 64).

Internal threats include weaknesses of management, limitations related to production and the size of activity. Barriers to development include insufficient financial management skills, sales and marketing skills and not using opportunities which occur on the market. Another problem are also mistakes in operations management, development strategy, the unexpected growth of costs and personnel reasons. A mistake in operations management is the lack of funds to cover investments, ongoing operations, mistakes made in planning, implementation and control of solutions. The production barrier consists in the necessity to modernize obsolete machines, manufacturing devices, old technologies, which is connected with the implementation of expensive investments (Piasecki, 1998, p. 187).

Due to limited resources of startups, they are more exposed to difficulties than other enterprises. The identification of key barriers and finding possibilities to eliminate or limit them is crucial for the proper functioning and development.

3. The assessment of selected functional areas of the activity of startups in Poland

3.1. The assessment of the situation of SMEs in Poland

The role of micro, small and medium-sized enterprises in the process of the development of market economy is important. The fundamental significance of these entities in supporting the economies of developed countries is proven worldwide. The small and medium-sized enterprises sector is the basic source of income of the state budget, affect the growth of GDP, create new jobs and positively contribute to functional and social changes of the areas in which they operate (Drewniak et al., 2017, p. 14).

The results of the research conducted by the Central Statistical Office unambiguously indicate that since 2013 the number of non-financial firms¹ operating on the Polish market has been increasing systematically, which is presented in Figure 1.

¹ Non-financial enterprises are entities whose main activity is the production and trade of goods or the provision of non-financial services, particularly state enterprises, companies, cooperatives, branches of foreign firms, natural persons conducting business activity on their own account, manufacturing groups, non-public higher schools, non-public health care facilities, agencies (except for state agencies, including enforcement agencies). Within the research, due to lack of comparable and full data for the SME sector, conclusions were partially based on the analysis of data for the non-financial enterprises subsector, which produces more than 96% of gross value added of the whole SME sector in Poland.

In 2016 more than 2,013 non-financial enterprises functioned in Poland, in 2017 there were more than 2,077 of them, which stands for a increase by 3.2%. At the same time, in 2017 the SME sector in Poland constituted 99.8% of all enterprises in total. Within the sector, the most numerous group were entities employing up to 9 workers (96.5%). The number of enterprises in 2017 was: micro 2,004,288, small 53,762 and medium-sized 15,335, respectively.

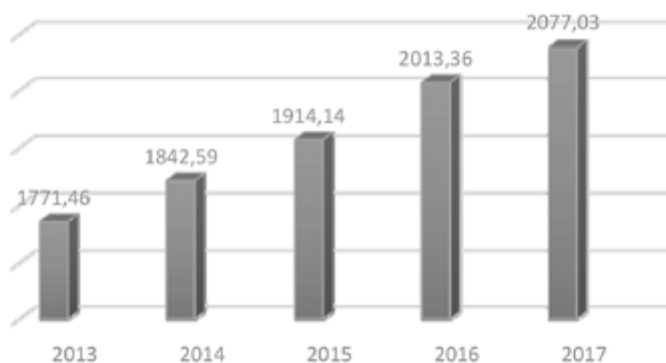


Figure 1. The number of non-financial firms in Poland

Source: own study based the publication of Central Statistical Office (Cmela & Płatek, 2018).

As for the character of the activity, in the last decade a decline in the share of trade entities has been marked, but the growth of the share of entities conducting professional scientific and technical activity has been marked. When referring specifically to the structure of non-financial enterprises, we can claim that in the years 2016–2018 nearly every fourth enterprise conducted trade activity, 13.6% of non-financial enterprises conducted construction activity, 13.3% conducted professional, scientific and technical activity, and 10.2% – industrial activity.

As of 31 December 2017, non-financial enterprises employed 9,860.3 thousand people, which means an increase by 1.7% annually. 6,735.5 thousand people worked in micro, small and medium-sized enterprises, which constituted 68.3% of all workers working in the non-financial sector. Almost 25% of workforce worked in trade, and one in three people was employed in industry.

The structure of enterprises by the years of conducting activity stays on the same level. In 2017 the largest group of enterprises were entities which started their activity in 2012 or before that year (67.4%). One in six enterprises is a young entity, set up in the years 2016–2017.

A special role in the SME sector is played by microenterprises. They constitute 82% of startups, which means that only one in five newly created enterprises is small, medium-sized or large. In 2017 the number of microenterprises in Po-

land was 2,073.6 thousand, their number went up in comparison with the previous year by 69.6 thousand, that is by 3.5%. The bigger number of firms translates into the growth of the number of people employed in those entities. In 2017 the number was 4,089.8 thousand people, that is by 3.4% more than in 2016.

In 2017 more than a half of microenterprises conducted service activity, 23.1% of entities conducted trade activity and vehicle repair, and 13.2% construction activity, in total it is 90.5% of the totality. When analysing the structure and employment by the sections of the Polish Classification of Activity (Polska Klasyfikacja Działalności – PKD) it was observed that the services sector in 2017 employed 47.7% of workers of microenterprises.

27.2% people worked in trade and vehicle repair, and 13.5% worked in construction (Cmela & Płatek, 2019, p. 16). When studying the relationship between revenues, value added, production and the number of workers, entities employing up to 9 workers are the second most productive group of entities conducting business activities, the most profitable and most cost-effective, considering the ratio of costs to revenues. High cost effectiveness contributes to good financial liquidity characteristic for the discussed entities. Polish microenterprises are characterised by the positive developmental trend: over the last years their number, the value of production, the number of people working and employed, revenues and expenditure on investments are constantly growing (Tarnawa & Skowrońska, 2018, p. 8).

When we assume that globalisation and integration processes will intensify and will be accompanied by the maintaining dynamic rate of technical and technological progress, changes in the attitudes of buyers, and the policy of supporting the SME sector, we may draw a conclusion that consistent and adequate market behaviours will be growing among microenterprises. They will be more inclined to undertake more intensive activities in the area of integration with the environment. Substantial support for the development of microenterprises would be an increase in the access to external financing. It would be beneficial to increase support by business angels, venture capital funds, the systems of pledges and credit guarantees (Steinerowska-Streb, 2017, pp. 140–141).

3.2. The assessment of the functioning of startups in Poland

At present, the Polish economy is not among those of countries which are very successful in the area of innovativeness on the global market, although in accordance with international rankings constant improvement is marked in this area. Poland has undertaken intense activities in order to build an economy friendly to conduct business activity and innovative solutions. To a great extent, the activities refer to startups, treated as innovative ventures in the area of economy. Building the environment supporting the creation of innovativeness in econ-

omy has brought about the activation and dynamisation of the startups development process (Kałowski & Wysocki, 2017, pp. 245–246).

The startup ecosystem is formed by entities and organisations interested in initiating innovations and transferring them into prosperous enterprises. These are aspiring and present founders of startups, scientists, innovation brokers, business angels and other investors. accelerators, incubators, organisations associating various representatives of groups and public institutions whose goal is to help innovative entrepreneurs. The system can be discussed on the national and the local level. Figure 2 shows the structure of the location of startups in Poland in the years 2016–2018. The examination of local ecosystems enables to find relationships, common problems and solutions which allow some to operate more effectively than others (Kałowski & Wysocki, 2017, pp. 233–234).



Figure 2. The location structure of startups in Poland in the years 2016–2018

Source: own study based on reports of the Startup Poland Foundation from the years 2016–2018.

The structure of the regional distribution of startups in terms of the city of registration of an entity is stable in time. According to Figure 2, main locations of the head offices of young enterprises are Warsaw, Wrocław, Krakow and Tricity. In the years 2016–2018, the position of Poznan weakened to the benefit of Lublin, which reached 6% in the previous year.

Figure 3 shows the results of research from the years 2016–2018 into the character of the activity of startups. According to them, startups mainly offer solutions in big data: analytics, research tools, business intelligence; Internet of things and tools for programmers and developers.

In-depth analysis points to decreasing interest in such offers. At the same time, there is an increase in the percentage of offered products and provided services in the categories of fintech, natural sciences, the health sector and biotechnology.

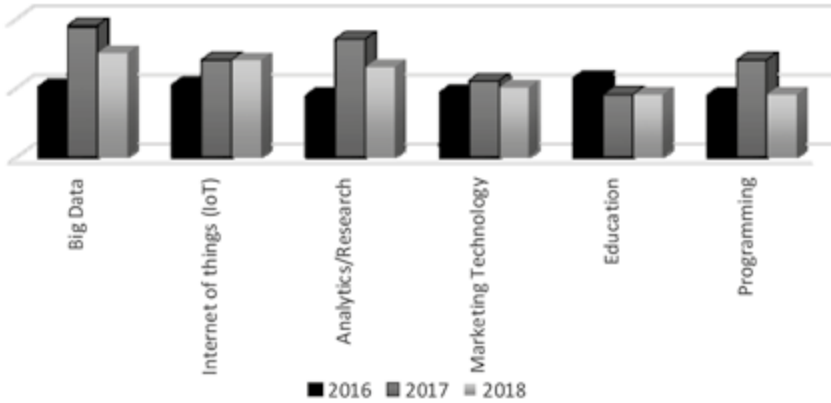


Figure 3. The areas of the activity of startups in Poland

Source: own study based on reports of the Startup Poland Foundation from the years 2016–2018.

An average level of monthly revenues of startups in individual industries in 2018 is presented in Figure 4.

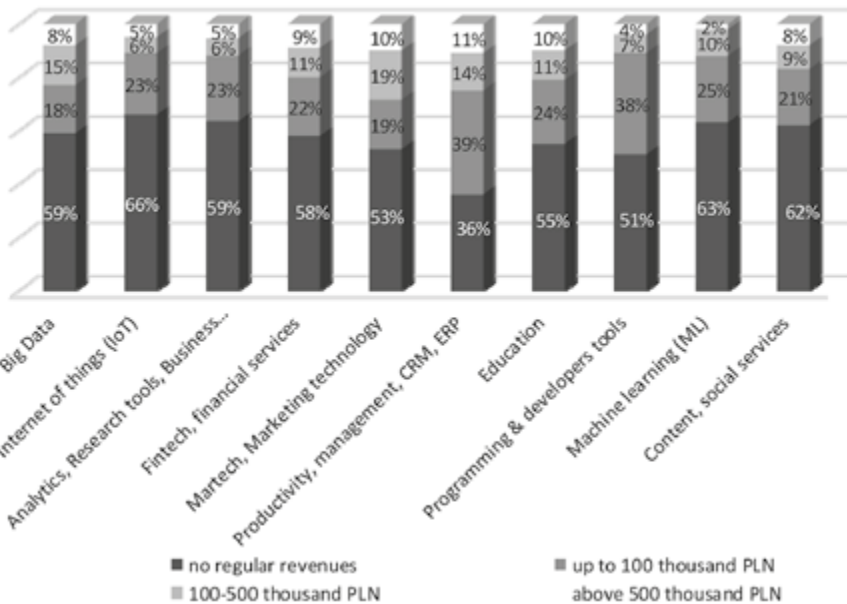


Figure 4. An average level of monthly revenues of the studied startups in individual industries in 2018

Source: (Beauchamp, Krysztofiak-Szopa & Skala, 2018).

Regular revenues in 2018 were most often achieved by startups from the following industries: productivity, management tools, CRM, ERP; tools for programmers and developers; martech; education and fintech. A novelty on the list of leading industries is machine learning which conquers the market very fast and wins external financing.

The main business model chosen by young enterprises in the years 2016–2018 is presented in Figure 5. Vast majority of startups sell their products and services in the model Business to Business (B2B). This sales channel enables to make higher profits and faster growth, as a result of which the percent of startups concentrating only on the consumer channel drops.

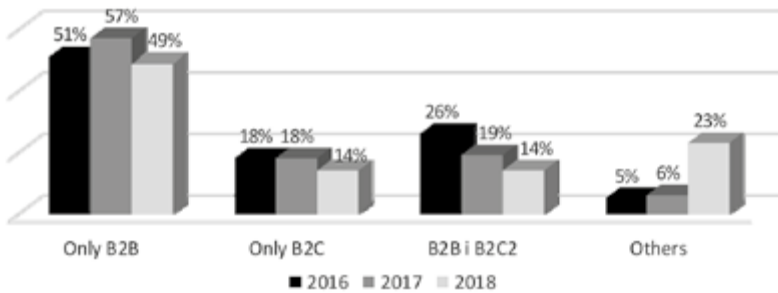


Figure 5. The main business model of startups in Poland

Source: own study based on reports of the Startup Poland Foundation from the years 2016–2018.

In the group of leading recipients among startups there are still SMEs but in recent years the growth of the number of recipients from the group of large and corporate clients is going up. In 2018 a large number of enterprises chose intermediate solutions by implementing Business to Business to Consumer (B2B2C), Business to Government (B2G), as well as Software as a Service (SaaS) models.

In the analysis of Polish startups, the next step was a study referring to founders of startups and workers employed in them. In the last years the age structure of entrepreneurs setting up startups is invariably stable, which is presented in Figure 6.

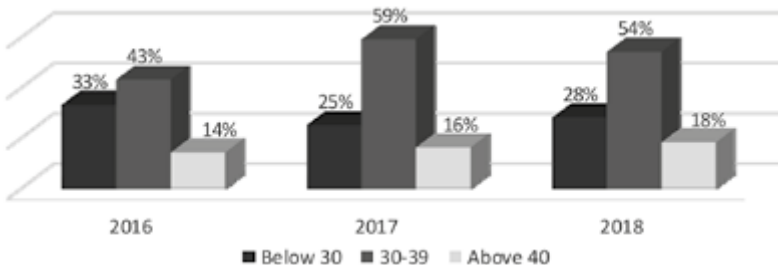


Figure 6. The age of the founders of startups or their CEOs

Source: (Beauchamp, Krysztofiak-Szopa & Skala, 2018).

Statistically, most often the occurring founders and CEOs of startups are experienced thirty-year-olds. Every year this group is the biggest percentage and constitutes around 50%. In a natural way from year to year there is an increase in the group of forty-year old managing directors. Moreover, more and more often young enterprises are set up in the form of a company with the participation of two founders rather than by sole traders.

What results from the research conducted in 2018 is that 52% of CEOs of startups have technical education, however, the best developing enterprises are run by people with social sciences education. They constitute 60% of the best startups.

According to the data presented in Figure 7, vast majority of startups are microenterprises employing nobody or not more than 10 people. In 2018 their percentage was 82%, that is by 4 percentage points more than in the previous year. The percentage of enterprises not employing any workforce was on the same level, but the percentage of entities in which 1 to 10 workers were employed went up. a little more than 10% of startups employ all the workforce based on employment contracts, and half of the totality indicate that they employ only some of the workforce in such a form.

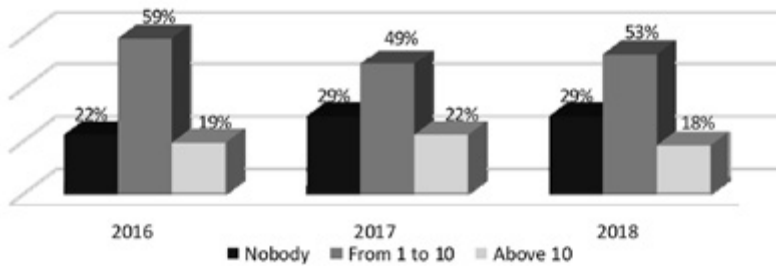


Figure 7. The number of workers hired in startups in Poland

Source: own study based on reports of the Startup Poland Foundation from the years 2016–2018.

In terms of employment, the largest startups offer tools in the area of technology for marketing, 16% of which employ more than 50 people. On the other hand, the highest percentage of entities which do not employ any workforce occurs among entities creating products in the field of power industry (42%), natural sciences and the health sector (39%). Startups having small teams are built exclusively based on the founders' own resources. Among them, 37% function not employing any worker based on the employment contract, and 28% employ 1–3 people. It confirms the conclusion that winning finance from external sources positively affects the growth of entities and employment in startups.

3.3. The assessment of the sources of financing of startups in Poland

Within the conducted research aiming at the establishment of capabilities, needs and resources of startups with regard to financing their activity, at the beginning there was an attempt to determine overall needs of startups concerning basic resources (financial and non-financial ones), necessary from the point of view of conducted activity. The results of the research are presented in Figure 8.

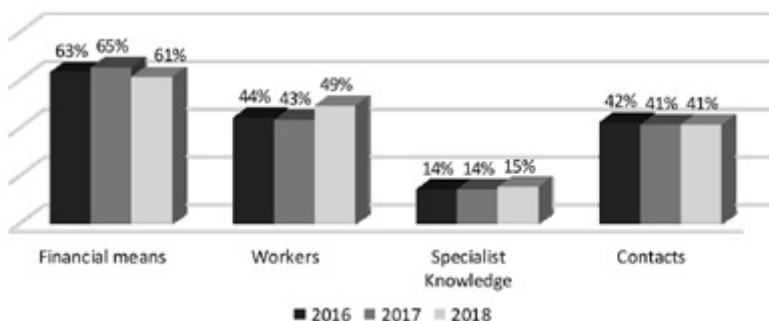


Figure 8. Identified needs of Polish startups

Source: own study based on reports of the Startup Poland Foundation from the years 2016–2018.

The studied Polish startups show the least need for specialist knowledge. It results from good availability to the services of incubators of entrepreneurship, industrial meetings, such as Aula, Startup Stage, Hive or OpenReaktor, but to the greatest extent the source of knowledge and network for the discussed entities is mentoring. Owing to individual mentors, entrepreneurs complete their specialist knowledge and have a possibility to reach a broader group of recipients. It is important from the point of view of newly-established entities, as almost every second one reports a need for business contacts and over the last years this trend stays on a similar level.

Almost a half of startups look for employees, which means a problem with the availability of qualified staff. The percentage of startups reporting this problem clearly increased last year, and it arises from the beneficial situation for employees on the Polish labour market (the employee market).

However, the biggest problem of the studied startups is all the time the need to win finances necessary to fulfil their economic goals. The development of activity, building a strong and stable brand requires proper financial means. The deficit in this regard hampers current activities and development. A characteristic feature in this respect is the fact of a need for different forms of capital depending on the lifecycle of a startup. Financing the core and investment activity is a key element translating into the possibilities of the growth of an enterprise. The pres-

ent-day economy offers numerous ways of winning necessary capital, but their availability depends on the lifecycle of the entity, its assets and capabilities of generating revenues (Kałowski & Wysocki, 2017, p. 189). Figure 9 presents a variety of the sources of financing depending on the stage on which the enterprise is.

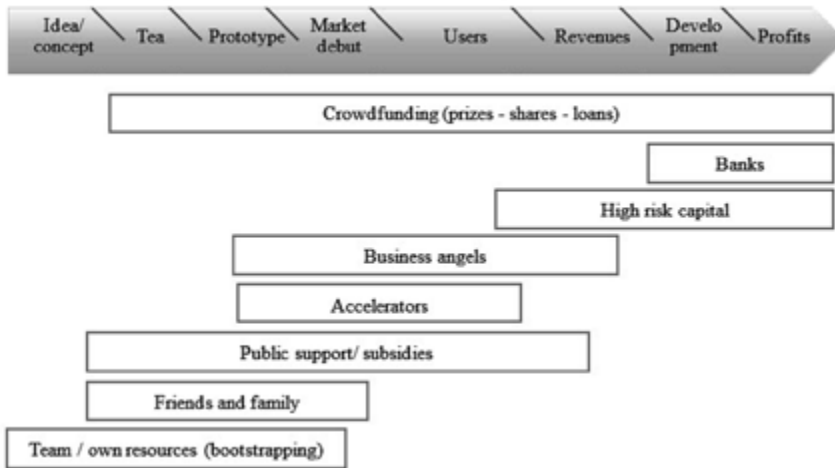


Figure 9. Sources of financing on different stages of the development of a startup

Source: (Højer Nielsen, 2018, p. 78).

In the first stages of development, a venture can be financed only by the founders' contribution, but with time costs which must be covered from profits arise and when those are not generated to a sufficient level, from own savings or foreign capitals. Family members and friends are often the first investors for startups, at the same time they have the smallest qualifications to make decisions as for risk and profits. They are not professional investors and they decide to support the initiative based on trust to the relative/friend (Højer Nielsen, 2018, pp. 78–79). A lot of startups used or use the support of the Polish Agency for Regional Development (Polska Agencja Rozwoju Regionalnego – PARP) which is the main operator of the European Union funds. In the years 2007–2013, PARP allocated 7 billion Euros, supporting over 1,000 startups. In the perspective of the years 2014–2020, the agency continues promoting entrepreneurship via different projects, among others: a starting platform for new ventures, programmes: Starter, Biznes, 4 Stock or Loan Fund for Innovations. The development of the Internet community has positively influenced the possibilities of supporting new initiatives, as well as the development of known sources of financing in a modern way. In this aspect special attention should be paid to crowdfunding. Much lower requirements and legal regulations enable an easier access to capital (Kałowski & Wysocki, 2017, pp. 194–195).

In the research Polish startups were analysed in respect of the level of their development. For this, the concept of the lifecycle of newly created enterprises was used, which is based on four stages of development, and which is used for the verification of the maturity of technological companies and more careful designing of the instruments of support. According to the criteria of this concept, in 2018 60% of the studied enterprises were on the *problem-solution fit* stage (formulation of the assumptions of the business model, creating a team) and the *solution-product* stage (intensive works on the product, prototyping, registering the activity, the first revenues or users). The first stages may not bring profits yet, but they undoubtedly build a potential of the future value of the entity. A startup must go through those stages to become a mature firm. One in four startups is in the *product-market fit* stage, that is it stabilizes sales, the users' base and works out the functioning business model. On the *scaling/expansion* stage, that is a fast increase in the number of customers, users or revenues, there were only 14% of startups. The present distribution of stages on which startup are is undoubtedly influenced by the date of the firm's registration. In 2018, 10% of enterprises were registered and 19% were only preparing to it. The same value was achieved by startups set up in 2014 and 2015. The highest percentage of entities, that is 38%, formally commenced their activity in the years 2016–2017 (Beauchamp et al., 2018, pp. 55–56).

Contrary to the noticeable recovery on the investment market, the number of investors choosing self-financing of the business fluctuates above 50%. In comparison with 2016 in the last two years bootstrapping and 3×F financing (friends, family & fools) have become popular. Figure 10 presents the sources of financing which were used most often by startups in the years 2016–2018.

The owners of startups who decide to use external sources of financing willingly take advantage of help of the Polish Agency for Enterprise Development (Polska Agencja Rozwoju Przedsiębiorczości – PARP) and the National Centre for Research and Development (Narodowe Centrum Badań i Rozwoju – NCBR). They are governmental agencies which, among numerous tasks, implement programmes of the development of the economy, support innovative and research activities, as well as regional development. Funds of the venture capital (VC) type enjoy similar popularity. As it can be seen in Figure 10, in 2017 almost twice as many entities used VC than in the previous year. However, in the following year the number of such entities decreased slightly. Similar changes in the choice of the sources of financing can be noticed when analysing the number of enterprises which obtained help from business angels in the discussed years. From 2016 to 2017 almost twofold growth of this value was marked, but in 2018 there was its weakening. The situation may mean that the investment motivation of VC private capital and business angels is exhausting although these are funds on which the highest percentage of startups taking part in the research counts.

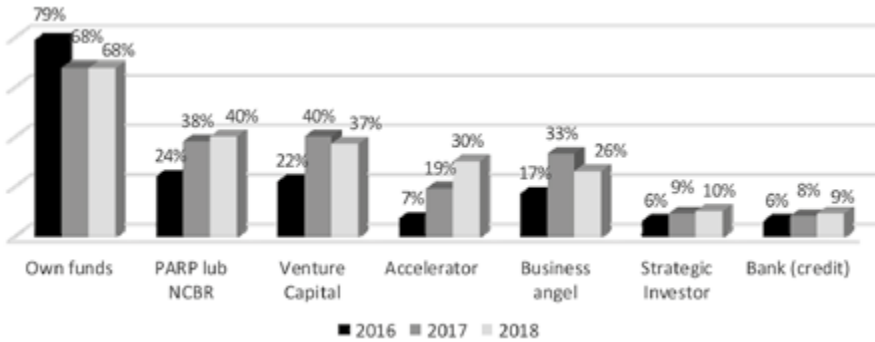


Figure 10. Sources of financing of startups in Poland

Source: own study based on reports of the Startup Poland Foundation from the years 2016–2018.

The year 2017 turned out to be very fruitful for the cooperation between entrepreneurs and accelerators. They have become the source of capital for almost every fifth startup. It was related to the Scals Up programme launched by PARP, which based the acceleration of young enterprises on public-private partnership. This rapid growth trend also maintained in 2018.

To the least extent, the source of capital for young entities are still funds of strategic industry investors and bank credits. However, from year to year we can notice a slight increase in financing from those sources.

External sources of finance which are going to win startups in the nearest future are presented in Figure 11.

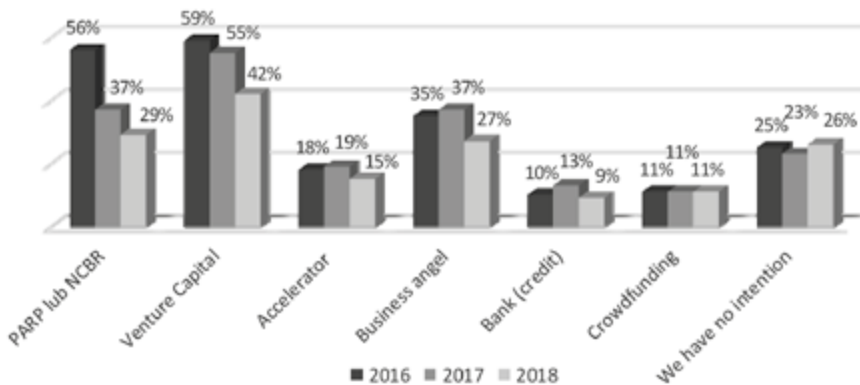


Figure 11. External sources of capital which Polish startups are going to win in the nearest future

Source: own study based on reports of the Startup Poland Foundation from the years 2016–2018.

When analysing the data from Figure 11, in the years 2016–2018 25% of all startups did not intend to win external sources of financing in the short term.

Entrepreneurs are going to take advantage of the support of leading institutions with less and less enthusiasm, but they keep placing hope in crowdfunding.

4. Conclusion

In the contemporary, dynamic environment and knowledge-based economy there is no possibility to ensure permanent and sustainable development without the existence of innovative, fast developing and flexible enterprises. A startup is a business entity inscribing into these conditionings. A startup is a modern and more and more popular form of conducting activity, which is considered a perfect solution for young, ambitious, creative, full of ideas people who want to commercialise their intentions and visions and those who want to try their hand in running a business and gain new skills.

The cited and commented research into Polish startups conducted by the Polish Development Fund confirms empirically the truthfulness of definitions, features and characteristics based on the literature of the subject. In its course it was found up that: the majority of Polish startups conduct their activity in Warsaw; the most frequently indicated form of conducting activity is a sole trader or a limited liability company; the founders and managers of startups are young people, usually aged 20–39; the majority of Polish startups are new entities, set up after 2015; a considerable part of Polish startups operate according to the B2B model; the majority of Polish startups are financed from their own funds exclusively; startups in Poland willingly use non-financial sources of support offered to them, aiming at raising their level of intellectual capital; with regard to needs for funds, Polish startups most often indicate financial capital; Polish startups give jobs and look for new employees who they are eager to finance from funds won from external investors.

Regardless of different opinions on the existence and functioning of startups in the contemporary economic area, their number among newly-set up and young business entities is growing dynamically. As small, modern, flexible and fast-developing they exert a considerable impact on the economic environment, create jobs and the seed for future larger and significant enterprises. The most important value of running a startup for its founders is self-employment, practical experience, learning on their own mistakes and networking. With time, it all turns into a considerable value and opens the way to subsequent, newly-established entities in Poland and abroad.

Bibliography

1. Beauchamp, M., Krysztofiak-Szopa, J., & Skala, A. (2018). *Polskie startupy. Raport 2018*. Warszawa: Startup Poland Foundation.

2. Blank, S., & Dorf, B. (2013). *Podręcznik startupu: budowa wielkiej firmy krok po kroku*. Gliwice: Wydawnictwo Helion.
3. Brągiel, E., & Dykiel, M. (2016). Rola mikroprzedsiębiorstw na regionalnym rynku pracy. *Przedsiębiorstwo i Region*, (8), 22–32.
4. Cmela, P.R., & Płatek, A., (Eds.). (2019). *Działalność przedsiębiorstw o liczbie pracujących do 9 osób w 2017 r.* Warszawa: Central Statistical Office.
5. Drewniak, R., Goździewska-Nowicka, A., Posadzińska, I., & Voss, G. (2017). *Uwarunkowania działalności małych i średnich przedsiębiorstw: przywództwo, marketing, budżet*. Warszawa: CeDeWu.
6. Guillebeau, C. (2013). *Niskobudżetowy startup: zyskowny biznes i życie bez frustracji*. Gliwice: Wydawnictwo Helion.
7. Højer Nielsen, N. (2018). *Finansowanie startupów: poradnik przedsiębiorcy*. Gliwice: Wydawnictwo Helion.
8. Kałowski, A., & Wysocki, J. (Eds.) (2017). *Start-up a uwarunkowania sukcesu: wymiar teoretyczno-praktyczny*. Warszawa: Oficyna Wydawnicza Szkoły Głównej Handlowej.
9. Lachiewicz, S. (2003). *Małe firmy w regionie łódzkim*. Łódź: Wydawnictwo Politechniki Łódzkiej.
10. Onak-Szczepanik, B. (2006). Miejsce i rola sektora małych i średnich przedsiębiorstw w gospodarce Polski. *Nierówności Społeczne a Wzrost Gospodarczy*, (nr 9 Problemy globalizacji i regionalizacji. Cz. 2), 613–626.
11. Piasecki, B. (1998). *Przedsiębiorczość i mała firma, teoria i praktyka*. Łódź: Wydawnictwo Uniwersytetu Łódzkiego.
12. *Raport: Polskie startupy*. (2016, 2017, 2018). Warszawa: Polish Development Fund. Retrieved od 29/05/2019, from: www.startup.pfr.pl/pl/aktualnosci/wyniki-raporu-polskie-startupy.
13. Ries, E. (2011). *The Lean Startup*. Londyn: Viking.
14. Skowronek-Mielczarek, A. (2002). *Źródła finansowania małych i średnich przedsiębiorstw w Polsce*. Warszawa: Oficyna Wydawnicza Szkoły Głównej Handlowej.
15. Steinerowska-Streb, I. (2017). *Zachowania rynkowe mikro-, małych i średnich przedsiębiorstw w Polsce: diagnoza, analiza, scenariusze rozwoju*. Warszawa: C.H. Beck.
16. Sztando, A. (2008). Progospodarczy obszar polityki edukacyjnej władz lokalnych. [in:] M. Malicki (Ed.), *Problemy rozwoju polityki regionalnej i lokalnej w Polsce. Zadania, uwarunkowania, dylematy rozwoju regionów*. Szczecin: Economicus.
17. Tarnawa, A., & Skowrońska, A. (Eds.) (2018). *Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce*. Warszawa: Polish Agency for Regional Development.
18. The Act of 6 March 2018 – Entrepreneurs’ Law Act (Journal of Laws of 2018, item 646).
19. Ziemia, M., & Świeszczak, K. (2013). Bariery rozwoju podmiotów z sektora MSP – ze szczególnym uwzględnieniem możliwości pozyskania kapitału obcego. *Zeszyty Naukowe Uniwersytetu Szczecińskiego*, 64(1), 491–499.

Innovative Tourism Startups: an Explorative Analysis

Tindara Abbate, Patrizia Accordino, Raffaella Coppolino,
Elvira Tiziana La Rocca, Daniela Rupo

1. Introduction

Over the previous decades, the expansion of Internet and related digital technologies has strongly revolutionized the directions for the value creation of organizations and, in general, of the whole ecosystem (Moore, 1993), by determining several business opportunities (Amit & Zott, 2001) and inevitable threats related to the volatility and unpredictable nature of technology (Trimi & Berbegal-Mirabent, 2012). Indeed, digital technologies have the potential of generating an incredible new wealth, commonly through entrepreneurial start-ups and corporate ventures (Amit & Zott, 2001). However, the digital revolution has mainly imposed the definition of new business models to create, delivery and capture value (Zott et al., 2011), by addressing customer needs, providing new products and solutions to innovation problems and transforming the rules of competition for established businesses and new ventures in unusual ways (Osterwalder et al., 2005; Teece, 2010; Zott et al., 2011; Massa et al., 2016; Foss & Saebi, 2018). This digital vortex has involved a large set of industries and contexts in its continuous movement toward a “digital center” in which business models are strongly digitized (Bradley et al., 2015). On the other hand, the development of ways dedicated to the value creation, delivery and appropriation has provided potential spaces for the definition and implementation of unconventional exchange mechanisms and transaction architectures (Amit & Zott, 2001) and, consequently, increased the opportunities of designing new boundary-spanning organizational forms (Zott et al., 2011). Specifically, these developments have revealed different horizons for the design and experimentation of e-business models (Osterwalder & Pigneur, 2003) by fostering firms to change fundamentally the way they organize and participate in economic exchanges, both within and across firm and industry boundaries in the context of highly interconnected electronic markets (de Reuver et al., 2007).

Although the management literature is increasingly focused on the e-business models, alternately using the definitions “Internet business models” or “business model for the web” (Osterwalder & Pigneur, 2003), it is necessary to underline that the different contributions show several aspects of the business logic of a firm characterized by ICT-driven innovations, without rendering an accepted definition for the concept of the e-business model itself. Therefore, it is also rapidly growing, by suggesting that the e-business model is an important phenomenon that needs to be conceptualized and empirically investigated. This gap represents an excellent opportunity for investigating the conceptual foundations of e-business models, considering that the mentioned ambiguity “is particularly troublesome for innovation-based startups, and in other contexts – such as the debut of a radically new innovation – where a business model must be designed from the ground up” (García-Gutiérrez & Martínez-Borreguero, 2016).

With this in mind, the paper intends to analyze the e-business model of digital firms to identify distinctive elements related to the application of innovative digital technologies without neglecting recent developments linked with legal factors as the rules on fair competition and taxation.

The research question is the following: *to what extent the e-business model supports the innovative way to compete in a real context?*

To achieve the objective of this study, we perform an explorative qualitative analysis based on a single case study, represented by an innovative digital firm operating also in the Italian travel industry. The previous choice is supported by various reasons. Firstly, in the travel industry, there are several examples of innovative firms that have shaped business logic that cannot be understood according to existing types of business models. Secondly, the e-business models of innovative startups can be more disruptive than those of incumbents, who can mainly make incremental changes just to realize options related to the new digital technologies, tools, and platforms. Indeed, innovative startups develop and implement a set of activities, which differ substantially from those of a well-established company.

Several contributions are provided to the research focused on the innovation of the business models stimulated by the use of digital technologies and platforms that strongly change the relationship between firms and customers. Additionally, insights are added to the literature on the startups, by underlining the peculiarities of their business model configurations.

The chapter is organized as follow. Section 2 includes a concise overview of e-business model literature, followed by the analysis of principal components used in this paper. Section 3 describes some methodological aspects concerning the research context, the selected case study, research design, and data collection. Section 4 contains the results and discussions of this study. Theoretical and managerial implications, limitations and further research directions are developed in Section 5.

2. Literature background

A business model concerns how firms earn money by addressing two fundamental issues: how they identify and create value for customers and how they capture some of this value as their profit in the process (Casadesus-Masanell & Ricart, 2010; Teece, 2010; George & Bock, 2011; Zott et al., 2011; Foss & Saebi, 2017). It describes the logic of firms, the way they operate and how they create value for their stakeholders (MacMillan et al., 2008). Creating and capturing value reflect two relevant functions that all organizations have to perform to survive over an extended period of time. Firstly, successful organizations “create substantial value by doing things in ways that differentiate them from the competition” (Shafer et al., 2005) and developing core competencies, capabilities, and positional advantages that are different from their competitors. Secondly, organizations have to earn money to survive; therefore, “their viability is tied both to the value they create and to the way they capture the value and resultantly generate profit” (Shafer et al., 2005). However, value creation and capture occur within a value network, which can consider partners, distribution channels, suppliers and coalitions that extend the company’s resources (Hamel, 2002). The role a firm plays within its value network is an important element of its business model.

In the context of Information Technology (IT), the term e-business model means “doing business electronically” (Zott et al., 2011), by encompassing e-markets, e-commerce and Internet-based business (Afuah & Tucci, 2001) and referring to firms that conduct transactions with their business partners and buyers over the Internet. In this respect, Shapiro and Varian (1999) propose that e-business value creation can result from combinations of information, physical products and services, innovative configurations of transactions, and the reconfiguration and integration of resources, capabilities, roles, and relationships among suppliers, partners, and customers.

Nevertheless, the research on e-business models can be systematized around two complementary streams: the former is oriented to describe generic e-business models and provide typologies; the latter examines the components of e-business models (Zott et al., 2011). Several studies suggest to decompose the business models in their “atomic elements”, which describe a different way of conducting business electronically; in particular, e-business initiatives can be exemplified by pure atomic business models or by combining them (Hamel, 2000; Afuah & Tucci, 2001; Petrovic et al., 2001; Rayport & Jaworski, 2001; Weill & Vitale, 2001). Applegate (2001) presents six e-business models focused on distributors, portals, infrastructure distributors, infrastructure producers, and infrastructure portals. Dubosson-Torbay et al. (2002) recognize the principal dimensions for classifying

business models: user's role, interaction pattern, nature of the offering, pricing system, level of customization, and economic control.

Additionally, scholars have deepened the principal components of the e-business models, by providing different representations (i.e., a mixture of informal textual, verbal, and ad hoc graphical representations) or schemas for the analysis of (new) ways of doing business and the (new) roles that firms play in their respective ecosystems. In particular, they mainly pay attention to the notion of value (e.g., value stream, customer value, value proposition), financial aspects (e.g., revenue streams, cost structures), and aspects related to the architecture of the network between the firm and its exchange partners (e.g., delivery channels, network relationships, logistical streams, infrastructure). Each of these components can constitute part of a generic business model, and "it could be a source of differentiation among business model types" (Zott et al., 2011).

In this respect, this study considers the contribution of Osterwalder and Pigneur (2003) that provides a business model "ontology", which is a conceptualization of the elements and their relationships, vocabulary, and semantics of a business model, by allowing to express the business logic of a specific firm. In particular, this ontology is broken down into four pillars that describe "what a company offers, who it targets with this, how this can be realized and how much can be earned by doing it" (Osterwalder & Pigneur, 2003). These pillars can be translated into four business model blocks: 1) product innovation block, which considers the value proposition of firms; 2) customer relationship block, which describes how firms get in touch with their customers and what kind of relationships they intend to establish with them; 3) infrastructure management block, which considers what activities, resources and partners are necessary to provide the first two blocks, and finally 4) financial aspects concerning the revenue flows and the pricing mechanisms of firms.

Table 1. The four pillars

Four Pillars	Components
Product innovation	Value Proposition Capabilities
Customer Relationships	Target Customer Distribution channels Customer Equity and Relationships
Infrastructure Management	Resources/Assets Activities and Processes Partner Network
Financial Aspects	Revenue Cost Profit

Source: (Osterwalder & Pigneur, 2003).

3. Design and methodology

In this section, we present the research context, focused on innovative startups with opportunities and threats they are facing in the European context. Then, we examine the selected case study, by explaining startup key factors, research design, and data collection.

3.1. Research context

Startups' development has received much attention from both the academic and business community. Several contributions define the term "startup" deepening the difference between startups and traditional businesses (Covin & Slevin, 1991; Baum et al., 2001; Kelley et al., 2010). Among others, it is very interesting the startup definition such as "the desire to explore a business opportunity instead of a force of economic necessity that drives the desire to start a business" (Australian Innovation System Report, 2015). Startup concerns not just the firm's early stage, but a business with a high potential for growth and development. In this phenomenon, especially, innovation represents an important factor (OECD 2010).

Unlike traditional businesses, startups can grow quickly, operating and dominating the industry at an international level, taking advantage of Internet opportunity. Many relevant inputs can be found online, including venture capital and partnerships (Kende, 2015).

Since 2010, startups present a significant development all over the world. In the USA, startups activity increased from 2014 to 2015 (Morelix et al., 2015). In Latin America, startups received great support from media, investors, and policymakers (OECD 2015b). In India, startups increased from 3100 in 2004 to around 11,500 in 2010 (Grant Thornton, 2016). European Union introduced several programs to support startups establishment (OECD, 2010): equipping entrepreneurs with digital skills; modernizing copyright laws and policies; reducing time and cost required to start a business, and simplifying startups procedure (European Startup Act¹).

Considering technologies and directions to create new products and services, a relevant form of the digital firm can be identified in digital technology startups, based on the Internet using the cloud, big data and other artificial intelligence (Giones & Brem, 2017). This form, having technology as an input factor, could rely on a variety of funding sources (Wallin et al., 2016).

Due to digital services, the modern global economy often could not capture business models achieving profit from digital services while a company can generally avoid the physical presence in a country and, consequently, the right taxation.

¹ See more at: <https://younginnovator.eu/european-startup-act-2020/>.

Therefore, the definition of “Permanent Establishment” marking the concept of significant economic presence could be relevant (Hongle & Pistone, 2015; Blum, 2015).

Last but not least, it is due to notice that article 101 of the Treaty on the Functioning of the European Union (TFEU) imposes a fair competition in the internal market, prohibiting anti-competitive actions and ensuring that markets remain open.

Recently, several proposals have been put forward in order to find a common solution appropriate to the taxation of firms operating in the digital economy. At the OECD level (OECD, 2015a), Action 1 of the OECD BEPS Project15 addresses three different options: defining the aforementioned concept of a “significant economic presence”, introducing withholding taxes on digital transactions or, equalization levies.

As a result, the European Commission has recently (EU COM, 2018) released long and short-term solutions regarding taxing multinational corporations that provide digital services. According to the long-term proposal, the Institution suggests the Member States adopting a uniform definition of a “Digital Permanent Establishment” with at least one of the following criteria:

- €7 million (\$8.1 million) in annual revenues;
- More than 100,000 users;
- More than 3,000 contracts for digital services with businesses in the EU.

The short-term digital tax proposal is the Digital Service Taxation, a turnover tax levied by individual countries at a rate of 3 percent on revenues derived from the selling of advertising space, digital intermediary activities like online marketplaces, and sales of user-collected data.

It would apply to companies with both:

- Total annual worldwide revenues of €750 million (\$868 million);
- Total EU revenues of €50 million (\$58 million).

Although these are only proposals, the new taxation approaches to the digital economy are in the tax agenda of several Member States: the 2019 Italian budget law (30/12/2018, no. 145) introduces a 3 percent digital service tax on revenues from digital services if the company has both more than €750 million (\$835 million) in worldwide revenue and revenues in Italy of €5.5 million (\$6.1 million). Nevertheless, to be charged the web tax needs an implementing decree of the Ministry of Economy that has not yet been issued.

Paying attention to the consequences of the attempt of avoiding fair competitions, the AGCM – Italian Competition Authority – has dealt with problems between e-business and traditional entrepreneurship.

In this context, a start-up grew, rapidly becoming competitive in service transport with its App and a digital firm with an innovative business model, very interesting to analyze. This phenomenon is the case that we will analyze below.

3.2. Research sample: MyTaxi

MyTaxi, the largest taxi app in Europe, was founded in June 2009 in Germany by the startup Intelligent Apps GmbH, initially under the name of 1TouchTaxi.

The idea of creating a direct connection between a licensed taxi driver and passenger, offering both a digital reservations' management system and a high-quality service, has been innovating an industry.

This direct connection “passenger – taxi driver” has been the main strength, in addition to another key component, that Mytaxi has been operating exclusively through licensed taxi drivers, thus ensuring consumers reliability, safety and a high standard of quality.

Traveling with MyTaxi is easier, faster, more convenient and efficient than traditional lines. Via the app, the customer can request or book a taxi, see it live on the digital map, contact the driver, rate the journey, pay for it with the smartphone, receiving the receipt as PDF in his email inbox.

Concerning the evolution of the company over time, the following table 2 shows the main stages of MyTaxi history.

MyTaxi's goal is to provide innovative and up-to-date services, able to continuously integrate new features, helping to create modern, safe and affordable urban mobility, using existing resources without adding other vehicles on the road. A recent study (CERTeT 2018)² on MyTaxi app, provides important input on strategic issues on which MyTaxi invests. According to this study, real benefits brought by e-hailing to mobility are the safety improvement, reliability, and transparency of the transport service. The survey shows that the introduction of e-hailing is able to generate a reduction in average waiting times between one run and another. The e-hailing platform use is very high compared to other call and booking methods, it also generates a change in the payment methods and increases the number of the trips, as it allows taxi drivers to intercept the demand more effectively. In addition, the survey investigated the issue of changing the relationship between the taxi driver and passenger, highlighting the perception of greater relaxation of customers with respect to the route and the price of the ride. Information and transparency regarding costs and the path provided

² In September 2018 MyTaxi presented the results of the study “Urban Mobility and Technology: the impact of e-hailing”, carried out by a research team of the Bocconi University CERTeT. The aim is to understand the influences and implications of e-hailing, that is the taxi call through application, in urban mobility, today increasingly complex and characterized by a growing demand for flexibility and services on demand. The study considered the numbers of mytaxi app in Milan and Rome, over a 12-month period, between October 2016 and September 2017, highlighting the differences between the two contexts with regard to seasonality, level of activity on weekdays and holidays and in and in the different time slots

through the e-hailing platform appear having a fundamental role in a relationship of trust between user and service provider. In light of these results, the continuous introduction of innovative service represents a crucial firm-specific factor. In this context, it fits MyTaxi *Match*, the first shared taxi service launched in Europe. This function allows customers to share a taxi ride with one or more foreign passengers who wish to climb along the route and proceed in the same direction. Travel expenses are cheaper for passengers, thus attracting new groups of financially weak customers, who previously barely used taxis.

Table 2. MyTaxi: main data and facts

Foundation	June 2009
Headquarter	Hamburg
Employees	over 500
Major shareholder	Daimler AG
App MyTaxi	Available for Apple iOS, Android, BlackBerry 10 and Windows Phone 7.x and 8.x, as well as a web app. User interface with the languages German, English, French and Spanish. Languages available for the web app: German and English.
Peculiarity	Internationality of MyTaxi, or the possibility of using the same app, with the same account, in most cities in European countries where the service is provided.
Main phases	
By July 2012	15,000 taxis connected in Germany download about 1.7 million times
In mid-2012	Integration of pre-order and mobile payment options
At CeBIT 2012	Award as "The most innovative business idea" among 50 international participants
At the beginning of 2012	Daimler joined as an investor
From September 2014	MyTaxi is a subsidiary of Daimler Mobility Services GmbH (part of the Daimler Group).
October 2014	available in over 40 cities in Germany, as well as internationally in Austria (Vienna, Graz, Salzburg), Switzerland (Zurich), Spain (Barcelona, Madrid), Poland (Warsaw) and the United States (Washington). Offer progressively extended to Australia (license), Italy, Portugal and Sweden by 2015.
May 2015	Innovation service: trips with MyTaxi drivers can be paid for with the app even if you didn't order the taxi through the app
July 2016	MyTaxi and Hailo, leading UK and Ireland app for taxi bookings, announced their merger
2017	Acquisition of CleverTaxi, leading taxi call app in Romania, and the acquisition of Taxibeat, leading market taxi app in Greece.
From December 2017	<i>Match service</i> , a new taxi sharing service that offers customers a more advantageous and efficient travel experience in pooling. Initially in Hamburg followed by other major cities such as Berlin or Munich.
2018	MyTaxi has been downloaded over 10 million times and provides its customers with a fleet of 120,000 licensed taxi drivers available in over 70 European cities in 11 European countries: Germany, Austria, Poland, Spain, Portugal, Italy, United Kingdom, Ireland, Sweden, Greece and Romania.
February 2019	Alliance Daimler AG (MyTaxi's majority shareholder) and BMW Group for combining their "existing offers in the areas of car-sharing, ride, parking, <i>recharge</i> and multimodality".
May 2019	<i>Hive</i> project in Lisbon, a shared transport version

Source: www.mytaxi.com.

Last October, the company launched a new version of the app that allows customers to choose different types of vehicles (for example Eco or those equipped with a wheelchair).

Recently MyTaxi launched in Lisbon a European pilot project called *Hive*, a shared transport version with hundreds of scooters distributed in various areas of the city. A type of transport also called “last mile” because drivers can park their cars where possible and travel the last stretch to get to their destination without having to walk or wait for public transport. Through an application downloaded to the mobile phone, customers can locate, book, unlock and pay the use time of scooters, which can be taken where they are and where they want to be in the municipal area. The areas of the city where this type of circulation is allowed appear on the display of the mobile phone. Hive attracts customers that are complementary to that of the current taxi call service, thus this service can be replicated also in other cities in Europe. Moreover, Hive confirms and enhances the “green” image of the company because the debut takes place in a country whose national electricity production comes from renewable sources, green, which satisfy 100% of the national electricity demand with a considerable surplus that comes.

Another relevant key factor is the process of acquisitions and alliances for building a synergic network of companies in order to combine and integrate complementary services.

It is possible to consider the merger with Hailo. MyTaxi became Europe’s largest cab hailing operator when its parent company Daimler³ absorbed UK platform Hailo, the leading UK and Ireland app for taxi bookings, active also in Spain, as well as in the United States. MyTaxi name and technique and Hailo offerings to be migrated to MyTaxi have been maintained. It has avoided many of Uber’s pitfalls by matching customers with registered drivers. When Hailo decided to join with MyTaxi, the goal was to become the dominant force in Europe through solid relationships with its drivers – something Uber cannot always boast about.

MyTaxi merging process with other European haulers continues (recent acquisitions include Romanian market leader Clever Taxi and Taxibeat the leading market taxi app in Greece) by relying on its trustworthy and cab-friendly reputation.

In February 2019, it was announced that the majority shareholder of MyTaxi, Daimler AG, would be allied with the BMW Group and that the two

³ Daimler is one of the biggest producers of premium cars and the world’s biggest manufacturer of commercial vehicles with a global reach. Daimler provides financing, leasing, fleet management, insurance and innovative mobility services.

would combine their “existing offers in the areas of car-sharing, ride, parking, re-charge and multimodality” under a common family of brands would have done. MyTaxi will be renamed “Free Now”⁴ this year to join the network of five new brands: Reach Now (Multimodal), Charge Now (Charging), Free Now (Ride-Hailing), Park Now (Parking) and Share Now (CarSharing). The app’s logo and appearance will also change. Therefore, the trips’ services will be expanded. For example, customers should also be offered rental cars with drivers (radio rental cars) with the app.

Regarding the firm performance, in 2018, MyTaxi in Italy has recorded a 110% sales growth and over 2 million rides. Relevant growth also at European level with over 40 million rides. The waiting time has dropped to 3.5 minutes thanks to a wide fleet of licensed taxi drivers. With a record-breaking 2018, MyTaxi aims to improve further thanks to new investments.

3.3. Research design and data collection

The choice of the case study and this “App”, in particular, is twofold. Firstly, it is to explore the phenomenon of innovative startups in a sector, both at a surface and in a deep level in order to understand this „contemporary phenomenon within its real-life context” (Yin, 1984). Secondly, it concerns the need to carry out a pilot study that can open up the door for further steps of our research, in the attempt to highlight similarities and differences among e-business models of homogeneous firm and identify emerging peculiarities in this field (Eisenhardt & Graebner, 2007).

We collect data concerning MyTaxi in order to explore the innovative activity in a context that faces peculiar challenges such as sustainability, diversity of laws and rules among nations, increasing of expertise of customer that fosters ever-changing needs. For this purpose, two main steps have been performed. In the first step, we examined the website and the App in order to analyze its main characteristics, trying to identify the peculiarity of the App and the business model of this firm. In a second step, we proceeded to analyze online materials, official documents, reports, scientific contributions (Kozinets, 2002), available online and concerning the start-up under investigation. Not neglecting new “scenarios” deriving from issuing rules concerning the relevant factors as the new rules on taxation of the web digital platform transaction and the problems connected with fair competition.

⁴ However, in UK this rebranding has caused some criticism because this will be the second rebranding in two years for the popular taxi app. Just when customers start to get used to referring to Hailo as MyTaxi, they have decided to change the name and rebrand yet again (Kelly, 2019).

The integrity of data was guaranteed in different ways. Firstly, the multiple sources were triangulated to improve the robustness of findings. Secondly, each researcher independently read the amount of data and information collected. Then, researchers discussed intensively their interpretations with the main purpose to reach a common agreement about their inferences by activating a necessary process of interaction between theoretical concepts and collected data.

4. Findings and discussions

In the contest just outlined, the startup under investigation is exponentially growing riding (and maybe driving) the wave of the phenomenon of e-hailing, or the call of taxis through the app, that is gaining ground even in the tourist sector and the potentiality to become a driver of change in travel approach is very high due to the reduction of waiting times, the new ways of booking and paying.

Starting from the idea of speeding up and, at the same time, customizing the driver/customer relationship, MyTaxi has expanded its range of action becoming highly competitive in a sector characterized by the presence of very stringent constraints.

From our desk analysis, we have identified several critical success factors briefly described here above (Fig. 1), highlighting each “pillar” it seems to be involved.

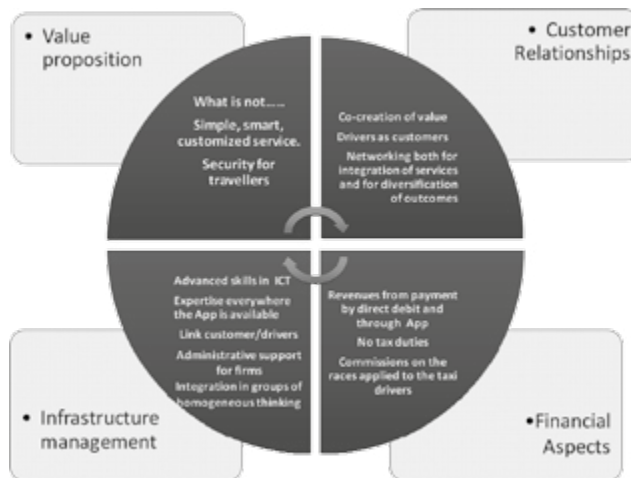


Figure 1. MyTaxi critical success factors

Source: own work.

MyTaxi brings together selected individual drivers and connects them to customers, facilitating and speeding up access to the service and payment through a user-friendly app and personalizes booking and payment formula both

in B2C and in B2B version. In B2C customers book-check-pay, using the App, saving time and increasing security (only licensed driver); while in B2B drivers can create/expand their customers' portfolio and firms getting the service (even for hospitality), saving time, reducing costs and accounting times, simply accessing Europe's largest taxi network. Moreover, for firms there is administrative support in travel accounting, i.e. the opportunity for companies to connect MyTaxi with their SAP account (but administrative support is also provided for those without SAP), streamlining the accounting procedures. Furthermore, the service "Hospitality" gives firms the opportunity to book for guests by pressing a single button of the modern MyTaxi or with the app.

MyTaxi is often defined with a negation: is not a taxi company, is not another Uber, is not a car rental with driver. MyTaxi is a service to make easier, personalized and faster travel experience for individual and for business purposes. In this context, ICT supported the direct customer/taxi driver relationship through the app: customers can book their service, traveling without having to think about "pulling out the wallet" and being able to check the itinerary of the taxi arriving by geolocation.

International distribution of the app is facilitated by its way of functioning: the same everywhere MyTaxi is operating, even if services seem to change on the basis of the pervasiveness of the app as well as law constraints and the culture of travelers. A significant example is what is happening in Lisbon, where users can easily use the App to find, unlock and pay for the use of scooters, enjoy their experience and block them once they reach their destination. The attention to the competitive arena and the specific local areas where MyTaxi operates is underlined by its polycentric staffing approach. For example, law experts and other key-positions for local growing (i.e. taxi drivers) seem to be enrolled only from the local country since the calls-for-job in the platform are in the language of the local while others calls are in English.

This firm seems to work to build collaborative networking both for the integration of services, for example, Trenitalia and for diversification of outcomes, or for the facilitation in travel accounting for firms. At the same time, it seems to move towards integration within groups of homogeneous thinking, i.e. FreeNow. Moreover, the payment by direct debit (Gpay credit card and similar pay tools) facilitates the travel experience.

From the local point of view, as just underlined, MyTaxi has a proactive approach and continuously interact with the local institutions to improve its competitiveness. In Italy, an interesting example is the AGCM resolution. In fact, the Antitrust Italian authority has established that the restrictive clauses of the exclusiveness of the big companies of Rome and Milan are "restrictive of competition in violation of Article 101 of the TFEU", so even taxi drivers already engaged

with other companies can register with MyTaxi and have their own customers. Consequently, MyTaxi will be able to enrich its offer by acquiring taxi drivers already engaged in other companies as partners, thus becoming more competitive in the Italian context. But this case is also an example of how important is continuous monitoring of external environment by the firm: new rules concerning the web tax on transaction could, in fact, distort the positive outcomes and the AGCM solutions could follow a different and less liberal vision.

In brief, this study highlights how digital business models seem to modify the roles of the individual actors in the competitive system and MyTaxi is a significant example of that.

On one hand, drivers and customers become multi-role stakeholders who are directly involved in the creation of value by customizing the service. On the other hand, the developers of solutions, the programs and process owners responsible for the service are embedded in the organizational system.

Another relevant factor is the choice of a polycentric staffing approach and the continuous monitoring of the environments where the firm is working both for facing the different rules that could affect the e-business model and for push innovation of services.

5. Conclusion

The current research contributes to the existing literature focused on the areas of e-business model and innovative startup. Firstly, the study advances the understanding of the e-business model concept, which is now attracting an increasing interest by scholars and practitioners as an important potentially competitive tool of future value in the new economy era. In particular, this research investigates the components of e-business model of innovative startups, by underlining the critical success components for creating, delivering and capturing value for firms and their stakeholders. Furthermore, while previous works have mainly emphasized the relevance to define and implement e-business model concept in sectors characterized by an high-propensity in innovation, the study examines the e-business model in the travel industry, scarcely investigated in management literature even if nowadays travel firms base and organize their business on the Internet technologies and platforms.

The findings have straightforward several managerial implications. In particular, the study reveals that the e-business model concept can be an adequate methodology and foundation for managerial tools by allowing to face the increasingly dynamic business environment. Additionally, managers have to understand the new opportunities offered by advanced Internet technologies and, consequently, use them for the development of their business models. Then, by

moving from the various underlined components, they should be able to differentiate their e-business model from the competition and take advantage of their core competencies.

Moreover, with a view on the new European strategies to achieve income from web-platform transactions, it is clear that entrepreneurs interested in new technologies have to consider Member States' new rules recently issued in order to avoid the limitations deriving but also to respect tax obligations and the rules on fair competition. The previous assumption should also influence the legislator in order to suggest avoiding restrictions imposed on innovative enterprises without considering their positive outcomes and the growth of the business ecosystem.

This research is not out of limitations, which may represent interesting opportunities for future research. First, the study is based on a single case study, therefore, it is impossible to generalize the findings. In this respect, an explorative qualitative analysis, based on different cases of innovative startups, could be useful to compare their e-business models and to obtain several insights for the step of quantitative analysis. Additionally, large quantitative data could be collected to empirically test the results of this study.

Bibliography

1. Afuah, A., & Tucci, C.L. (2001). *Internet Business Models and Strategies*. Boston: McGraw-Hill, Irwin.
2. Amit, R., & Zott, C. (2001). Value Creation in e-Business. *Strategic Management Journal*, 22(6/7), 493–520.
3. Applegate, L.M. (2001). E-business Models: Making Sense of the Internet Business Landscape. [in:] G.W. Dickson & G. DeSanctis (Eds.), *Information Technology and the Future Enterprise: New models for managers* Prentice Hall. USA: Upper Saddle River.
4. *Australian Innovation System Report* (2015). Retrieved on 30/04/2019, from: www.industry.gov.au/innovationreport.
5. Baum, J.R., Locke, E.A., & Smith, K.G. (2001). A Multidimensional Model of Venture Growth. *Academy of Management Journal*, 44(2), 292–303.
6. Blum, D. W. (2015). Permanent Establishments and Action 1 on the Digital Economy of the OECD Base Erosion and Profit Shifting Initiative – The Nexus Criterion Redefined?. *Bulletin for International Taxation*, 69(6–7), 318.
7. Bradley, J., Loucks, J., Macaulay, J., Noronha, A., & Wade M. (2015). *Digital Vortex How Digital Disruption Is Redefining Industries*. Global Center for Digital Business Transformation. Retrieved on 30/04/2019, from: <https://www.cisco.com/c/dam/en/us/solutions/collateral/industry-solutions/digital-vortex-report.pdf>.
8. Casadesus-Masanell, R., & Ricart, J.E. (2010). From Strategy to Business Models and onto Tactics. *Long Range Planning*, 43(2–3), 195–215.
9. Covin, J.G., & Slevin, D.P. (1991). A Conceptual Model of Entrepreneurship as Firm Behavior. *Entrepreneurship Theory and Practice*, 16(1), 7–26.

10. De Reuver, M., Bouwman, H., & MacInnes, I. (2007). What Drives Business Model Dynamics? A Case Survey. *Eighth World Congress on the Management of eBusiness 2007 (WCM&B 2007)*, 11–13 July.
11. Dubosson-Torbay, M., Osterwalder, A., & Pigneur, Y. (2002). E-business Model Design, Classification, and Measurements. *Thunderbird International Business Review*, 44(1), 5–23.
12. Eisenhardt, K.M., & Graebner, M.E. (2007). Theory Building from Cases: Opportunities and Challenges. *Academy of Management Journal*, 50(1), 25–32.
13. EU COM (2018). Proposal for a COUNCIL DIRECTIVE laying down rules relating to the corporate taxation of a significant digital presence Brussels, 21.3.2018, 147 final 2018/0072 (CNS). Retrieved on 30/04/2019, from: https://ec.europa.eu/taxation_customs/business/company-tax/fair-taxation-digital-economy_en .
14. Foss, N.J., & Saebi, T. (2017). Fifteen Years of Research on Business Model Innovation: How Far Have we Come, and Where Should We Go?. *Journal of Management*, 43(1), 200–227.
15. Foss, N.J., & Saebi, T. (2018). Business Models and Business Model Innovation: Between Wicked and Paradigmatic Problems. *Long Range Planning*, 51, 9–21.
16. García-Gutiérrez, I. & Martínez-Borreguero, F.J. (2016). The Innovation Pivot Framework. Fostering Business Model Innovation in Startups. *Research Technology Management*, 59(5), 48–56.
17. George, G., & Bock, A.J. (2011). The Business Model in Practice and its Implications for Entrepreneurship Research. *Entrepreneurship Theory and Practice*, 35(1), 83–111.
18. Giones, F., & Brem, A. (2017). Digital Technology Entrepreneurship: a Definition and Research Agenda. *Technology Innovation Management Review*, 7(5), 44–51.
19. Grant Thornton (2016). Grant Thornton India Tracker 2016. India meets Britain. Retrieved on 30/04/2019, from: <https://www.grantthornton.co.uk/globalassets/1.-member-firms/united-kingdom/pdf/publication/2016/india-meets-britain-2016-report.pdf>.
20. Hamel, G. (2000). *Leading the Revolution*. Boston: Harvard Business School Press.
21. Hamel, G. (2002). *Leading the Revolution: How to Thrive in Turbulent Times by Making Innovation a Way of Life*. Boston, MA: Harvard Business School Press.
22. Hongle, P., & Pistone, P. (2015). *Blueprints for a New PE Nexus to Tax Business Income in the Era of the Digital Economy*. White Papers IBFD. Retrieved on 30/04/2019, from: <http://www.ibfd.org/sites/ibfd.org/files/>.
23. Kelley, D., Bosma, N., & Amoros, J.E. (2010). *Global Entrepreneurship Monitor – 2010 Global Report*. Retrieved on 30/04/2019, from: www.gemconsortium.org.
24. Kende, M. (2015). *ICTs for Inclusive Growth: E-entrepreneurship on the Open Internet*. The Global Information Technology Report. Retrieved on 30/04/2019, from: http://www3.weforum.org/docs/WEF_GITR2015.pdf.
25. Kozinets, R.V. (2002). The Field Behind the Screen: Using Netnography for Marketing Research in Online Communities. *Journal of Marketing Research*, 39(1), 61–72.
26. Massa, L., Tucci, C., & Afuah, A. (2017). A Critical Assessment of Business Model Research. *Academy of Management Annals*, 11(1), 73–104.

27. Moore, J.F. (1993). Predators and Prey: a New Ecology of Competition. *Harvard Business Review*, 71(3), 75–86.
28. Morelix, A., Fairlie, R.W., Russell, J., & Reedy, E.J. (2015). *Kauffman Index of Startup Activity*. SSRN. Retrieved on 30/04/2019, from: <https://ssrn.com/abstract=2613479>.
29. OECD (2010). High-growth Enterprises: What Government Can Do to Make a Difference. [in:] *OECD studies on SMEs and Entrepreneurship*. Paris: OECD Publishing.
30. OECD (2015a). *Addressing the Tax Challenges of the Digital Economy, Action 1 – 2015 Final Report, OECD/G20 Base Erosion and Profit Shifting Project*. Paris: OECD Publishing. Retrieved on 30/04/2019, from: <http://dx.doi.org/10.1787/9789264241046-en>.
31. OECD (2015b). Startup Latin America: Building an innovative future. [in:] *Preliminary Report*. OECD Development Centre. Paris: OECD Publishing.
32. Osterwalder, A., & Pigneur, Y. (2003). Modeling Value Propositions in e-Business. *ICEC '03 Proceedings of the 5th International Conference on Electronic Commerce*.
33. Osterwalder, A., Pigneur, Y., & Tucci, C.L. (2005). Clarifying Business Models: Origins, Present, and Future of the Concept. *Communications of the Association for Information Systems*, 16(1), 1–25.
34. Petrovic, O., Kittl, C., & Teksten, R.D. (2001). Developing Business Models for eBusiness. *International Conference on Electronic Commerce 2001*, Vienna.
35. Rayport, J.F., & Jaworski, B.J. (2001). *Cases in E-Commerce*. Boston: McGraw-Hill/Irwin.
36. Shafer, S.M., Smitha H.J., & Linder, J.C. (2005). The Power of Business Models. *Business Horizons*, 48, 199–207.
37. Shapiro, C., & Varian, H.R. (1999). *Information Rules: A Strategic Guide to the Network Economy*. Boston, MA: Harvard Business School Press.
38. Teece, D.J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning*, 43(2–3), 172–194.
39. Trimi, S., & Berbegal-Mirabent, J. (2012). Business Model Innovation in Entrepreneurship. *International Entrepreneurship Management Journal*, 8, 449–465.
40. Wallin, A., Still, K., & Henttonen, K. (2016). Entrepreneurial Growth Ambitions: the Case of Finnish Technology Startups. *Technology Innovation Management Review*, 6(10), 5–16.
41. Weill, P., & Vitale, M.R. (2001). *Place to Space. Migrating to eBusiness Models*. Boston: Harvard Business School Press.
42. Yin, R.K., (1984). *Case Study Research: Design and Methods*. Beverly Hills, Calif: Sage Publications.
43. Zott, C., Amit, R., & Massa, L. (2011). The Business Model: Recent Developments and Future Research. *Journal of Management*, 37(4), 1019–1042.

PART III TRANSFORMATIONS AND DEVELOPMENT
IN THE FACE OF CHANGES

Contribution of Competition Policy to Economic Development – Example of Former Transition Economies

Milan Kostić, Dragomir Dimitrijević, Nenad Janković

1. Introduction

Healthy competition is the basis of economic and wider social progress, therefore every modern state protects and encourages it. By ensuring healthy competition, a state provides the opportunity of choice to consumers and protects them from possible activities that could reduce their, but also wider social welfare, striving thereby not to limit companies' development potential. The basic instrument that every modern state uses to preserve healthy competition is competition policy (anti-monopoly policy).

In fostering healthy competition as a driver of economic growth, competition policy has a special role. The only question is what is the real contribution of the policy to economic growth? The aim of the paper is to answer the question on a sample of fourteen countries of Central, Eastern, and Southeastern Europe that completed or are completing the transition process. In accordance with the set aim, the paper consists of five interconnected parts. After introductory considerations, in the second part of the paper, the theoretical basis of the problem area was analyzed, with particular reference to the link between competition policy and economic growth. The basics of the research with methodology applied were examined in the third part of the paper, while the fourth part presents research results with discussion. The conclusions with recommendations for decision makers and competition authorities are presented in the last part of the paper.

2. Competition policy and economic growth – theoretical view

Competition policy is not easy to define. One of the generally accepted definitions is: Competition policy is a set of policies and laws which ensure that competition in the marketplace is not restricted in such a way that is detrimental

to society. By studying the concept of competition policy, it is necessary to determine the damage that the restriction of competition brings with it. The damage is expressed through the reduction of economic welfare, therefore competition policy is often defined as the set of policies and laws which ensure that competition in the marketplace is not restricted in such a way as to reduce economic welfare (Motta, 2008).

Competition policy aims to promote effective competition and eliminate the abuse of market power. It is assumed that the policy is constantly seeking to increase efficiency, promote innovation, and improve the possibility of choice by producers and consumers (Lipczynski, Wilson & Goddard, 2009).

When it comes to competition policy, it is largely influenced by a number of economic, political, social, and historical factors and, as such, it must meet certain goals. In particular, economic goals that include ensuring and preservation of good conditions of competition through: 1) eliminating voluntary activities of economic entities that affect the weakening of competition, and 2) improving the conditions of competition, while respecting natural limitations (Stojanović, 2003).

In contemporary industrial organization, the prevailing view is that economic efficiency should be the main objective of competition policy. Economic efficiency is often observed and assessed through three mutually compatible concepts of efficiency: allocative, productive, and dynamic efficiency. In relation to the three concepts of efficiency, the scope of competition policy is also estimated (Milošević et al., 2018, p. 158).

Many studies have shown a positive relationship between competition policy and the economic growth of national economies. For example, Dutz & Hayri (1999) confirm in their research, conducted on a sample of 100 countries between 1986 and 1995, that there is a statistically significant positive impact of competition policy on economic development. The intensity of competition is a transmission mechanism through which competition policy impacts economic development, therefore a more efficient competition policy impacts a higher level of competition in a country (Dutz & Vagliasindi, 2000; Vagliasindi 2001). Consequently, this leads to greater economic development. In line with this, some authors have confirmed that a high level of competition in a country has a positive impact on its economic development, as it encourages companies to a continuous innovation process (Aghion et al., 2001).

Furthermore, some studies have confirmed that reduced efficiency can be expected in branches where there is a high level of concentration and high barriers to entry. This is additionally contributed by the predatory behavior of dominant companies aimed at squeezing out smaller competitors from the market and preventing newcomers from entering the market. If a quality competition policy prevents this behavior, it creates the basis for faster economic growth (Rey, 1997).

Research results carried out by Krakowski (2005) on a sample of 101 countries showed that the effectiveness of competition policy has a positive impact on local competition. The work of the author Romano (2015), which will also be the basis of the research, is particularly interesting; it argues that there is a statistically significant positive impact of the effectiveness of competition policy on the change in GDP per capita (GDPp/c). This conclusion unambiguously shows the importance of competition policy to the economic growth of the analyzed states.

Historically speaking, although it had emerged over a hundred years ago in the United States (Sherman's Act of 1890), competition policy began its life in Europe many years later. When it comes to Western Europe, the emergence and development of competition policy is related to the period after the Second World War, with a special intensification from the 1990s. Although the first laws in this area in Western Europe were passed before the Second World War (the Profiteering Act from 1919 in Great Britain), the real implementation started from the 1950s. Current European competition policy practice is characterized by simultaneous application of national and supranational regulations from this area.

In former transition countries of Central, Eastern, and Southeastern Europe, competition protection legislation is relatively young and has only been implemented since the 1990s, when these countries were embarking on the path of euro integration. The dynamics of entering and enforcing the protection of competition in these countries is quite colorful, according to the moment of the beginning and the intensity of development. In the sample of analyzed countries, there are also the ones in which the implementation of contemporary competition policy started in 2005. It is Serbia, while in most of the countries in this region implementation started in the early 1990s.

3. Methodological basis and results of preliminary research

Investigation of the link between competition policy and the level of economic development was conducted on a sample of 14 countries between 2008 and 2017. The following countries of Central, Eastern, and Southeastern Europe were included: Albania, Serbia, Montenegro, Romania, Bulgaria, Croatia, Czech Republic, Slovakia, Slovenia, Poland, Estonia, Lithuania, Latvia, and Hungary. The data were collected from the Global Competitiveness Reports, annual reports published by the World Economic Forum.

The World Economic Forum views competitiveness as a complex phenomenon influenced by many factors that are grouped into twelve pillars of competitiveness. The pillars of competitiveness are as follows: Institutions, Infrastructure, Macroeconomic environment, Health and primary education, Higher education and training, Goods market efficiency, Labor market efficiency, Financial mar-

ket development, Technological readiness, Market size, Business sophistication, and Innovation. Independent variables included in the research belong to the sixth pillar of competitiveness (Goods market efficiency) and represent efficiency enhancers factors. All of the pillars of competitiveness are grouped into three groups of pillars, pillars that form the Basic Requirements Factors, Efficiency Enhancers Factors, and pillars belonging to Innovation and Sophistication Factors. Not all groups of factors have the same importance for all countries. Depending on the level of development, which is measured by GDPp/c in this case, certain factors will impact more or less the competitiveness of an economy (Tab. 1). In this context, the first group of pillars is of greatest importance for the least developed countries, i.e. the *Basic requirements factors* (60%); in addition to the *Basic requirements factors* (40%), *Efficiency enhancers factors* (50%) are of great importance for medium-developed countries; and *Efficiency enhancers factors* (50%) and *Innovation and sophistication factors* (30%) are of utmost importance for the most developed countries. Of the 14 countries analyzed (in 2017), 4 countries are in the second stage, 6 countries are in transition from the second to the third stage and 4 countries are in the third stage (Tab. 2), therefore, Efficiency enhancers factors have the greatest impact on all of them, especially Goods market efficiency pillar and its constituent elements.

Table 1. Importance of certain indicators of competitiveness in relation to the country's development stage and level of GDP per capita

Country's development level	Stage 1	Transition from stage 1 to stage 2	Stage 2	Transition from stage 2 to stage 3	Stage 3
	Factor-driven economic development		Efficiency-driven economic development		Innovation-driven economic development
Basic requirements factors	60%	40%–60%	40%	20%–40%	20%
Efficiency enhancers factors	35%	35%–50%	50%	50%	50%
Innovation and sophistication factors	5%	5%–10%	10%	10%–30%	30%
GDP per capita (USD)	to 2,000	2,000–2,999	3,000–8,999	9,000–17,000	over 17,000

Source: (Schwab, 2016, s. 38).

Analyzing the trend of GDPp/c at the end of the observed period, compared to its beginning (Table 2 and Figure 1), the conclusion is that the 14 countries observed can be divided into three groups. The first group is comprised of Slovakia and Poland, with GDPp/c practically unchanged in this ten-year period (Slovakia – decrease of 25.1 USD and Poland – increase of 12.8 USD). The second group consists of five countries with a significant decrease in this in-

indicator (Slovenia – 3,571.3 USD, Croatia – 2,333.6 USD, Hungary – 1,317.5 USD, Serbia – 881.9 USD, and Czech Republic – 659.4 USD). The third group consists of 7 countries with an increase in GDPp/c, where the largest one was recorded in Lithuania (2,594.8 USD), Estonia (2,405.6 USD), and Romania (1,522 USD).

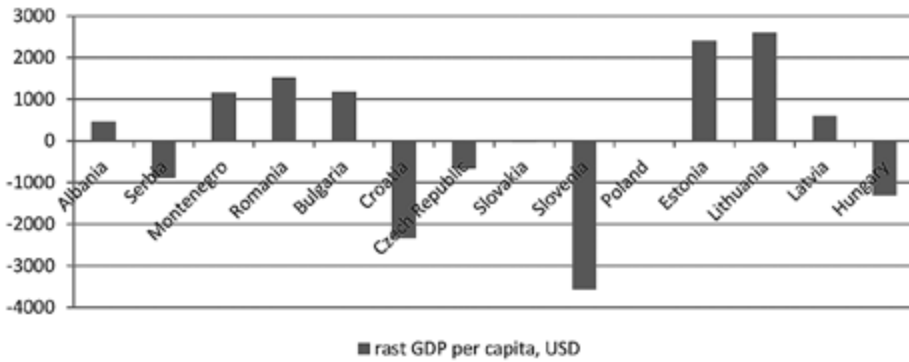


Figure 1. GDP per growth in the countries observed at the end (2017) compared to the beginning of the observed period (2008) capita

Source: Authors, based on various Global Competitiveness Reports.

Table 2. GDP per capita in USD, goods market efficiency (GME), effectiveness of anti-monopoly policy (EAMP), extent of market dominance (EMD), and intensity of local competition (ILC) in selected countries at the beginning and the end of the observed period

	GDP per capita, USD		GME		EAMP		EMD		ILC	
	2008	2017	2008	2017	2008	2017	2008	2017	2008	2017
Albania	4,073.9	4,537.9	3.61	4.4	2.8	3.3	2.7	3.1	3.7	4.7
Serbia	6,781.9	5,900.0	3.68	4.0	2.6	3.1	2.6	3.2	3.7	4.5
Montenegro	6509.0	7,669.6	4.17	4.4	3.5	3.6	3.5	3.5	4.6	4.4
Romania	9,291.7	10,813.7	4.18	4.1	3.9	3.4	4.2	3.6	4.7	4.9
Bulgaria	6,856.9	8,031.6	4.11	4.3	3.4	3.5	3.8	3.8	5	4.8
Croatia	15,628.1	13,294.5	4.11	4.0	3.5	3.4	3.4	3.1	5	4.7
Czech Republic	21,027.5	20,368.1	4.73	4.7	4.6	4.0	4.5	4.3	5.8	5.8
Slovakia	17,630.1	17,605.0	4.71	4.5	4.6	3.6	5.0	3.5	5.7	5.4
Slovenia	27,148.6	23,577.3	4.49	4.6	4.2	3.8	4.3	4.3	5.1	5.4
Poland	13,798.9	13,811.7	4.22	4.6	3.9	4.0	4.1	4.7	5.3	5.3
Estonia	17,299.1	19,704.7	4.98	5.1	4.8	4.7	4.4	4.1	5.6	5.8
Lithuania	14,085.9	16,680.7	4.52	4.6	4.0	3.7	3.8	3.6	5.4	5.5
Latvia	14,997.3	15,594.3	4.46	4.4	4.0	3.6	3.8	3.6	5.1	5.5
Hungary	15,542.3	14,224.8	4.2	4.4	4.3	3.7	3.6	3.2	5.4	4.2

Source: Authors, based on various Global Competitiveness Reports.

Regarding the goods market efficiency (unlike at the beginning of the observed period), in 2017, all the countries observed had a score of over 4, where Serbia and Croatia (score 4.00) took over the worst position from Albania (4.4) (Tab. 2). At the same time, Albania recorded the biggest progress in this pillar of competitiveness in the observed period, from 3.61 to 4.4 points (increase of 0.79 points). After Albania, Poland and Serbia recorded the biggest progress. Although it did not make a significant increase, Estonia remained the country with the most efficient goods market and the only country (of the observed countries) with a score of over 5. As for other countries, the results differ – there are countries that have improved the goods market efficiency and their GDPp/c has increased, and there are countries that have reduced the goods market efficiency and their GDPp/c has decreased. What is particularly interesting is that there are countries that have improved the goods market efficiency, but their GDPp/c has decreased (Slovenia, Hungary, and Serbia).

The trend of certain elements of the goods market efficiency pillar was particularly interesting for the conducted research, as follows: the effectiveness of anti-monopoly policy (EAMP), the extent of market dominance (EMD), and the intensity of local competition (ILC). What is particularly worrying is the fact that the value of the score concerning the effectiveness of anti-monopoly policy (observing the beginning and the end of the period) has decreased in most of the analyzed countries (nine out of fourteen) (Tab. 2). In order to see the impact of the trend of the score, as well as the scores that also concern competition policy, which are the extent of market dominance and the intensity of local competition, we will apply the corresponding statistical analysis. Namely, in the next part of the paper we will try to measure the impact of the effectiveness of antimonopoly policy (EAMP), the extent of market dominance (EMD) and the intensity of local competition (ILC) (as independent variables) on GDP per capita in USD (as a dependent variable; GDPp/c). GDP per capita in USD from the previous year will be the control variable. As for the data for independent variables, the value of the scores ranges from 1 to 7, where the score 1 is the worst, and score 7 is the best value of the variable. GDP per capita (GDPp/c) is given at current prices.

Fixed Effect Model was used for the statistical analysis of the impact of independent variables on dependent one in the following form:

$$GDPp/c_t = \beta_0 + \beta_1 EAMP_{i,t} + \beta_2 EMD_{i,t} + \beta_3 ILC_{i,t} + \beta_4 GDPp/c_{i,t-1} \quad (1)$$

Before it was selected, the Fixed effect model was tested using Hausman and Wald tests, which showed that this regression model was the best for such structured data. Data processing was performed in the statistical program EViews 7.

4. Research results and discussion

The data retrieved from the World Bank database show that the sample consists of quite heterogeneous states according to the level of GDPp/c and the score of the effectiveness of competition policy. The highest GDPp/c for all the states between 2008 and 2017 was 27,148.60 USD, and the lowest 3,677.00 USD. The mean value of GDPp/c for all analyzed states during the entire research period was 12,692.87 USD. The mean score of the effectiveness of competition policy (EAMP) for the analyzed period was 3.8. Similar situation is with the scores of two remaining independent variables, the extent of market dominance (EMD) and the intensity of local competition (ILC) (Tab. 3).

Table 3. Descriptive statistics of GDPpc, EAMP, EMD and ILC

	GDPp/c	EAMP	EMD	ILC
Mean	12692.87	3.805000	3.696429	4.908571
Median	13344.25	3.800000	3.700000	5.100000
Maximum	27148.60	4.900000	5.100000	5.800000
Minimum	3677.00	2.600000	2.500000	3.400000
Std. Dev.	5499.121	0.464468	0.561141	0.624959
Skewness	0.212587	-0.065630	0.209705	-0.474692
Kurtosis	2.313689	2.942900	2.865023	2.119204
Jarque-Bera	3.802144	0.119524	1.132384	9.783261
Probability	0.149408	0.941989	0.567683	0.007509
Sum	1777002.	532.7000	517.5000	687.2000
Sum Sq. Dev.	4.20E+09	29.98650	43.76821	54.28971
Observations	140	140	140	140

Source: Authors' calculations – EViews 7.

Analyzing the trend of GDPp/c and explanatory variables, one can notice that there is a high level of correlation in the trend of independent variables and dependent one. Correlation coefficient in the trend of EAMP, i.e. ILC and GDPp/c, is 0.71 and 0.76 respectively. Correlation coefficient in the trend of EMD and GDPp/c is somewhat smaller, but it is above 0.50 (0.55) (Tab. 4). This points to the existence of a strong positive relationship between the segment concerning the conditions of competition in the market and the level of economic development of the analyzed states.

Table 4. Correlation coefficient in the trend of dependent variable GDP and independent variables EAMP, EMD, and ILC

Covariance Analysis: Ordinary				
Date: 02/13/19 Time: 18:35				
Sample: 2008 2017				
Included observations: 140				
Correlation				
Probability				
Observations	GDP	EAMP	EMD	ILC
GDPp/c	1.000000	0.706674	0.554813	0.761332
	-----	0.0000	0.0000	0.0000
	140	140	140	140

Source: Authors' calculations – EViews 7.

In the continuation of the research, the impact of independent variables on the dependent one was assessed, using the adequate regression model. The level of GDPp/c in the previous period was used as the model's control variable (Tab. 5). Before the implementation of the regression analysis, stationarity of distribution of all variables included in the model was assessed. It turned out that all the variables were stationary and that they could enter the model. Also, using the Hausman and Wald test, the regression model (Appendix) was properly selected. It is a Fixed Effect Model (LSDV model), with the results shown in Table 5.

Based on the results of statistical analysis given in Table 5, the following regression equation has been obtained, which shows the direction and intensity of the impact of the effectiveness of anti-monopoly policy (EAMP), extent of market dominance (EMD), and intensity of local competition (ILC) on the level of GDPp/c. The equation has the following form:

$$GDPp/c_t = 4751.06 + 1440.32 EAMP_t - 1298.67 EMD_t + 975.54 ILC_t + 0.19 GDPp/c_{t-1} \quad (2)$$

It can be concluded that the increase in the effectiveness of anti-monopoly policy (competition policy) score of 1 leads to an increase in GDPp/c of 1,440.32 USD. The growth in the scope of market dominance of 1 decreases GDPp/c by 1,298.67 USD, the growth of the local competition score of 1 leads to an increase in GDPp/c of 975.54 USD. The effects of all exploratory variables are statistically significant. The regression equation is characterized by a high level of representativity (R-squared value), therefore we can say that over 96% of changes in the dependent variable can be described by the independent variables presented in the model. There is no autocorrelation problem since the view of the author Field (2009), who believes that values below 1 and above 3 are worrying, which means

that those moving from 1 to 3 are not, is accepted in the analysis. Particular attention in the research is related to the impact of the independent variable, the effectiveness of competition policy (EAMP), on the trend of GDPp/c. Observing the entire sample of states, the relationship is positive and is shown in Figure 2.

Table 5. Results of the Panel regression analysis of the impact of EAMP, EMD, and ILC on GDP per capita for selected states between 2009 and 2017

Dependent Variable: GDP				
Method: Panel Least Squares				
Date: 02/10/19 Time: 20:08				
Sample (adjusted): 2009 2017				
Periods included: 9				
Cross-sections included: 14				
Total panel (balanced) observations: 126				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4751.059	2416.754	1.965884	0.0519
EAMP	1440.321	612.3799	2.352005	0.0205
EMD	-1298.671	467.0589	-2.780530	0.0064
ILC	975.5404	372.2455	2.620691	0.0100
GDP(-1)	0.188420	0.093388	2.017615	0.0461
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.965683	Mean dependent var	12589.93	
Adjusted R-squared	0.960281	S.D. dependent var	5410.908	
S.E. of regression	1078.368	Akaike info criterion	16.93585	
Sum squared resid	1.26E+08	Schwarz criterion	17.34103	
Log likelihood	-1048.958	Hannan-Quinn criter.	17.10046	
F-statistic	178.7730	Durbin-Watson stat	1.454264	
Prob(F-statistic)	0.000000			

Source: Authors' calculations – EViews 7.

As can be seen from Figure 2, there is a positive relationship between the movement of the score of competition policy effectiveness and the level of GDPp/c on a sample of all analyzed states. Individually observed, situation is rather colorful (Fig. 3).

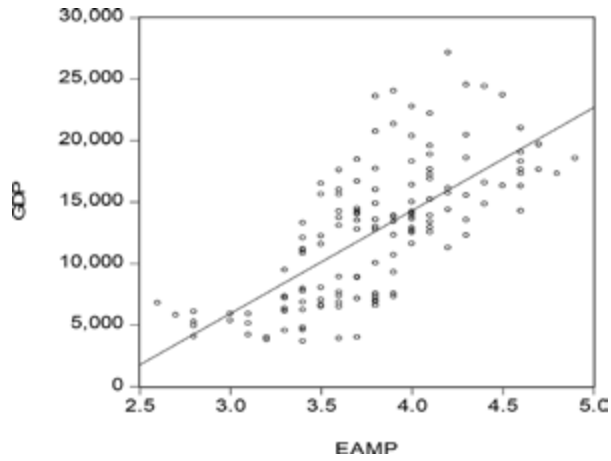


Figure 2. Trend of EAMP score and level of GDP per capita for all analyzed states between 2008 and 2017
Source: Authors' calculations – EViews 7

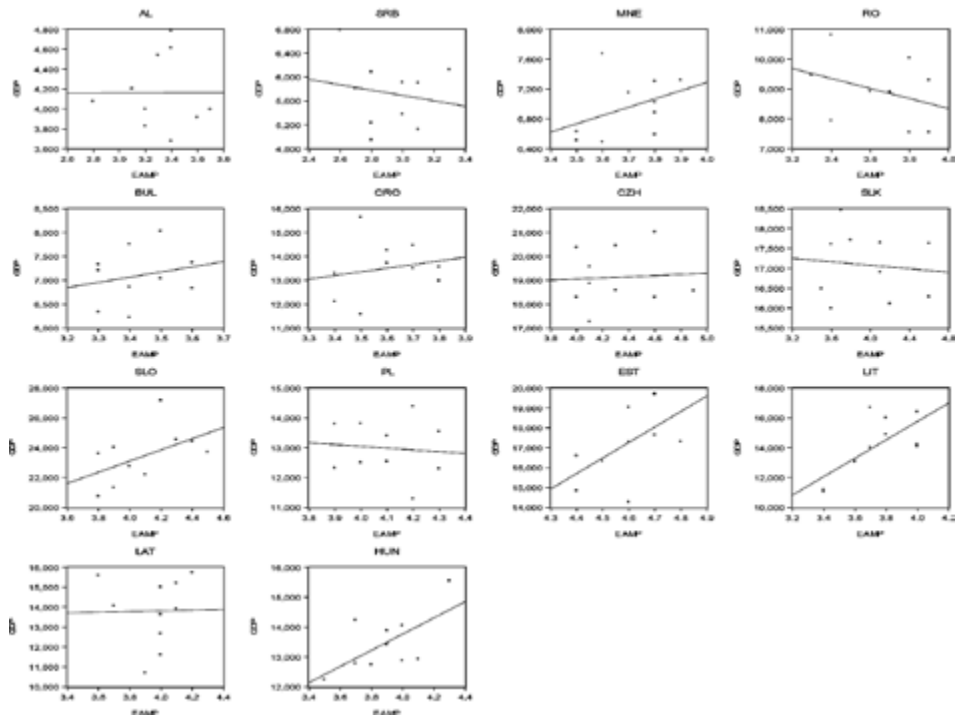


Figure 3. The trend of score of EAMP and GDP per capita in individual states_during the analyzed period
Source: Authors' calculations – EViews 7.

It can be seen from Figure 3 that in certain states (Poland, Romania, Serbia, and Slovakia) there is a negative relationship between the analyzed values. However, in most states, the relationship is positive and significant (Fig. 3).

5. Conclusion

Regardless of the fact that the situation related to the impact of competition policy on the level of states' development (individually observed) is colorful, it can be said that, at the level of the overall sample, the impact of competition policy on economic development is positive and statistically significant. The increase in the effectiveness of anti-monopoly policy score of 1 point leads to an increase in GDPp/c of 1,440.32 USD. The average annual change in the effectiveness of anti-monopoly policy in the observed sample of countries was 0.02 points, which implies a change in GDPp/c of 29 USD. In accordance with the positive impact of the policy's effectiveness on economic growth, every contemporary state should protect and promote it, if it desires to develop. One of the ways to improve is greater inclusion of economic analysis in this sphere of state regulation. Economic analysis enables competition authorities to defend decisions more easily and to perceive their effects on companies and the economy as a whole.

What is particularly worrying about the effectiveness of competition policy is that there has been a decrease in the score in nine of the fourteen analyzed countries (observing the beginning and the end of the period). This shows the state's indulgence towards undertakings which harm market conditions, in times of crisis. The history of the implementation of anti-monopoly policy has shown that, during the crisis, the state is ready to tolerate the uncompetitive behavior of undertakings in hope that it would help them overcome the crisis. The research has shown that in the event of a decrease in the score of the effectiveness of anti-monopoly policy, the level of national economies' development will decrease. Our recommendation is that competition policy needs to be improved in order to accelerate the economic development of states. Greater application of economic analysis is just one way to improve it.

The main contribution of the paper is that it represents the first work of this type, which was executed on the sample of the states of Central, Eastern, and South-Eastern Europe. The researchers plan to direct their further research to the extension of the sample of states that will enter the analysis, as well as to consider why there is a negative relationship between competition policy and the level of economic development in certain states.

Bibliography

1. Aghion, P., Harris, C., Howitt, P., & Vickers, J. (2001). Competition, Imitation and Growth with Step-by-Step Innovation. *Review of Economic Studies*, 68(3), 467–492.
2. Dutz, M.A., & Hayri, A. (1999). *Does More Intense Competition Lead to Higher Growth? (Working Paper, no. 2320)*. Washington: World Bank.
3. Dutz, M.A., & Vagliasindi, M. (2000). Competition Policy Implementation in Transition Economies: An Empirical Assessment. *European Economic Review*, 44 (4–6), 762–772.
4. Lipczynski, J., Wilson, J., & Goddard, J. (2009). *Industrial Organisation – Competition, Strategy, Policy*. Harlow, UK: Prentice Hall.
5. Krakowski, M. (2005). *Competition Policy Works; The Effect of Competition Policy on the Intensity of Competition – An International Cross-Country Comparison (HWWA Discussion Paper, 332)*. Hamburg: Hamburg Institute of International Economics.
6. Milošević, S., Trifunović, D., & Popović-Markopoulos, J. (2018). Uticaj politike zaštite konkurencije na ekonomski razvoj zemalja u razvoju. *Ekonomski horizonti*, 20(2), 157–171.
7. Motta, M. (2008). *Competition Policy: Theory and Practice*. Cambridge, UK: Cambridge University Press.
8. Rey, P. (1997). Competition Policy and Economic Development. *IDEI-Toulouse*, September.
9. Romano, O. (2015). Assessing The Macroeconomic Effects of Competition Policy – The Impact on Economic Growth. *Economic Insights – Trends and Challenges*, 4(67(3)), 81–88.
10. Schwab, K. (2016). *The Global Competitiveness Report 2016–2017*. World Economic Forum, Switzerland. Retrieved on 30/04/2019, from: http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf.
11. Stojanović, B. (2003). *Tržište Evropske Unije – konkurencija i trgovinska politika*. Ekonomski fakultet u Nišu.
12. Vagliasindi, M. (2001). *Competition Across Transition Economies: An Enterprise-level Analysis of The Main Policy and Structural Determinants (Working Paper, 68)*. London: European Bank for Reconstruction and Development.

Appendix

Null Hypothesis: Unit root (common unit root process)

Series: GDP

Date: 02/10/19 Time: 18:01

Sample: 2008 2017

Exogenous variables: Individual effects

User-specified lags: 1

Newey-West automatic bandwidth selection and Bartlett kernel

Total (balanced) observations: 112

Cross-sections included: 14

Method	Statistic	Prob.**
Levin, Lin & Chu t^*	-4.68909	0.0000

** Probabilities are computed assuming asymptotic normality

Null Hypothesis: Unit root (common unit root process)

Series: ILC

Date: 02/10/19 Time: 18:10

Sample: 2008 2017

Exogenous variables: Individual effects, individual linear trends

User-specified lags: 1

Newey-West automatic bandwidth selection and Bartlett kernel

Total (balanced) observations: 112

Cross-sections included: 14

Method	Statistic	Prob.**
Levin, Lin & Chu t^*	-6.44432	0.0000

** Probabilities are computed assuming asymptotic normality

Null Hypothesis: Unit root (common unit root process)

Series: EMD

Date: 02/10/19 Time: 18:12

Sample: 2008 2017

Exogenous variables: Individual effects

User-specified lags: 1

Newey-West automatic bandwidth selection and Bartlett kernel

Total (balanced) observations: 112

Cross-sections included: 14

Method	Statistic	Prob.**
Levin, Lin & Chu t^*	-7.65855	0.0000

** Probabilities are computed assuming asymptotic normality

Null Hypothesis: Unit root (common unit root process)

Series: EAMP

Date: 02/10/19 Time: 18:12

Sample: 2008 2017

Exogenous variables: Individual effects

User-specified lags: 1

Newey-West automatic bandwidth selection and Bartlett kernel

Total (balanced) observations: 112

Cross-sections included: 14

Method	Statistic	Prob.**
Levin, Lin & Chu t*	-5.33145	0.0000

** Probabilities are computed assuming asymptotic normality

Correlated Random Effects – Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	66.106770	4	0.0000

** WARNING: estimated cross-section random effects variance is zero.

Wald Test:

Equation: Untitled

Test Statistic	Value	df	Probability
F-statistic	5.176235	(13, 108)	0.0000
Chi-square	67.29105	13	0.0000

Drivers of Competitiveness of the National Tourism System of Ukraine in the Global Environment

Anatolii Mazaraki, Myroslava Bosovska

1. Introduction

National tourism system (NTS), which is a component of the national economic system, is based on intersectoral interaction of economic entities in relation to production, organisation, realisation, and consumption of tourist product and is capable of forming considerable multiplication effect regarding the generation of demand in other sectors of the economy and increase in employment. Such a quality to catalyse the development of tourism-related types of economic activity requires the activation and encouragement of tourism systems in order to increase the performance of the whole economy of the country. The efficiency of the NTS functioning also provides for a wide involvement of international tourist flows. In addition, tourism is “an integral component of globalisation processes that determines the context of determining national tourism development benchmarks, given the prospects of global trends in the world” (Boiko, 2010, p. 161), i.e. tourism systems are a priori directed to global space and are determined by it. These factors confirm the necessity to create competitive national tourism system that serves as a prerequisite both for the investment inflow and the formation of demand for national tourist product that is reflected in tourist flows’ volumes, direct and indirect receipts from tourism.

Aggravation of competitive struggle in the world tourism market requires studies on this issue as at the level of enterprises, so at the level of countries and regions. Most of the scientific papers devoted to this problem primarily focus on studying the competitiveness at the level of enterprise or tourist product while the issue of competitiveness of the tourism industry of a certain region or a country is also extremely important. Therefore, the study of competitiveness of the national tourism system is a relevant scientific problem and requires thorough consideration.

2. Essential features of the competitiveness of the national tourism system

After analysing scientific works on competitiveness, one can state that most researchers, in particular, Porter (1990), Lambin (2012) and others, as the main factor of competitiveness consider the availability of competitive advantage, i.e. factor or a combination of factors that make activities of object of competition more successful compared with competitors and which cannot be easily repeated. What about the branch level, the competitiveness is determined, on the one hand, by the correctness of the development of strategic development directions, which are formed by the organizational structure of the management of the branch, and, on the other hand, by the effectiveness of tactical decisions made by individual entities. If we are talking about the competitiveness of tourism system, it should be viewed from various aspects: firstly, in the international context, and secondly, at the national and regional levels among other systems of the national economy.

What about the international level, it is proposed to consider the competitiveness of Ukrainian tourism market as “ability of our state to propose such unique new tourism services that would fully satisfy the most exacting demand, interest a large number of potential consumers and attract them to travel to our country” (Kovalenko, 2006, p. 12). However, the competitiveness of the national tourism system should be viewed widely, in particular as the presence of:

- favorable economic, political, socio-cultural, technological, ecological, demographic environment;
- the common development strategy for tourism and related industries;
- possibilities for the production, realization, and consumption of tourist product that satisfy the requirements of certain groups of consumers in relation to consumption value, uniqueness, and innovation;
- competitive entities of the tourism system.

In the aspect of problems under study, important is to determine the competitiveness of the national tourism system at the international level. Monitoring of the countries' position in the world tourism market is carried out by the World Economic Forum in cooperation with other international organizations in the tourism industry. In order to identify the competitive status and tourist attractiveness of countries in the field of tourism services provision, experts of the World Economic Forum annually calculate the competitiveness index and present annual report – The Travel & Tourism Competitiveness Report.

The competitiveness index of the tourism system of an individual country is determined as the arithmetic mean of four subindexes¹: A – enabling environment; B – travel & tourism policy and enabling conditions; C – infrastructure; D – natural and cultural resources. Each of the subindexes includes a complex of factors of the other two levels (14 groups with 90 indicators), which characterize the state of development of tourism systems of countries. Components of the Travel & Tourism Competitiveness Index, renewed in 2017, are shown in Figure 1.

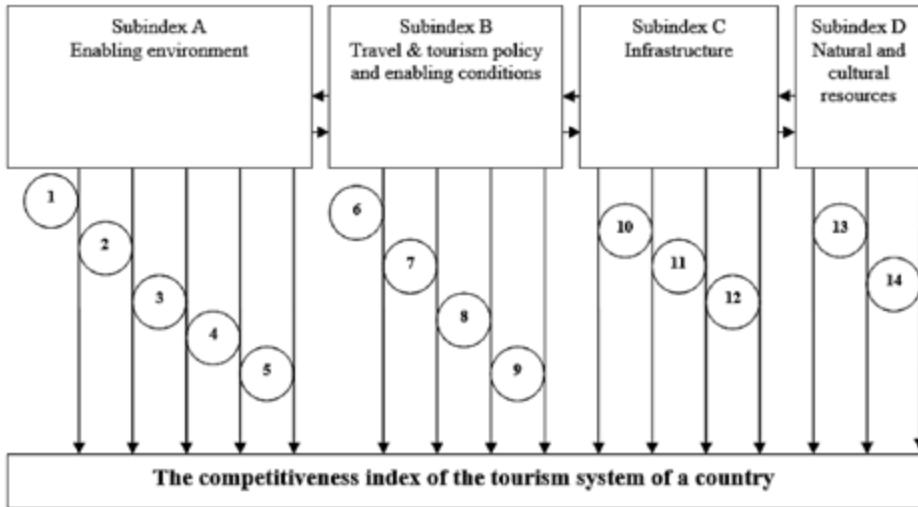


Figure 1. Structural elements of the competitiveness index of tourism systems of countries

Note: 1 – Business environment, 2 – Safety and security, 3 – Health and hygiene, 4 – Human resource and labour market 5 – ICT readiness, 6 – Prioritization of Travel & Tourism, 7 – International Openness, 8 – Price competitiveness, 9 – Environmental sustainability, 10 – Air transport infrastructure, 11 – Ground and port infrastructure, 12 – Tourist service infrastructure, 13 – Natural resources, 14 – Cultural resources and business travel

Source: developed by the authors based on The Travel & Tourism Competitiveness Report.

Therefore, determination of competitiveness of countries is based on 14 indicators (grouped in 4 subindexes: environment; travel & tourism policy and enabling conditions; infrastructure; natural and cultural resources), each of which is formed by a number of other factors (90 in total). According to countries' score (Score) from 1 to 7, a rank (Rank) is formed where the first positions are occupied by the most competitive countries, and the latter – respectively, the least competitive.

It should be noted that in relation to the modification of the content and structure of indicators making the competitiveness index of tourism systems in

¹ Until 2017, 3 subindexes were used: A – the legislative base of tourism; B – business environment and tourism infrastructure development; C – the state of human, cultural and natural resources in tourism.

2017 compared to previous years, there are certain contradictions, however, it is possible to assess general competitiveness trends in the NTS of Ukraine.

3. Diagnostics of the national tourism system of Ukraine in the global competitiveness rating

The position of Ukraine during the last 10 years in the global competitiveness rating of tourism systems is fairly low: it ranks 76–88th among 124–140 countries². overall assessment in 2017 is 3.5 out of a maximum of 7 points provided that the lowest are Safety and security (3.5 points) and Business environment (3.7 points); average scores are typical for Human resource and labour market (4.9 points) and ICT readiness (4.2 points); and the best situation relates to Health and hygiene (6.6 points). In 2015, the index was not determined due to political events associated with the annexation of the Crimea and military aggression of the RF on the part of Donetsk and Luhansk regions. The evaluation of the generalized spectrum of indicators that make up the tourism competitiveness index in Ukraine is given in Table 1.

Table 1. Dynamics of the competitiveness rating of the national tourism system of Ukraine for 2007–2017³

Indicators Ukraine's rating/ Number of countries	2007	2008	2009	2011	2013	Indicators Ukraine's rating/ Number of countries	2017
	78/124	77/130	77/133	85/139	76/140		88/136
Policy rules and regulations	88	100	104	107	114	Business environment	124
Environmental regulation	109	83	79	88	92	Environmental sustainability	97
Safety and security	73	93	86	82	77	Safety and security	127
Health and hygiene	39	17	18	17	8	Health and hygiene	8
Prioritization of travel and tourism	90	96	87	101	84	Prioritization of travel and tourism	90
Air transport infrastructure	87	98	94	93	78	Air transport infrastructure	79
Ground transport infrastructure	67	84	72	74	73	Ground and port infrastructure	81
Tourist infrastructure	75	62	101	53	50	Tourist service infrastructure	71
ICT infrastructure	64	52	119	68	70	ICT readiness	81
Price competitiveness	37	115	61	119	110	Price competitiveness	45
Human resources	73	80	68	68	65	Human resources and labour market	41
National tourism perception	46	62	66	117	101	International Openness	78
Natural resources	118	104	112	119	102	Natural resources	115
Cultural resources	118	84	88	86	80	Cultural resources and business travel	51

Source: developed by the authors based on (The Travel & Tourism Competitiveness Report 2007, 2008, 2009, 2011, 2013, 2017).

² The higher the position, the worse the situation.

³ Ukraine's position in 2015 was not determined.

Consequently, Ukraine is currently ranked 88th out of 136 countries, with the country's worst ranking over the period covered by the research. The low position of the country in the international rating is determined by low values and reduction of indicators that determine the level of safety and security (127th position), business environment (124th), natural resources (115th). This negatively affects the overall development of the NTS and the possibility of integration processes to the world market at all levels of the economic system, that is, integrated development for Ukraine is not a formed trend, but a declaration of intent. Therefore, an important task should be to determine the competitive advantages of Ukraine on the basis of monitoring the components of the tourism competitiveness index. Factor analysis of the structure of each of the indicators determining the tourist competitiveness of Ukraine allowed determining both the advantages of Ukraine in the international tourist market and the disadvantages. Out of 90 indicators forming the competitiveness rating, those that show themselves as positive or negative indicators of global competitiveness of the NTS of Ukraine are identified (Tab. 2).

Table 2. Competitive advantages and disadvantages of Ukraine according to the global tourism competitiveness rating in 2017⁴

Competitive advantages of the NTS of Ukraine:		Disadvantages of the NTS of Ukraine:	
factors	rating	factors	rating
<i>Business environment</i>		<i>Business environment</i>	
Time required to deal with construction permits days	9	Property rights	129
Time to start a business days	22	Business impact of rules on FDI	128
Cost to start a business % GNI per capita	11	Efficiency of legal framework in settling disputes	119
<i>Health and hygiene</i>		Efficiency of legal framework in challenging regs	125
Physician density /1,000 pop	19	Cost to deal with construction permits % construction cost	129
Access to improved sanitation % pop.	51	Effect of taxation on incentives to work	122
<i>Human resources and labour market</i>		Effect of taxation on incentives to invest	131
Primary education enrollment rate net %	57	Total tax rate % profits	114
Secondary education enrollment rate gross %	53	<i>Safety and security</i>	
Hiring and firing practices	47	Business costs of crime and violence	114
Ease of finding skilled employees	38	Reliability of police services	102
Pay and productivity	42	Business costs of terrorism	126
Female participation in the labor force ratio to men	58	Index of terrorism incidence	126
<i>ICT readiness</i>		<i>Health and hygiene</i>	
Internet use for biz-to-consumer transactions	35	HIV prevalence % adult pop.	111
Fixed-broadband Internet subscriptions /100 pop.	64	<i>ICT readiness</i>	

⁴ The higher the rating, the worse the situation.

Competitive advantages of the NTS of Ukraine:		Disadvantages of the NTS of Ukraine:	
factors	rating	factors	rating
Mobile-cellular telephone subscriptions /100 pop.	26	ICT use for biz-to-biz transactions	104
Mobile network coverage % pop.	36	Mobile-broadband subscriptions /100 pop.	128
<i>Prioritization of Travel & Tourism</i>		<i>Prioritization of Travel & Tourism</i>	
T&T government expenditure % government budget	36	Government prioritization of travel and tourism industry	122
Comprehensiveness of annual T&T data 0–120 (best)	18	Effectiveness of marketing and branding to attract tourists	103
		Timeliness of providing monthly/quarterly T&T data 0–21 (best)	104
<i>International Openness</i>		<i>International Openness</i>	
Number of regional trade agreements in force number	48	Visa requirements 0–100 (best)	105
		Openness of bilateral Air Service Agreements 0–38 (best)	111
<i>Price competitiveness</i>		<i>Price competitiveness</i>	
Hotel price index US\$	29	Ticket taxes and airport charges 0–100 (best)	99
Purchasing power parity PPP \$	2		
<i>Environmental sustainability</i>		<i>Environmental sustainability</i>	
Environmental treaty ratification 0–27 (best)	43	Stringency of environmental regulations	110
Costal shelf fishing pressure tonnes/km2	28	Enforcement of environmental regulations	116
		Sustainability of travel and tourism industry development	108
<i>Air transport infrastructure</i>		<i>Air transport infrastructure</i>	
Available seat kilometers, domestic millions	54	Quality of air transport infrastructure	102
Available seat kilometers, international millions	59	Aircraft departures /1,000 pop.	97
Number of operating airlines Number	37	Airport density airports/million pop.	117
<i>Ground and port infrastructure</i>		<i>Ground and port infrastructure</i>	
Paved road density % total territorial area	52	Quality of roads	132
Quality of railroad infrastructure	34	Quality of port infrastructure	94
Railroad density km of roads/land area	24		
<i>Tourist service infrastructure</i>		<i>Tourist service infrastructure</i>	
Automated teller machines number/thousand adult pop.	21	Hotel rooms number/100 pop.	103
		Quality of tourism infrastructure	107
<i>Natural resources</i>		<i>Natural resources</i>	
Number of World Heritage natural sites number of sites	46	Total protected areas % total territorial area	121
		Attractiveness of natural assets	105
<i>Cultural resources and business travel</i>		<i>Cultural resources and business travel</i>	
Number of World Heritage cultural sites number of sites	36		
Cultural and entertainment tourism digital demand 0–100 (best)	51		
Oral and intangible cultural heritage number of expressions	56		
Sports stadiums number of large stadiums	25		

Source: developed by the authors based on (The Travel & Tourism Competitiveness Report, 2017).

In order to focus tourism on maximizing the advantages and reducing the disadvantages, it is necessary to consolidate the efforts of both the authorities and the business entities. Integration processes that will allow consolidating efforts in the tourism industry and maximally efficiently use and develop existing potential should become an important direction for increasing the competitiveness of the country (Bosovska, 2015).

Quite an illustrative indicator that reflects the level of competitiveness is the volume of demand, which is characterized by tourist flows. It is possible to confirm the priority of factors of the formation of tourist demand for the implementation of tourism potential in order to ensure the country's competitiveness based on statistical data that reflect the dynamics of tourist flows and their structuring (Tab. 3, Fig. 2).

Indicators of volumes of tourist flows since 2000 have increased by almost two times, respectively. However, the economic, political crisis, military aggression of the RF led to a decline in the growth of the tourism industry in Ukraine in relation to world trends. Nevertheless, the small reduction in the volumes of people traveling abroad is characteristic only for 2014–2015, and the indicators for 2016–2017 are the highest for the 18-year period. Regarding the inbound flow, the situation is less optimistic: in 2014, its volume in comparison with 2013 has reduced by almost 2 times: from 24.67 million to 12.71 million people. Over the past two years, a growing trend has begun, however, the pace is insignificant: 7.2%, 6.7%. Thus, the dependence between foreigners' arrivals and the general socio-economic situation of the country is clearly observed.

Particular attention should be paid to the number of tourists served by the subjects of tourist activity in Ukraine, whose share is rather low, on average 13.2% for those traveling abroad and 14.5% for foreigners who arrived in Ukraine. During 2000–2003, the number of tourists served by tourism entities increased, especially in 2003, with an increase of nearly 30%. In 2004–2005, there was a decrease in tourist activity, which is mainly associated with currency fluctuations in the market. During 2007–2008, there was an intensive increase in the number of tourists served, which was accompanied by the intensification of the development of all types of tourism in all directions. In 2009–2011, taking into account the reasons caused by the global financial crisis, the number of tourists has decreased by almost by 25% – to 2.29 million people, despite the growth of the inbound tourism flow. The years of 2012–2013 were characterized by positive trends: the volume of tourists served increased to 3.45 million people, which is the largest since 2000, and in 2011 – more by 1.0% – to 2.4 million people. In 2014–2015, the volumes of persons serviced by the subjects of tourism activity and their growing tendencies changed dramatically, the reduction compared with 2013 was more than 50.0%. However, in the future, especially in 2017, there is a slight increase (Fig. 2).

Table 3. Dynamics of volume of tourist flows of Ukraine for 2000–2017

Years	The number of Ukrainian citizens who travelled abroad*		The number of foreign citizens who visited Ukraine**		The number of tourists served by tourism entities in Ukraine***	
	mln ppl	% to 2000	mln ppl	% to 2000	mln ppl	% to 2000
2000	13.42	100.0	6.43	100.0	2.01	100.0
2001	14.85	110.6	9.17	142.7	2.17	108.0
2002	14.73	109.7	10.51	163.5	2.26	112.5
2003	14.79	110.2	12.51	194.6	2.86	141.9
2004	15.48	115.4	15.62	243.0	1.89	93.9
2005	16.45	122.6	17.63	274.2	1.83	90.6
2006	16.87	125.7	18.93	294.4	2.20	109.6
2007	17.33	129.1	23.12	359.5	2.86	142.2
2008	15.49	115.5	25.44	395.7	3.04	151.0
2009	15.33	114.2	20.79	323.4	2.29	113.7
2010	17.18	128.0	21.20	329.7	2.28	113.2
2011	19.77	147.3	21.41	332.9	2.12	105.5
2012	21.43	159.6	23.01	357.8	3.00	149.2
2013	23.76	177.0	24.67	383.7	3.45	171.6
2014****	22.44	167.1	12.71	197.6	2.43	119.4
2015	23.14	172.4	12.43	193.1	2.02	100.0
2016	24.67	183.7	13.33	207.3	2.55	124.8
2017	26.44	196.9	14.23	221.1	2.81	139.3

* Including one-day visitors (according to the State Border Guard Service of Ukraine).

** 2000–2010 according to data of the Ministry of Infrastructure of Ukraine, starting from 2011 – according to data of the State Statistics Service of Ukraine.

*** Idem.

**** 2014–2017 – without the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol, and temporarily occupied territories in the Donetsk and Luhansk regions.

Source: developed by the authors based on (*Turystychni...*, 2018).

Studying the dynamics of arrivals in Ukraine of recent periods (2007–2017), we note that with respect to the differentiation by countries of the formation of inbound tourism flows to Ukraine, from 2007 to 2013, the structure of the first ten countries by volume of the flow was virtually unchanged: the largest number of people came from Russia (34.6% on average annually), in the second place is Moldova (18.7%), the third one – Poland (14.3%), and the fourth – Belarus (13.4%). Further, the share of the volume of flows across the countries is much lower: Hungary – 2.9%, Slovakia – 2.7%, Germany – 1.0%, the USA – 0.6%, Israel – 0.4%, and Italy – 0.3%. The volume of the flow of the first ten countries was quite high, fluctuating between 90.0% and 90.9%, while the four countries – Russia, Moldova, Poland, and Belarus accounted for an average of 81.0% of the flow of foreign citizens to Ukraine.

Significant changes in the volume and structure of the inbound tourism flow occurred since 2014 (Tab. 4), which is characterized by a record decrease by 48.5%, and domestic as well by 54.1% compared with 2013.

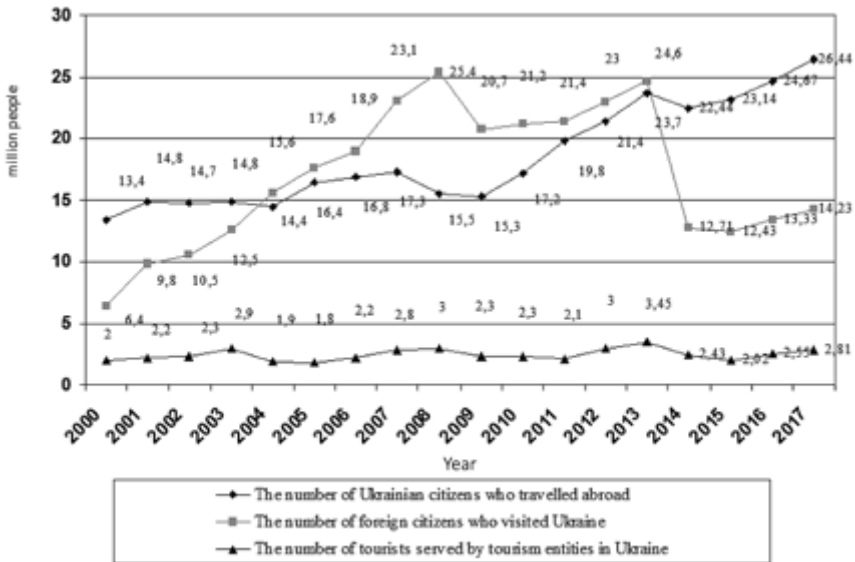


Figure 2. Dynamics of tourist flows of Ukraine for 2000–2017

Source: developed by the authors based on (*Turystychni...*, 2018).

As the above research results demonstrate, the ratings of countries in terms of volume of inbound flow to Ukraine in 2013–2017 have changed, in particular, by 2014, only 10 countries provided 93.3% of the inbound flow, with almost half (41.7%) was from the RF. Today, the citizens of Moldova (32.2%) dominate, the second position – Belarus (13.7%) and only the third – Russia (11.1%), that is, the flow from this country decreased more than 2 times. By contrast, compared to 2013, in 2017, the number of visits in Ukraine by citizens of Hungary (by 64.5%), Turkey (by 32.0%), and Israel (more than 2 times) increased. The flows of citizens of Poland (by 5.0%), Romania (by 11.7%), Slovakia (by 3.3%) have slightly decreased. In addition, the share of “first ten” countries whose citizens visited Ukraine declined slightly: in 2016 to 88.7%, and in 2017 it was 90.0% compared to 93.3% in 2012–2013, indicating a slight change in the structure of the inbound tourism flow.

Despite the positive tourism balance of Ukraine, which first emerged in 2012, and the growing market for tourist services, Ukraine continues to actively develop outbound tourism, indicating the need for radical changes in the development of the domestic tourism market. Such reserves could be the introduc-

tion of innovative technologies based on the creation of transnational integrated structures, the formation and development of tourist clusters, the implementation of public-private partnership programs for the development of tourism infrastructure and the intensification of the development of the national tourism system.

Table 4. The rating of countries by the volume of the inbound flow in Ukraine for 2014–2017 (the first 10 countries)

rating	2014 p.			2015 p.			2016 p.			2017 p.		
	Country	number of arrivals, thousand people	%	Country	number of arrivals, thousand people	%	Country	number of arrivals, thousand people	%	Country	number of arrivals, thousand people	%
1	Moldova	4368.4	34.4	Moldova	4393.5	35.4	Moldova	4296.4	32.2	Moldova	4435.7	31.2
2	Russia	2363.0	18.6	Belarus	1891.5	15.2	Belarus	1822.3	13.7	Belarus	2727.6	19.2
3	Belarus	1592.9	12.5	Russia	1231.0	9.9	Russia	1473.6	11.1	Russia	1464.8	10.3
4	Poland	1123.9	8.8	Poland	1156.0	9.3	Hungary	1269.7	9.5	Poland	1144.2	8.0
5	Hungary	874.2	6.9	Hungary	1070.0	8.6	Poland	1195.2	9.0	Hungary	1119.4	7.9
6	Romania	584.8	4.6	Romania	763.2	6.1	Romania	774.6	5.8	Romania	791.1	5.6
7	Slovakia	416.2	3.3	Slovakia	412.5	3.3	Slovakia	410.5	3.1	Slovakia	366.2	2.6
8	Germany	131.2	1.0	Germany	154.5	1.2	Israel	216.6	1.6	Turkey	270.7	1.9
9	Turkey	116.3	0.9	Israel	149.4	1.2	Turkey	199.6	1.5	Israel	261.5	1.8
10	Israel	101.8	0.8	Turkey	140.7	1.1	Germany	171.1	1.3	Germany	209.4	1.5
	First 10 countries together	11672.7	91.8	First 10 countries together	11362.3	91.3	First 10 countries together	11829.6	88.8	First 10 countries together	12790.6	90
	Other countries	1038.8	8.2	Other countries	1065.8	8.6	Other countries	1503.5	11.3	Other countries	1439.0	10.0
	In total	12711,5	100	In total	12428,3	100	In total	13333,1	100	In total	14229,6	100

Source: developed by the authors based on (The Travel & Tourism Competitiveness Report 2014–2017).

Another problem of the competitiveness of the Ukrainian tourism system is the lack of promotion of tourist products in the world market and relevant information, as evidenced by the structure of inbound tourist flows to Ukraine. More than 80.0% of foreign arrivals are from the neighbouring countries – Moldova, Belarus, the Russian Federation, Poland, Hungary, Slovakia, which traditionally visit Ukraine, and – often for visiting friends and relatives. All other tourist destinations accounted for less than 20.0% of tourist flows. At the same time, 73.6–97.1% of all arrivals in Ukraine were for private purposes, and only 0.2–1.9% of people intended specifically the tourist visits (Tab. 5).

As for the direct structure of the flow of people arriving in Ukraine for the purpose of tourism, about 74.1% of them arrive for leisure and recreation, which necessitates the development of appropriate tourist infrastructure. About 18.4% of tourists come to Ukraine for business tourism, which necessitates the development of the infrastructure of business tourism. Instead, the share of medical tourism in recent years tended to decrease and makes only 5.8% of the total inbound tourist flow, which confirms the assumption of the negative state of the sanatorium and resort area in Ukraine.

Table 5. Structure of international arrivals in Ukraine by the purpose of visiting, 2014–2017

Purpose of arrival	2014		2015		2016		2017	
	thou- sand people	%	thou- sand people	%	thou- sand people	%	thou- sand people	%
Official, business, diplomatic	49.4	0.4	41.1	0.3	33.4	0.2	88.9	0.6
Tourism	146.8	1.2	137.9	1.1	172.8	1.3	38.9	0.2
Private	9696.8	76.3	11525.2	92.7	12953.7	97.1	13741.6	96.5
Education	1.1	0.0	0.1	0.0	2.0	0.0	4.5	0.0
Employment	0.7	0.0	1.3	0.0	0.1	0.0	2.6	0.0
Immigration (permanent residence)	2.4	0.0	2.3	0.0	3.1	0.0	4.0	0.0
Cultural and sports exchange, religious, other	2814.0	22.1	7.2	0.0	167.9	1.2	348.8	2.5
Total	12711.5	100.0	12428.2	100.0	13333.0	100.0	14229.6	100.0

Source: developed by the authors based on (Foreign..., 2014, 2015, 2016, 2017).

Thus, the positive impact of tourism on the state of the economy of Ukraine and its individual regions is insufficient, and the state of development of this system is characterized as spontaneous and inertial, which necessitates a detailed study of each element to ensure the sustainability and process of adaptation of enterprises to the current conditions of business development. This problem has intensified, taking into account the crisis situation in the economy caused by political events in Ukraine.

4. Directions to improve the competitiveness of the national tourism system of Ukraine

Overcoming of the abovementioned problems is also determined by the fact that “at the modern stage, it is extremely important to solve practical issues associated with the integration of the Ukrainian economy in the European community, formation of positive image of Ukraine, expanding opportunities for at-

tracting foreign and domestic tourists, optimal use of potential, efficient influence of social and regulatory institutions, formation of new competitive advantages of the national tourist product, investment attraction” (Mazaraki, 2018), therefore, it is necessary to outline ways of solving the actual problems of the NTS.

An important determinant for ensuring competitive sustainable development of tourism in Ukraine should be the consolidation of efforts and resources of tourism entities, deepening and intensification of integration processes at various levels of the economic system, implementation of international experience of tourism development on the basis of integration into the practice of domestic enterprises. This will contribute to an increase in tourist demand, formation of high-quality tourist product, improvement of the level of resource potential use, development of tourist infrastructure, reduction of seasonal and spatial uneven distribution of tourists, improvement of financial and economic indicators of tourism entities, development of related and concurrent branches of the economy, job creation, foreign exchange incoming in the country and state budget replenishment etc.

Therefore, important measures to improve the competitiveness of the tourism industry of Ukraine at the international level should be:

- contribution to the development of a competitive environment in the very industry and continuation of economic reforms, as well as reducing bureaucratic obstacles to doing business;
- promoting the diversification of tourist product and tourism services market of Ukraine that is to expand regional markets for foreign tourism and create proposals of new tourist products taking into account modern changing conditions;
- improvement of the international image of Ukraine;
- contributing to the establishment of reasonable pricing policy by tourism entities;
- promoting the attraction of foreign investment.

Let us note certain features of the implementation of the abovementioned measures. It is needed to highlight the important regulatory role of the state in the tourism system as in Ukraine, there is a considerable lag behind world standards of legislative provision, the formation of the competitive environment, organisational and production technology and so on.

Diversification of Ukrainian tourist product will contribute to:

- reducing the risk of high dependence on several key markets;
- reducing the seasonal nature of tourist demand, distributing it more evenly over the seasons and the country’s regions, since now foreign tourists are mostly visiting Kyiv, Lviv, and Odesa (more than 75.0% of the total flow),

and internal tourists – these regions and Ivano-Frankivsk and Zakarpattia regions (more than 60.0% of the total flow).

- reducing the overload of valuable natural and cultural and historic resources.

No doubt, it is important to form an image of Ukraine as an international tourism destination. In this area, system and comprehensive work should be done, although separate one-time promotions are actually carried out. Moreover, Ukraine should adopt the experience of many world countries that commit considerable financial resources to tourism advertising. So, for example, Spain's government annually allocates on average 70 million USD for international and information and promotional activities in the field of tourism, Turkey – 40 million USD, Austria – 48 million EUR, Hungary – 10 million EUR, the Czech Republic – 3 million EUR. In general, main players in the world tourist arena have developed tourist infrastructure, spend at least 10 million EUR per year on international and promotional activities (Boiko et al., 2018).

Being a global socio-economic phenomenon, tourism is characterised by a high degree of propensity to innovate processes. Therefore, competitive advantages of Ukraine that has powerful natural and also cultural and historical preconditions for the development of tourism is worth to be improved through innovative measures, which should be aimed at forming a unique tourist product and marketing activities, use of new management methods, utilization of modern information technologies.

Although the country's competitiveness in the area of international tourism is directly related to the availability of natural, cultural and historic resources, they acquire economic importance depending on the degree of availability of these resources and the possibility of their exploitation for tourism purposes. Therefore, tourism development requires developed infrastructure and, accordingly, attracting investment.

Based on analyzing scientific studies, one can consider that there are several options for solving problems of increasing the competitiveness of the country in the field of domestic and foreign tourism. The first variant provides for the development of the tourism system due to the attraction of private investment, as well as within the separate regional programs and investment projects. Advantage of this method lies in the absence of additional financial and organizational costs from the state, however, its disadvantage is the uncertainty of volumes of private investment under conditions of economic crisis with the possible cessation of financing and the wrong choice of priority investment directions, as well as investment of funds will be carried out in separate investment projects, having little influence on the decisions and problems of the development of the tourist industry system in general.

Alternative development provides for an active action on the situation by using the program-target method. The main advantages of this scenario are the implementation of the real mechanism of state support, management and coordination of activities with the possibility of analyzing the performance of the whole set of works on solving the problems, consolidation of significant financial resources in certain priority development directions of tourism and, as a consequence, more rational use of public funds. Implementation of this scenario provides for the greater allocation of public funds on the basis of public-private partnership, as well as the attraction of private investment, ensuring the participation of public institutions in making decisions on designing and creating promising tourist and recreational clusters, new job formation, increasing domestic demand, and territorial development.

5. Conclusion

Taking into account the diversity of tourism and its positive influence on various aspects of the country's activities (economic, social, international etc.), improving the competitiveness of the national tourism system should become an important state goal.

Complexity and specificity of competitiveness of the tourism system at the global level lies in the fact that it depends on the competitiveness of tourist enterprises in a less degree but mainly on the activity of related enterprises and general state of affairs in the country, and not only economic but also its security level, preservation of natural resource and cultural heritage, hospitality level and so on.

According to the World Economic Forum's Travel & Tourism Competitiveness reports, over the past 10 years the level of competitiveness of the tourism system of Ukraine is fairly low, the biggest problems relate to state policy and regulation in the field of tourism, price competition and the level of protection and use of natural and cultural resources in tourism, and recently – the level of security. Therefore, the main measures to improve the competitiveness of the tourism system in Ukraine at the international level should be the formation of a favourable environment for tourism business development, elaboration of reasonable integrated development strategy, improvement of the international image of Ukraine, identification and further reforming of its competitive advantages. Given the above, issues related to the development of a competitive environment in this field, mechanisms of efficient state policy on tourism development, attraction of investments, justification of pricing, the formation of unique competitive advantages etc. require further research.

Bibliography

1. Boiko, M., Bosovska, M., Vedmid, N., Bovsh, L. & Okhrimenko, A. (2018). Investment Attractiveness of the Ukrainian Tourism System. *Investment Management and Financial Innovations*, 15(4), 193–209.
2. Boiko, M., Bosovska, M., Vedmid, N., Melnychenko, S., & Okhrimenko, A. (2017). Development of the Tourism Cluster. *Problems and Perspectives in Management*, 15(4), 134–149.
3. Boiko, M.H. (2010). *Tsinnisno oriientovane upravlinnia v turyzmi*. Kyiv: KNTEU.
4. Bosovska, M.V. (2015). *Intehratsiini protsesy v turyzmi*. Kyiv: KNTEU.
5. *Foreign Nationals' Arrival in Ukraine from the Countries from which they Came* (2018). State Statistics Service of Ukraine. Retrieved on 30/05/2019, from: <http://www.ukrstat.gov.ua/>.
6. Kovalenko, Y.O. (2006). *Formuvannia konkurentospromozhnoho rynku mizhnarodnykh turystychnykh posluh v Ukraini*. PhD Desertation. Kyiv: KNTEU.
7. Lambin, J.J. (2012). *Market-driven Management Strategic & Operational Marketing*. Dunod.
8. Mazaraki, A., Boiko, M., Bosovska, M., Vedmid, N., & Okhrimenko, A. (2018). Formation of the National Tourism System of Ukraine. *Problems and Perspectives in Management*, 16(1), 68–8.
9. Porter, M.E. (1990). The Competitive Advantage of Nations. *Harvard Business Review*.
10. *Turystychni potoky: Derzhavna sluzhba statyky Ukrainy* (2018). State Statistics Service of Ukraine. Retrieved on 30/05/2019, from: <http://www.ukrstat.gov.ua/>.
11. World Economic Forum (2007). *The Travel & Tourism Competitiveness Report 2007. Furthering the Process of Economic Development*. Retrieved on 30/05/2019, from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.178.3367&rep=rep1&type=pdf>.
12. World Economic Forum (2008). *The Travel & Tourism. Competitiveness Report 2008. Balancing Economic Development and Environmental Sustainability*. Retrieved on 30/05/2019, from: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.225.7976&rep=rep1&type=pdf>.
13. World Economic Forum (2009). *The Travel & Tourism. Competitiveness Report 2009. Managing in a Time of Turbulence*. Retrieved on 30/05/2019, from: http://www.ontit.it/opencms/export/sites/default/ont/it/documenti/files/ONT_2009-03-04_02101.pdf.
14. World Economic Forum (2011). *The Travel & Tourism. Competitiveness Report 2011. Beyond Downturn*. Retrieved on 30/05/2019, from: <http://www3.weforum.org/docs/TTCR11/>.
15. World Economic Forum (2013). *The Travel & Tourism. Competitiveness Report 2013. Reducing Barriers to Economic Growth and Job Creation*. Retrieved on 30/05/2019, from: http://www3.weforum.org/docs/WEF_TT_Competitiveness_Report_2013.pdf.

16. World Economic Forum (2015). *The Travel & Tourism. Competitiveness Report 2015. Growth through Shocks*. Retrieved on 30/05/2019, from: http://www3.weforum.org/docs/TT15/WEF_Global_Travel&Tourism_Report_2015.pdf.
17. World Economic Forum (2017). *The Travel & Tourism Competitiveness Report 2017. Paving the way for a more sustainable and inclusive future*. Retrieved on 30/05/2019, from: http://www3.weforum.org/docs/WEF_TTCR_2017_web_0401.pdf.

Foreign Economic Activity of Ukrainian SMEs: Status and Prospects

Ganna Duginets, Valeriy Sai

1. Introduction

Small and medium businesses are the engine of economic growth of any country in any industry. In this regard, their development is a priority for the state. In many countries of the world, these entities constitute the main share in the total amount of enterprises by the number of employees and gross value added. It should be noted that the role of small business has especially increased in the conditions of a post-industrial society, which manifests in the change in the socio-economic functions of this form of business. Small and medium-sized enterprises (SMEs) are becoming an integral part in the structure of the general production process, without which it is impossible to ensure the successful socio-economic development of society and the growth of production efficiency.

The ratification and adoption by 46 countries of the Bologna Charter on Small and Medium Enterprises Support of 2000 (OECD, 2000), is a sign of recognition for the fact that small and medium-sized businesses are an important component of the world economy and its structure, which increases its adaptability and flexibility and strengthens its stability through the employment of new labor.

Small and medium businesses in Ukraine have long been operating under difficult conditions of socio-economic development. In 2014, the country was struck by an economic crisis (for the third time in the history of the country's independence), caused by a geopolitical conflict (temporary occupation of parts of Ukraine's territory, as well as the military and economic aggression of the Russian Federation and the ensuing hostilities) that led to the destruction of production facilities and transport infrastructure, loss of inter-branch and logistic links, increasingly difficult international relations, the inaccessibility of energy raw materials (coal), the significant growth of investment risks and negative expectations of the population. Also, a significant negative impact has been caused by

the accumulated systemic imbalances in the economy, which led to devaluation and inflationary processes. Although the growth of Ukrainian exports in 2017 has somewhat offset the negative impact of the previous years, the loss of a significant part of the country's export potential due to military confrontation in the Donbas region has rendered the restoration of the usual export specialization impossible. Thus, the search for new market niches and potential export directions in foreign markets gains relevance for domestic producers. This requires the implementation of tools for supporting the diversification of export opportunities of enterprises, the removal of barriers to foreign trade for small and medium-sized enterprises (SMEs), which are, as of right now, only slightly represented in foreign markets or are only starting their export activities.

2. Problem statement

The problems and peculiarities of the development of small and medium-sized businesses are given special attention in the works of many Ukrainian and foreign scientists. A number of issues related to the foreign economic potential of SMEs is reflected in the works of Zhalilo (2015), IBurakovsky, Krynytsyna and Sologub (2016); the general issues of identifying and overcoming barriers for SMEs in foreign markets are covered in the studies of international organizations, in particular OECD (OECD, 2008). The constant development of threats for growing the export potential of SMEs requires proposing and improving upon ways of strengthening it on the basis of detection and systematization of obstacles that restrict the opportunities of SMEs in foreign markets. Hence, the purpose of this study is to highlight the current state and nuances of the development of small and medium-sized businesses in Ukraine in recent years and to determine the prospects for their further promotion to foreign markets.

3. Results

One of the main preconditions for the growth of living standards and economic development of the state is the development of entrepreneurial activity. In developed countries, special attention is paid to the development of small and medium-sized businesses, which supports their stable economic situation; in the 21st century, this development e.g. in the EU countries is characterized by the following dominant tendencies:

- SMEs in Western European countries have become highly export-oriented, and the share of their products sold in the foreign market reaches as high as 50% of total export volume.
- SMEs are increasingly attracting foreign investment and transnationalizing their activities. It should be noted that the growing role of SMEs in the

foreign economic relations of their respective countries is associated with a transition to intra-industry (in contrast with inter-branch) international specialization, as SMEs often specialize in the production of components, parts, structural elements, supplying them to large TNCs that assemble the finished products; this is especially characteristic of the world's aircraft, automotive, electrical engineering industries (Duginets, 2018).

- Without small entrepreneurial structures, the full implementation of international scientific and technical cooperation is impossible, as they tend to introduce technological innovations at earlier stages of the life cycle of a particular invention/product, e.g. when the demand for the products offered is not yet saturated and high. Finally, SMEs are not inclined to impose certain obligations and conditions on the customer, which is often practiced by large TNCs. Sale of licenses is the least risky form of entrepreneurship abroad, compared with, for example, the export of capital.

According to EU's Eurostat, of the 20 million active enterprises registered in the member states in 2015, excluding the financial sector, 67.4% were small and medium-sized businesses; furthermore, this share reaches as high as 95% in the UK, Germany, Italy, and France (EU, 2018). This tendency is also typical for the newer EU members: in the second decade of the 21st century, more than 60% of Romania's economically active population is employed in SMEs, accounting for 60% of the gross domestic product, 58% of the total number of transactions and 31% of exports. In the Czech Republic, which is one of the most economically advanced countries among the post-socialist states of Central and Eastern Europe, small business have become a catalyst for reform. The Czech Republic is a country of predominantly small entrepreneurship: its statistic for the amount of small enterprises per 1,000 people (68.4) outmatches those of the EU's developed countries (43 per 1,000 thousand inhabitants) (Eurostat, 2018). It should be noted that SMEs in EU member countries account for more than 50% of GDP, about 30% of total exports and about 10% of foreign direct investment, and about 25% of these companies' products are competitive on external markets (EC, 2013).

In the national production system, small and medium-sized businesses form a widespread network that operates in local and simultaneously foreign markets as suppliers and consumers, that is, participants in intra-economic and foreign trade cooperation. As a consequence, in developed countries, the value added share produced by SMEs exceeds 50% of national GDP, and the number of employees varies from 46% (Germany) to 80% (Japan) (World Bank, 2018).

At the same time, attention is drawn to the various external economic activities of SMEs. According to OECD, every fourth SME in developed countries is oriented onto the foreign market, and revenues from international operations account for 10–40% of their total income. SME exports are estimated to account

for 28–30% of global commodity exports, and the export orientation of SMEs continues to grow, almost 2.5 times faster than the corresponding growth rate of large companies. For the SMEs of the EU, the share of exported products is, according to various estimates, about 20–50%; in the machine-building industry of the USA and Japan, this share constitutes 30–40%. Given the fact that many SMEs operate in a system of subcontracting relationships, their indirect participation in foreign economic relations is significantly higher (EU, 2018).

In developed countries, from 130 to 150 thousand SMEs are employed in foreign trade. For example, the share of US' SMEs accounts for about 20% of the total export of the country, and for the SMEs in Belgium, Germany, the Netherlands, Switzerland and Japan, it reaches as high as 40–50% (World Bank, 2018).

Taking into account the fact that, at present, such enterprises conduct their activity in conditions of severe competition connected with the intensified globalization of the world's economic space, all the countries of the European Union pay considerable attention to stimulating the development of small business (Orlovska, Aliyev & Duginets, 2013). In 2007–2013, the Seventh Innovation Program has been implemented, aiming to support research and development in the unified economic space of member countries. During the creation of this program, a number of measures were taken and in order to increase the engagement of SMEs in competitions; in particular, tender calls are organized, where the main customers are SMEs, or competitions for external support among the SMEs (OECD, 2000). The European Business & Innovation Centers Network (EBN) also plays an important role in co-operation of innovative enterprises. As part of these networks, technoparks, innovation centers, incubators, research institutes, information systems, technology transfer centers and other organizations are actively cooperating (for more details see (Orlovska & Morozova, 2017).

As a result, from 30 to 60% of the aggregate number of SMEs have succeeded in bringing at least one improved or new process or product to the market. According to recent OECD studies, in countries such as Belgium, Great Britain, Ireland, Italy, Portugal, and Switzerland, the innovative activity of SMEs in services is comparable to that of large companies (ECB, 2014). The share of companies handling process innovation (the development of new or significantly improved production methods, changes in equipment or production organization, or both) exceeds the share of companies that work with product innovations (the introduction of technologically new or improved products); meanwhile, large enterprises are mostly active in trading licenses. Small businesses widely employ the organization of joint ventures with foreign participants as a form of conducting foreign economic activity. In this case, as a rule, there is a parity of association – i.e. the consolidation of small business from different countries takes place. At the same time, as we have pointed out earlier, SMEs associate with larger business on

the basis of subcontracting in the course of international industrial and technological cooperation. Large TNCs engage SMEs to produce components that are often innovative products. As an example, the volume of SME-sourced components in the total cost of an automobile manufactured in the European production lines of Volkswagen and Daimler groups amounts 60%; the same parameter in General Motors and Ford is only 50%, and in Nissan and Toyota, it exceeds 70% (EU, 2018).

As for Ukraine, the share of small and medium-sized enterprises in the total number of enterprises in 2017 is respectively 95.5% and 4.4%, which in general corresponds to the level of developed countries of the world (State Statistics Service of Ukraine); it should, however, be noted that their contribution to the creation of value added does not correspond to the level of the EU states, where the average value added produced on SMEs amounts to 50–52% of the national GDP, and even more in some countries (55–62% in France, 57–60% in Italy) (EU, 2018). According to Eurostat, of the 20 million active enterprises registered in the member states in 2015, excluding the financial sector, 67.4% were small and medium-sized businesses; furthermore, this share reaches as high as 95% in the UK, Germany, Italy, and France (EU, 2018).

Loss of competitiveness by some large enterprises and the relative stability of small and medium enterprises in crisis conditions has led to an increase in their share in Ukraine (Tab. 1); in 2016–2017, SMEs accounted for 79.1% of all employment and 59% of value added in terms of production costs, which are higher indicators than in Poland and Germany.

Table 1. Indicators of activity of business entities in the European Union and Ukraine

Subjects of entrepreneurship	Share in the total number of business entities, %				Share in the total employment provided, %				Share in the total value added in terms of production cost, %			
	EU 28	Germany	Poland	Ukraine	EU 28	Germany	Poland	Ukraine	EU 28	Germany	Poland	Ukraine
Microenterprises	92.7	82.16	95.03	96.78	29.2	18.93	36.26	35.19	21.1	15.41	17.94	8.92
Small business (without microenterprises)	6.1	14.87	3.82	2.41	20.4	23.43	14.47	11.74	18.2	18.07	14.19	10.68
Medium businesses	1	2.48	0.95	0.79	17.3	20.41	18.2	32.18	18.5	19.66	20.19	39.4
SMEs total	99.8	99.51	99.8	99.98	66.9	62.77	68.93	79.11	57.8	53.41	52.32	58.99
Large enterprises	0.2	0.48	0.2	0.02	33.1	37.23	31.08	20.89	42.2	46.86	47.68	41.01

Note: the latest available statistics are used: for the 28 countries of the European Union – from 2016; for Ukraine, Poland and Germany – from 2017.

Source: compiled by authors on the basis of (World Bank, 2018).

Subjects of medium-sized entrepreneurship are generally larger than in EU countries, and they form a significant share of value added in terms of production costs (39.1%) and employment (32.2%). Microenterprises constitute a large group, but are not very productive – 35.2% of employed workers and 8.9% of value added in terms of production cost. In the EU, micro enterprises also have a problem of low productivity, with the respective indicators at 29.2% and 21.1%.

It should be noted that the level of participation of Ukrainian small and medium enterprises in export activity is rather low. Among SMEs, the share of exporters is much lower than among large enterprises. Whereas almost half (47.5%) of large enterprises conduct export activities, only 11.7% of small and 19.9% of medium-sized enterprises are present in foreign markets; the export orientation of SMEs is thus much lower than that of large businesses. Large enterprises export 18.1% of total sold products; for small enterprises, this indicator was smaller by a factor of four (4.1%), for medium enterprises – more than twice as small (8.3%) (World Bank, 2013).

The implementation of the Free Trade Agreement between the EU and Ukraine (DCFTA+) creates new opportunities for small and medium-sized businesses both in the domestic and foreign markets (Duginets et al., 2019). With its implementation, DCFTA+ establishes duty-free access to the European market and provides for a reduction of non-tariff restrictions of trade. It should be noted that, at the moment, the role of SMEs in Ukraine's foreign trade is limited. Small and medium entrepreneurship is involved in the production processes of large exporters and receives certain benefits from the liberalization of trade; predominantly, however, SMEs tend to focus on foreign trade in terms of import operations rather than export, due to the following factors:

- difficulty in providing competitive products, whose sales in foreign markets (especially machinery and equipment) are associated with additional issues of certification and implementation of a large number of environmental, safety and quality requirements;
- the need for organizing specialized units that would be able to fully carry out export operations, including after-sales service;
- stringent requirements regarding delivery times present in current commercial practice;
- insufficient availability of specialists in the field of maintenance and sales;
- the existing structure of Ukraine's national exports, dominated by large grain traders and representatives of the metallurgical industry.

Therefore, when entering the external market through exports, domestic SMEs face similar problems as other countries (to a greater extent, developing ones): low-quality products and lack of a production structure that meets international standards; shortage of financial and other resources necessary for en-

trepreneurship abroad; low level of entrepreneurial culture; shortage of personnel for working abroad; lack of information in the field of foreign economic activity; high transport costs; volatile exchange rates, corruption and bureaucratic barriers.

Another important component of SMEs' development is the focus on the innovative component of the goods and services they export; Ukrainian SMEs, however, predominantly participate only in the following directions of Ukraine's international innovation cooperation:

- conducting scientific researches on foreign orders;
- independent research and development on the foreign market (sale of licenses and patents to nearby states);
- technological mediation in the import of ready-made technologies;
- cooperation with larger manufacturers and exporters.

Many European countries have experience in testing innovative products jointly by TNCs and SMEs; in our country, the latter are weakly integrated into the cooperative innovation network. In order to develop SMEs in the field of innovation, it is necessary to involve them in the implementation of the key tasks of regional socio-economic development and in the implementation of effective projects for the development of advanced technologies, associated with small financial and material resources and a short payback period. Guarantee funds formed within a framework of regional SME support funds, the activity of which should be further increased, would become a significant stimulus in this context.

In general, Ukrainian SMEs have developed almost all forms of foreign economic activity that are characteristic of SMEs in countries with a transitory economy and developing countries. However, the export and import of goods, as well as sales or purchases for the needs of large multinational corporations, remain among the most developed and typical forms. Progressive forms of foreign economic activity are at the stage of formation and require proper attention from the state authorities for their development. At the same time, state support should cover a variety of directions for increasing the foreign economic activity of SMEs – from simplifying the conditions for the registration of companies and their taxation to the formation of a reliable mechanism for state guarantee and co-financing of SMEs with the participation of both large business and the state. In the practice of SME support in our country, there is a lack of coordination in the measures of stimulation undertaken, unjustified timeframes and amounts of funding, repetition of one-sided measures, goals, objectives and potential results of the same type in different programs. Overall, even with the successful implementation of some projects, existing government programs supporting SMEs are not effective enough, thus making it necessary to develop fundamentally new institutions and mechanisms for SME support.

Among the main problems of developing the export potential of SMEs in Ukraine are the following: overregulation of entrepreneurial activity and the near impossibility of conducting transparent entrepreneurial activity, widespread corruption, limited access to financial resources [Development of small and medium]. These trends have a negative impact on the state's position in the international Doing Business Index, where Ukraine is far behind the EU (Tab. 2). The information underlying this indicator characterizes the conditions in the country that regulate the activities of SMEs throughout their life cycle, as well as the state of their implementation in practice.

Table 2. Doing Business ranking of some EU member states and Ukraine, 2010–2017*

	2010	2015	2017		2010	2015	2017
Denmark	6	4	3	France	28	31	29
Sweden	18	11	9	Slovenia	43	51	37
Finland	11	9	12	Latvia	27	23	14
Netherlands	29	27	32	Czech Republic	82	44	28
Belgium	22	42	45	Slovakia	40	37	34
UK	4	8	8	Hungary	52	54	42
Luxembourg	42	59	57	Poland	73	32	24
Lithuania	26	24	20	Cyprus	35	64	43
Estonia	17	17	11	Croatia	89	65	49
Ireland	8	13	16	Italy	76	56	50
Germany	21	14	19	Greece	97	61	59
Austria	31	21	21	Bulgaria	51	38	47
Portugal	33	25	26	Romania	54	48	41
Spain	48	33	25	Ukraine	147	96	79

* Malta is the only EU country not included in the Doing Business Index

Source: compiled by the authors on the basis of (World Bank, 2018).

The analysis of the data presented in Table 2 shows that the ranking of leading countries with high index rankings (UK, Denmark) has not changed significantly in the covered time span; countries with an average and low ranking changed their position in the hierarchical table either in the positive (Poland, Greece, Slovakia, Czech Republic, Romania) or the negative direction (Luxembourg, Belgium, Ireland), and some countries such as Estonia, Finland, and the Netherlands remained in the same positions. However, in 2017, many countries have improved their standing: Poland has continued to rise from 32nd to 25th, Spain has risen by 19 positions, and Romania – by 36 positions.

The high level of ease of doing business, coupled with other factors, is linked to specific EU policies for SMEs. For example, Italy has simplified the process of creating enterprises by reducing the minimum capital requirements and

the minimum amount of authorized capital, as well as by optimizing registration procedures; France has simplified the process of creating businesses by reducing the time it takes to register an enterprise through the “Center de Formalités des Entreprises”; Portugal has simplified the taxation regime for enterprises by reducing the rate of tax on profit and lowering the tax rate on part of the taxable profits of income of enterprises that are classified as small and medium enterprises. In addition, the procedure for ensuring the implementation of contracts was simplified by adopting a new Civil Procedure Code aimed at reducing the number of pending cases, optimizing court procedures, increasing the role of judges and accelerating the process of resolving standard civil and commercial trials. As far as Ukraine is concerned, the state policy aimed at creating a favorable environment for the development of small and medium-sized enterprises and facilitating business is producing some results: over the past five years, the country’s ranking in the Doing Business Index has risen from the 152th to 83rd place. At the same time, many barriers to business development remain unsolved, such as the long registration of ownership process and existing problems in ensuring the implementation of contracts, obtaining loans and protecting minority investors.

Domestic subcontractors need effective SME support programs, which would provide effective government procurement preferences, reductions and assistance in lease payments and taxation, a possibility of attracting financial resources (in “soft” forms of support), a system of information and consulting services (including marketing channels for finding partners and customers), large-scale projects on the implementation of quality management systems and cluster projects of large-scale and small-scale cooperation in production. These programs should be interconnected and coordinated at the regional level and based on the monitoring of production and technological capabilities of industrial enterprises. Monitoring should be carried out according to a unified methodology, and its results should provide the basis for decision-making aimed at the development of industry at the countrywide level.

Another significant issue for SMEs is the protection of intellectual property rights. In this regard, it is advisable to create a specialized expert council that would be empowered to draw conclusions on the feasibility of financing the costs of patenting the developments of SMEs and of certification of new products in foreign countries. In financing these costs, it is necessary to apply the system of state guarantees and mechanisms of preferential crediting with the help of authorized financial and credit institutions on the basis of prolonged credit reimbursement. The latter would allow many SMEs that have potential in the innovation field to emerge from difficult situations, which is connected, on the one hand, with the availability of new developments potentially competitive in

external markets and, on the other hand, the impossibility of their marketing on favorable conditions due to the lack of funds for certification and patenting.

4. Conclusion

Summarizing the main provisions and analytical arguments, it can be noted that small and medium-sized businesses form an important component of the world economy and its structure, increasing its adaptability and flexibility, and strengthening its stability through the employment of new labor. In turn, the transformation of global production in the early 21st century causes adjustments to the development of the world economic system. In the last 10–15 years, new resources (highly educated and highly skilled personnel, creative population, innovations, knowledge, information) and tools (management, marketing, branding, outsourcing, offshore etc.) are actively coming to the forefront. Global factors of their use generate them, and are in turn formed by them themselves. All of this makes it increasingly necessary to concentrate on increasing the value added production of small and medium-sized businesses.

In Ukraine, compared to EU countries, the share of SMEs in the total number of enterprises active in 2017 corresponds, in general, to the European level. However, their share of contribution to creating value added in the national economy remains lower than in the EU. Therefore, we believe that the expansion of SMEs' export potential can become a factor in compensating for Ukraine's losses in traditional exports to foreign markets. In recent years, Ukraine has suffered significant losses in industrial capacities, which in previous times used to be a significant factor in the growth of production in the export-oriented industries. Therefore, further research on the export opportunities of SMEs should be aimed at identifying sectoral peculiarities and mechanisms for supporting their entry into foreign markets.

Bibliography

1. Burakovskiy, I., Krinitsyn, O., & Sologub, I. (2016). *SME Export Promotion Policy in Ukraine*. IER. Retrieved on 30/05/2019, from: http://www.ier.com.ua/files//publications/Policy_papers/IER/2016/LEV/Krinitsyn_SME_Export_Promotion.pdf.
2. Duginets, G. (2018). *The Global Value Chains*. Kyiv: KNUTE.
3. Duginets, G., Diachenko, O., Mazaraki, N., & Golovachova, O. (2019). *Deep and Comprehensive Free Trade Agreement with the EU: Advantages and Downsides for the Ukrainian Society*. Kyiv: Kyiv National University of Trade and Economics.
4. EC (2013). *The 7th Framework Programme: Setting a new Standard in European Research*. Retrieved on 30/05/2019, from: https://ec.europa.eu/research/fp7/pdf/fp7-brochure_en.pdf.

5. ECB (2014). *Survey on the Access to Finance of Small and Medium-sized Enterprises in the Euro Area*. European Central Bank. Retrieved on 30/05/2019, from: <https://www.ecb.europa.eu/pub/pdf/other/accesstofinancesmallmediumsizedenterprises201404en.pdf?da920468528300ff549d8cc95522eb81>.
6. EU (2018). *Annual Report on European SMEs 2016/2017 Focus on self-employment SME Performance Review 2016/2017*. Retrieved on 30/05/2019, from: <https://publications.europa.eu/en/publication-detail/-/publication/0b7b64b6-ca80-11e7-8e69-01aa75ed71a1/language-en>.
7. Eurostat (2018). *Small and Medium-sized Enterprises (SMEs)*. Retrieved on 30/05/2019, from: <http://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statistics/sme>.
8. OECD (2000). *The Bologna Charter on SME Policies*. Paris: OECD Publishing.
9. OECD (2008). *Removing Barriers to SME Access to International Markets*. Paris: OECD Publishing.
10. OECD (2010). *SMEs, Entrepreneurship and Innovation*. Paris: OECD Publishing.
11. OECD (2015). *New Approaches to SME and Entrepreneurship Financing. Broadening the Range of Instruments*. Paris: OECD Publishing.
12. Orlovska, J., & Morozova, S. (2017). The Modern Innovative Policy of Leading European Countries: Experience for Ukraine. *Economic Space*, 120, 24–36.
13. Orlovska, J., Aliyev, R., & Duginets, G. (2013). The International Experience of Increasing Enterprise Competitiveness on the Basis of Internationalization Strategies. *Economic Space*, 74. 42–52.
14. *State Statistics Service of Ukraine* (2019). Retrieved on 30/05/2019, from: <http://www.ukrstat.gov.ua/>.
15. World Bank (2013). *World Bank Enterprise Surveys*. Ukraine. Retrieved on 30/05/2019, from: <http://www.enterprisesurveys.org/data/exploreconomies/2013/ukraine>.
16. World Bank (2018). *Doing Business 2018: Reforming to Create Jobs*. Washington, DC: World Bank. Retrieved on 30/05/2019, from: <http://www.doingbusiness.org>.
17. Zhalilo, Y. (2015). *SMEs, Trade and Economic Development in Ukraine*. Geneva: International Trade Centre.

Organisational Quality Culture in Polish Enterprises – Myth or Reality?*

Anna Pietruszka-Ortyl

1. Introduction

Organisational quality culture is the target stage in the evolution of organisational culture in most enterprises operating in the current conditions of the knowledge-based economy. Currently, organisational culture and quality are two crucial, interweaving and complementary key attributes of the company. Both culture and quality, separately, are soft assets of the organisation that determine its market success, and when combined into one – that currently determine its survival and development.

Today, it is assumed that organisational culture is now widely seen as one of the most important and valuable factors in organisational success across a wide variety of business sectors (Taylor & Rostron, 2018, p. 313; Kane et al., 2018, p. 392; Ambekar et al., 2019, p. 146). Because it consists of a cluster of common norms and values, which are formed over a long time and affect the way an organisation works (Ingelsson et al., 2018, p. 1751), nowadays a new organisational culture is developed to support and improve the organisation's core activities (Tenji & Foley, 2019, p. 401).

Today, the focus on quality is a *sine qua non* condition of the functioning and success of an organization and, at the same time, one of the main tasks for managers (Ali & Musah, 2012, p. 289). The philosophy of quality management has evolved from a mere inspection activity to an important managerial function in organization (Gouda et al., 2019, p. 55) – now managing quality is nowadays recognised as one of the most significant core processes (Lobo et al.,

* This publication was financed by funds granted to the Faculty of Management at Cracow University of Economics, within the framework of the subvention for the maintenance of research potential.

2018, p. 1232). It is said that quality shall be a value shared amongst everyone in the organisation: quality is a way of life (Kemenade & Hardjono, 2019, p. 153). “Quality is Value philosophy” concept has emerged (Gouda et al., 2019, p. 56). Thus in quality approach there has been shift in understanding and focus from “hard” aspects such as tools, techniques, practices and systems to “soft” behavioural and cultural elements – organisational culture has become the most significant factor in the success or failure of quality initiatives (Tenji & Foley, 2019, p. 401). Moreover, numerous studies proved that organisational culture is one of the most important variables in the success or failure of TQM implementation (Patyal & Koilakuntla, 2018, pp. 1407–1408). It is acknowledged that, taking into account the fact that strategy must precede culture and culture must be aligned (Kaul, 2019, p. 116), strategic quality orientation should be leveraged from quality culture (Khan & Naeem, 2018, p. 1568).

Having regard to the fact that level of desire to understand and improve quality culture is currently higher than the level of its practical implementation, which is unsurprising for a newly emerging topic (Emond & Taylor, 2018, p. 374), the main purpose of the study is to provide an initial comparative verification of which stage of evolution towards quality culture is represented by companies operating in Poland. Also, the paper aims is to review existing literature on the essence, determinants and dimensions of organisational quality culture.

2. Theory of organizational quality culture

Quality culture is a vast topic – it involves the psychological, technical and managerial aspects, as well as the visible and invisible elements, the stable and dynamic perspective (Taylor & Rostron, 2018, p. 314). It is issue also widely discussed by both practitioners and researchers, but it has no clear definition (Cronemyr et al., 2017, p. 515).

Ali and Musah postulate quality culture is overall attitude of an institution, which focuses on the concept of quality and applies it to all aspects of its activities; an institution as a whole has embraced quality in every element of functionality that enhances continuous improvement; it's a learning culture in which all members of institution are involved in a self-critical assessment and improving culture in which all of the workforce of institution is fully engaged in all activities carried out by the institution (Ali & Musah, 2012, p. 290). Therefore refers to an organisational culture that intends to enhance quality permanently and it is characterised by two distinct elements: on the one hand, a cultural/psychological element of shared values, beliefs, expectations and commitment towards quality and, on the other hand, a structural/managerial element with defined processes that enhance quality and aim at coordinating individual efforts (Nong Ha & Ngoc Quang, 2014, p. 1). Includes therefore to an environment in which employees not only follow quality guidelines

but also consistently see others taking quality-focused actions, hear others talking about quality, and feel quality all around them (Srinivasan & Kurey, 2014, p. 58).

Organisational quality culture may be thus defined through a set of indicators attributed to 3 categories verifying its condition – the level of the employee, the superior and the whole organization (Molenda, 2012, pp. 210–219). It can also be measured in accordance with specific categories (people, processes, proactivity, purpose) and dimensions of these categories (Taylor & Rostron, 2018, pp. 318–325) (Tab. 1).

Table 1. Categories and dimensions of organisational quality culture

Category	Dimension	Essence
PEOPLE	Empowerment	employee participation, employee development, trust
	Reward	how leaders allocate rewards and status, how leaders recruit, select, promote and excommunicate
	Training	individual learning, deliberate role of modelling behaviours, teaching and coaching
	Communication	from senior management to employees – language barrier is an accident waiting to happen
	Teamwork	team orientation, team approach
PROCESSES	Systems	having documented management systems in place
	Management control	what leaders pay attention to, measure, and control on a regular basis
	Effective coordination	requires communication, positive relationships and understanding of the processes, needs and issues of departments outside one's own; collaborative culture
	Consistency	having consistent practices across different people and teams, and also the maintenance of them over time
	Work environment	design of physical space, facades, and buildings
PROACTIVITY	Customer focus	responding to customer needs and creating them due to the organisation offer
	Risk awareness	tendency to take risks, attitude towards him
	Innovation and change	attitudes to change, creating change, innovativeness
	Organisational learning	To recurrence and allow continual improvement; how leaders react to critical incidents and organisational crises
	Investment	how leaders allocate resources
PURPOSE	Vision	formal statements of company vision, goals and/or values that referenced quality
	Strategy	The importance of establishing and implementing long-term quality vision, medium-term quality strategy and short-term quality targets
	Values	formal statements of organisational philosophy, creeds and charters
	Targets	goals orientations and clarity
	Metrics	clear task structure, espoused values, performance measures

Source: prepared by the author on the basis of (Taylor & Rostron, 2018, pp. 318–325).

Concluding, as the basic dimensions of organisational quality culture following issues can be accepted (Khan & Naem, 2018, p. 1579): measurable and

time-based quality goals are included in the development of long-term plans, organisation have common, strict and stables values, beliefs based on trust and openness, quality performance, goals and initiatives are communicated to firm's employees, clients and all stakeholders on regular basis.

Research of literature on the subject and the considerations taken lead to the conclusion that striving to reach the level of organisational quality culture is a process that requires continuous improvement. It may proceed in the following stages: TQM implementation → Organisational Culture → Quality Culture → Organisational Quality Culture (Fig. 1).



Figure 1. Evolution towards organisational quality culture

Source: own elaboration.

At the early stage of quality management implementation, when a quality culture is not firmly established, it is organisational culture that has a strong influence on employee behaviour. Thus, organisational culture, at first, seems a more stable and appropriate predictor than quality culture (Tenji & Foley, 2019, p. 400). Then, we should be aware that the values within the quality culture can be found in the second level of the organisational culture – espoused values (Cronemyr et al., 2017, p. 500). They are associated with the following values: sociability, solidarity, integration, differentiation, fragmentation, consensus, pervasiveness, psychological intensity, adaptability, involvement, consistency, and mission (Tenji & Foley, 2019, p. 408).

In the evolution towards achieving organisational quality culture, we should remember that the primary, parent organisational culture of the enterprise, which can be described as the core-culture, has a significant impact on the course of this process. Core-culture keeps the culture of the organisation vibrant and resilient (Kaul, 2019, p. 120). It would be best for this core-culture to be a quality culture or similar – based on the key attitudes and values of quality culture. At the same time, research shows that community culture seems to be the strongest predictor of reliability, assurance, responsiveness and empathy, while innovative culture was found to have the strongest influence on the tangibles dimension (Karakasna-ki et al., 2019). Also, the group culture and development culture are the most supportive cultures forming both infrastructure and core quality practices. Thus,

managers need to be competent in managing teams, interpersonal relationships and look for innovation and new resources. They should favour teamwork and help individuals improve their performance, expand their competencies and get rewarded for their contribution to better quality (Patyal & Koilakuntla, 2019, p. 1419).

To sum up, in contemporary economy having the right culture – particularly quality culture – is a key success factor for any business (Emond & Taylor, 2018, p. 369).

3. Methodology

Despite of the facts, that culture is highly contextual and requires a research process that facilitates depth and discovery (Taylor & Rostron, 2018, p. 326) and measuring quality culture is not an easy task (Cronemyr et al., 2017, p. 505) but also owing to the observation, that the importance of quality culture is increasingly recognized across a wide range of industries, but the challenges remain in terms of how to quantify and change it (Kane et al., 2018, p. 391), the goal of conducting preliminary research on the condition of the quality culture in enterprises operating in Poland was set.

Having regard to the report, that there is a need for a tool that measures not only quality values but also behaviours that support or obstruct a quality culture (Cronemyr et al., 2017, p. 498), a decision was made to undertake initial research in the field of identified values, actions and attitudes aimed at building a quality culture, taking into account the behaviour of employees, managers and the perspective of the entire organisation. Moreover, an attempt was made to identify the quality culture characteristics in the reviewed enterprises and thus to diagnose in which phase of organisational quality culture development they are.

At the beginning of the research work, whose main objective consisted in a preliminary analysis and diagnosis of the conditions shaping organisational culture in enterprises operating in Poland, the following research hypotheses were formulated:

- prevailing standards of behaviour in enterprises contribute to the evolution of their organisational cultures towards an organisational quality culture,
- there are manifestations of quality culture in enterprises at the level of employee, managers, and the whole organisation,
- the organisational cultures of companies have characteristics of quality culture which affect their survival and development,
- the organisational cultures of enterprises are moving to the last phase of building an organisational culture of quality, that is continuous and holistic creation of quality.

Theoretical assumptions formulated in this way have given rise to the following research questions:

- what are the manifestations of quality-focused organisational culture in the studied enterprises operating in Poland?
- in the companies analysed, are there any obstacles slowing down the pro-quality evolution of their organisational cultures?
- what determinants of quality culture can be observed in the reviewed companies at the level of employee, manager and organisation?
- what actions are taken in the entities reviewed to stimulate the emergence of organisational quality culture?

In order to verify the research hypotheses and to implement the formulated research challenges, empirical studies based on a questionnaire survey were carried out in 2018 and in the first half of 2019. The research tool included 20 closed-ended questions – most of them multiple choice (that is why many of the respondents' answers do not add up to 100%).

As a result, 238 completed questionnaires were collected. Each respondent was from a different organisation. Consequently, it should be acknowledged that the research was only of a pilot and general nature. The respondents were usually employees with an average professional experience of 5.5 years, and in the enterprise described in the survey – 3.5 years. It was therefore possible to assume that they had adequate knowledge of the organisation characterised in the answers to the survey questions.

The business profile of the analysed organisations was diverse too – 28% of the surveyed enterprises are involved in production, 22% in trade, and 40% in services. 10% of the enterprises reviewed represented a mixed profile. Most of them were experienced entities, operating under various market conditions – with an average company age of 15 years.

Thus, the structure of the research sample reflected the general tendencies resulting from the prevailing conditions of the knowledge-based economy, characterised by the services sector taking a dominant role over manufacturing sectors. Therefore, it was possible to speculate that the operation of the majority of organisations reviewed was in line with the principles of the new economy, in which organisational cultures should be knowledge-oriented and their development should be towards a culture of quality, shaped in a conscious and controlled manner, especially in the case of large entities, which were the prevailing group in the sample.

The companies described in the study were also diverse when it comes to size – 21% of them were microenterprises, 23% were small, 24% were medium, and 32% were large organisations. In the respondents' opinion, most of them had a satisfactory financial position (34% of respondents stated that the companies they

described were in a very good financial position, 54% stated good, and 12% stated average). The stable financial situation of the companies reviewed suggested that the surveyed enterprises should represent attitudes of openness, show a greater tendency to take risks, search for new areas of development and be quality-oriented.

4. Results

When seeking answers to the research questions asked, reference was made to answers given by the respondents. First, an attempt was made to analyse and diagnose the stage of evolution of the enterprises reviewed towards a culture of quality. The answers obtained generally indicate that the entities described are moving from the phase of lack of emphasis on quality, to the stage of error detection and prevention of quality errors, and the stage of continuous quality creation. This is evidenced by the frequency of actions and attitudes indicated by the respondents that are an emanation of quality culture, at the level of the employee, manager and organisation. Nonetheless, the respondents simultaneously identify the areas clearly slowing down the achievement of specific development phases towards the stage of full focus on quality, which is suggested by the emergence of quality culture itself and not by its existence in a specific formula.

Arguments confirming this thesis are provided by the respondents' statements relating to the actions and attitudes most often visible in their organisations that prevent the transformation of organisational culture towards one promoting knowledge (Fig. 2). These are mainly: treating knowledge as a source of power (45.17% of responses), allocation of full responsibility for the functioning of organisation only to managers (43%), and keeping financial decisions in total secrecy (44.12%).

The high number of indications regarding the treatment of knowledge as a source of power are worrying. This suggests adopting closed attitudes and exercising power based on available information and knowledge – using them to gain influence in the organisation. This is not a desirable way of operating in contemporary enterprises because such standards of behaviour limit the diffusion of knowledge in organisations, effectively minimising knowledge sharing and limiting attitudes of openness and co-operation.

Reinforced with a formal, strongly hierarchical structure (38% of responses), including strict separations into organisational units (38.5% of indications), risk avoidance (32.85%) and conduct based mainly on clichéd rules (36.32%), they essentially limit the tendency to share knowledge, innovation, search for new solutions or show initiative. A lack of transparency and rigid rules are not conducive to trust or openness and thus limit creativity, commitment and determination to seek perfection, which is manifested in the affirmation of quality.



Figure 2. Obstacles in the evolution towards organisational quality culture identified in the study

Source: own elaboration based on empirical research carried out.

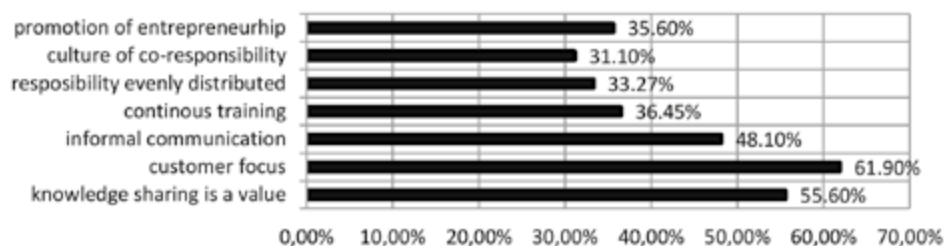


Figure 3. Standards of behaviour that stimulate the emergence of organisational quality culture as indicated in the surveyed enterprises

Source: own elaboration based on empirical research carried out.

Determination to shape a pro-quality organisational culture in the studied organisations is reflected in the most frequent standards of behaviour identified by the respondents, which are obligatory in the organisations described by them: knowledge sharing as a value (55.6%), being “customer-oriented” (61.9%), informal communication methods (48.1%), continuous training and education of employees (36.45%), evenly shared responsibility (33.27%), a culture of shared responsibility (31.1%) and promotion of entrepreneurship (35.36%).

It can be surmised that, according to the indications of respondents, the causal relationship “quality – market success” determined by external factors is becoming more widely recognised in organisations, resulting in the high number of responses selecting customer orientation. Awareness of the importance and dominating influence of external factors on pro-quality orientation is greater.

The respondents chose the internal determinants of evolution towards the organisational quality culture to a lesser extent. At the same time, these lower indications provide direct guidance for managers on the directions of action and places to be emphasised on the way to reaching the stage of continuous quality creation.

Focusing on the 3 identified levels of quality culture indicators (employee, manager, organisation), they were indicated by the respondents to a moderate degree, which further confirms the supposition that the organisations reviewed are just evolving towards a crystallised organisational quality culture (Tab. 2).

Table 2. The indicated determinants of quality culture in the perspective of the employee, the superior and the organization

the employee	
<i>is fully involved in performance of his/her duties</i>	48.3%
<i>has a precisely determined scope of responsibilities</i>	42.3%
<i>is supported by managerial staff in the performance of his/her duties</i>	40.9%
<i>has the opportunity to improve his/her competences</i>	48.8%
<i>complies with the binding procedures. instructions</i>	40.0%
<i>commits to improvement of his/her job</i>	30.0%
<i>is thoroughly familiar with his/her duties</i>	60.9%
<i>has sufficient competencies to perform the assigned duties</i>	37.9%
<i>takes care of his/her workstation</i>	52.47%
<i>is well-motivated to perform his/her duties</i>	36.9%
the superior	
<i>supports employees in performance of their tasks</i>	39.32%
<i>is focused on fulfilment of customer's requirements</i>	60.4%
<i>enables employees to participate in trainings</i>	40.1%
<i>encourages employees to increase their qualifications</i>	32.9%
the organization	
<i>priority treatment of meeting customer's requirements</i>	47.1%
<i>mandatory fulfilment of legal and technical requirements by the product/service</i>	39.7%
<i>cooperation with the best suppliers</i>	37.3%
<i>continuous investment in the most advanced machines and devices</i>	23.6%
<i>very good cooperation between employees</i>	51.0%
<i>elimination of products/services inconsistent with the requirements from the order execution process</i>	19.6%
<i>use of techniques and methods of quality improvement</i>	38.7%

Source: own elaboration.

At the employee level, the pursuit of quality culture is manifested to a large extent through good knowledge of duties (42.3% of answers) and full commitment to the performance of one's own duties (48.3%), the ability to improve skills (48.8%) and demonstrating particular care for the workplace (52.47% of answers).

In the case of managers, their dedication to the development of the quality culture manifests itself in the focus on meeting customer expectations (60.4% of answers) and supporting employees in fulfilling their duties (39.32%), as well as enabling their participation in training (40.1%). The identified actions of managers are consistent with the policy of shaping organisational quality culture and are a response to the need for development of internal quality culture determinants as suggested in previous questions. In turn, leaders should pay more attention to encouraging their employees to upgrade their qualifications (32.9% of answers), while increasing the strength of their real influence on colleagues.

While referring to the level of building a quality culture in the organisation, the respondents most often pointed to very good co-operation between employees (51.0% of responses), encouraging the emergence of voluntary co-operative attitudes and civic behaviour, prioritisation of meeting the expectations of customers (47.1%), mandatory compliance with legal and technical requirements of products/services (39.7%), and the use of techniques and methods for improving quality (38.7%).

Among the observed factors stimulating the emergence of quality culture, the respondents mentioned the following: great freedom of action, teamwork and communication efficiency. Other elements catalysing the emergence of a culture of quality are less evident – openness to changes and proactive attitudes. Therefore, these should be developed and efforts should be focused on them (Fig. 4).



Figure 4. Factors stimulating the emergence of quality culture
 Source: own elaboration.

According to the respondents, the tools most commonly used that stimulate the emergence of a permanent state of organisational quality culture are, in turn: teamwork, fulfilment of obligations to employees, raising awareness of the company's goals and clear principles of conduct, TQM, and management acting as role models of openness and honesty among other behaviours. Professionals are

relatively rarely promoted and trained. Therefore, striving for excellence remains more in the hands of the employees themselves; professionalism is not the focal point and perhaps that is why the respondents emphasise that choosing the right staff is a rare phenomenon (Fig. 5).

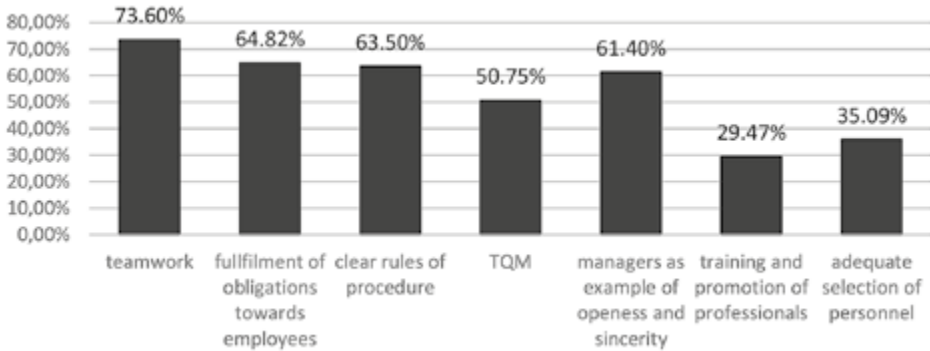


Figure 5. Tools stimulating the emergence of permanent quality culture

Source: own elaboration.



Figure 6. Characteristics of quality culture of enterprises operating in Poland

Source: own elaboration.

To sum up, the surveyed enterprises operating in Poland are undergoing transformations in their organisational cultures towards a quality culture, because the respondents, their employees, indicate in the companies described the features of quality culture that determine their success (Fig. 6). These are: high opera-

tional standards (46.6% of responses), the importance of people in achieving the organisation's success (42.95%), strong values (36.8%) and informal pro-quality behavioural rules (35.62%).

Nonetheless, none of the distinguished attributes exceed 50% of responses, which may suggest that they are following the road to a permanent stage of quality affirmation in each of the mentioned dimensions. Therefore, efforts should be taken to develop the following mechanisms: widely shared philosophy of comprehensive quality management (14,65%), popularization and consolidation of quality culture (26,67%), as well as distinguishing successful people (28,2%) and publicizing their awards in the field of quality (26,67%).

5. Conclusion

Changing organisational culture takes time and effort. Therefore managers should be convinced that the organisational quality culture is worth pursuing. They must have a deep internal conviction that affirmation of quality fosters the success of the contemporary organization. This conviction should be expressed in their actions and attitudes focused on both employees and customers. High quality of human capital management, supported by focus on quality, must be reflected in a culture promoting knowledge, trust, learning, and engagement – quality culture.

The following directives, playing the role of metaphorical signposts, can be helpful for managers in planning the route towards organisational quality culture (Lobo et al., 2018, p. 1247):

- employees feel that they are individually and collectively responsible for quality,
- the role of the specialised quality department is seen as facilitating quality improvement and not being solely responsible for quality improvement,
- the quality department is responsible for initiating, planning or implementing quality initiatives within various departments and also facilitating or conducting quality enhancement efforts under the leadership of top management,
- the organisation has formal quality management practices in all functional areas,
- the organisation acknowledges the importance of functional excellence but focuses on performance achievement.

The analysed results should be treated only demonstratively, as they have clear restrictions due to the size of the research sample and research method – self-designed questionnaire. The study should be considered only as a pilot study, confirming the pursuit of transformation of organizational cultures of companies

operating in Poland into quality culture. It can warrant further scientific exploration of the tackled problems in a cross-section of various sectors and strive to create a comprehensive model of building quality culture, taking account of the perspective of the employee, the superior, the organization, the customer, and the whole sector embedded in the context of cultural diversity or the network society.

Bibliography

1. Ali, H.M., & Musah, M.B. (2012). Investigation of Malaysian Higher Education Quality Culture and Work Performance. *Quality Assurance in Education*, 20(3), 289–309.
2. Ambekar, S., Prakash, A., & Patyal, V.S. (2019). Role of Culture in Low Carbon Supply Chain Capabilities. *Journal of Manufacturing Technology Management*, 30(1), 146–179.
3. Cronemyr, P., Bäckström, A., & Rönnbäck, A. (2017). Quality Culture Deployment – Using Behaviours to Explain, Diagnose and Improve a Quality Culture. *International Journal of Quality and Service Sciences*, 9(3/4), 498–518.
4. Emond, B., & Taylor, J.Z. (2018). The Importance of Measuring Food Safety and Quality Culture: Results from a Global Training Survey. *Worldwide Hospitality and Tourism Themes*, 10(3), 369–375.
5. Endara, Y.M., Ali, A.B., & Ab Yajid, M.S. (2019). The Influence of Culture on Service Quality Leading to Customer Satisfaction and Moderation Role of Type of Bank. *Journal of Islamic Accounting and Business Research*, 10(1), 134–154.
6. Gouda, S.K., Awasthy, P., Krishnan T.S., & Sreedevi R. (2019). What Does “Green Quality” Really Mean?. *The TQM Journal*, 31(1), 52–69.
7. Ingelsson, P., Bäckström, I., & Snyder K. (2018). Strengthening Quality Culture in Private Sector and Health Care. What Can we Learn from Applying Soft Measures?. *Leadership in Health Services*, 31(3), 276–292.
8. Kane, K., Taylor, J.Z., & Teare, R. (2018). Reflections on the Theme Issue Outcomes: Can the Culture of Safety and Quality in Organizations Be Measured and Changed?. *Worldwide Hospitality and Tourism Themes*, 10(3), 391–396.
9. Karakasnaki, M., Psomas, E., & Bouranta, N. (2019). The Interrelationships Among Organizational Culture and Service Quality under Different Levels of Competitive Intensity: An Application in the Shipping Industry. *International Journal of Quality and Service Sciences*, 11(2), 217–234.
10. Kaul, A. (2019). Culture vs Strategy: which to Precede, which to Align?. *Journal of Strategy and Management*, 12(1), 116–136.
11. Kemenade, E., & Hardjono, T.W. (2019). Twenty-first century Total Quality Management: the Emergence Paradigm. *The TQM Journal*, 31(2), 150–166.
12. Khan, B.A., & Naeem, H. (2018). The Impact of Strategic Quality Orientation on Innovation Capabilities and Sustainable Business Growth: Empirical Evidence from the Service Sector of Pakistan. *International Journal of Quality & Reliability Management*, 35(8), 1568–1598.

13. Lobo, R.S., Samaranayake, P., & Laosirihongthong, T. (2018). Quality Management Capabilities of Manufacturing Industries in the Western Sydney Region: Comparative Analysis for Quality Improvement. *International Journal of Quality & Reliability Management*, 35(6), 1232–1252.
14. Molenda, M. (2012). Znaczenie wartości organizacyjnych w rozwoju kultury jakości. *Zeszyty Naukowe Politechniki Śląskiej. Seria: Organizacja i Zarządzanie*, 63a(1891), 210–219.
15. Nong Ha, N.D., & Ngoc Quang, B. (2014). Factors Influencing the Process of Developing Quality Culture at the University of Social Sciences and Humanities, Vietnam National University-Ho Chi Minh City. *Asian Journal of Humanities and Social Sciences*, 2(4), 1–9.
16. Patyal, V.S., & Koilakuntla, M. (2018). Impact of Organizational Culture on Quality Management Practices: an Empirical Investigation. *Benchmarking: An International Journal*, 25(5), 1406–1428.
17. Srinivasan, A., & Kurey, B. (2014). Creating a Culture of Quality. *Harvard Business Review*, April, 1–8.
18. Taylor, J.Z., & Rostron, K.I. (2018). The Development of a Safety and Quality Culture Assessment Tool from a Longitudinal, Mixed-method Research Journey. *Worldwide Hospitality and Tourism Themes*, 10(3), 313–329.
19. Tenji, T., & Foley, A. (2019). Testing the Readiness of an Organisational Culture Profile to a TQM Implementation. *The TQM Journal*, 31(3), 400–416.

Performance Management and Business Performance Management as Controller's Supporting Contemporary Management Concepts*

Janusz Nesterak, Anna Charytanowicz, Olga Malinowska,
Dariusz Put, Wojciech Szymła

1. Introduction

When considering controlling as a concept of supporting management processes, particular attention should be paid to contemporary management concepts that strongly support the controller in implementing the entrusted tasks. Herein, the main and most desirable management concepts are: *Business Process Management*, *Knowledge Management* and organizational learning, Total Quality Management, Kaizen and *Time-Based Competition/Time Based Management*.

Performance Management and Business Performance Management (BPM) systems are now of particular relevance (Miranda, 2004). They constitute a combination of strategy, advanced information technology and management methods that enable effective implementation of the company's business goals (Ariyachandra & Frolick, 2008, p. 113). BPM is a new phenomenon in business analytics, as the first systems of this type appeared a little over 10 years ago¹. According to the Business Performance Management Standards Group, BPM “*is a methodology to optimize the execution of business strategy that consists of a set of integrated, closed-loop, analytic processes, supported by technology, that address financial as well as operational data. BPM enables a business to define, measure and manage its performance against strategic goals*” (Business..., 2005). BPM can be considered

* The publication has been financed by the funds allocated to the Department of Economics and Organization of Enterprises at the University of Economics in Cracow in the framework of grants to maintain research potential.

¹ The terms are used interchangeably: Corporate Performance Management (CPM) or Enterprise Performance Management (EPM).

as being a holistic company management system based on performance monitoring, oriented at achieving set business goals (Hossain & Prybutok, 2008).

The aim of the study is to provide a synthetic description of the listed management concepts supporting the modern controller. In doing so special emphasis is placed upon Performance Management.

2. Management concepts supporting the controller

The Process Management Method has achieved a high level of perfection. It is widely discussed in literature, at conferences and in specialized scientific journals (including the *Business Process Management Journal*). Indeed, many universities have separate faculties to study and teach process management methods (Fettke, Houy & Loos, 2010) and the number of practical applications of the method is increasing.

The term “process-oriented management” in the subject literature is identical with the concept of “process management”, a term that better reflects the meaning of the widely understood notion of process management (Korsan-Przywara & Zgrzywa-Ziemak, 2011). It is also often seen as a new field and a dominant paradigm in management (Romanowska & Trocki, 2004; Kafel, 2005; Nesterak & Staszczyk, 2012). In the opinion of Perechuda (1999), this method is a response to the growing turbulence within the outer and inner environment of the organization, the increased complexity of internal and external processes, individualization of customer needs and expectations, short product life cycles and increased importance of intangible assets and deregulation of the market competition system. The author’s opinion is that the functional approach to management in which it is held that the company operates on the basis of strictly defined individual units’ tasks wherein all business processes are subordinated to the organizational structure, does not work in modern economic practice. Controlling enforces the implementation of a process management approach that groups activities into systems of processes transforming them into products or services in subsequent phases. It also obliges the enterprises to flatten the organizational structure, to introduce orientation to task implementation and to increase the autonomy of personnel. This, in turn, influences the optimization of the needed resources and the reduction of business costs, and, thus, give the company a significant advantage in today’s competitive market.

Knowledge management and organizational learning (KM & OL) are management concepts that rely on building the company’s potential by acquiring and implementing knowledge about its operations. An organization is described as “learning” when it consciously uses its potential to improve its functioning. The learning is based on five pillars: systemic thinking, personal mastery, thought models, common vision building and team learning (Maier, 2002; Mikuła, 2006;

Senge, 1998). Systemic thinking is based on looking for multidimensional dependencies that together influence the company's success. Personal mastery concerns the motivation of each employee in the field of self-improvement and self-development. Common vision building is associated with the employees' identification with the established development direction and the adopted system of values. Team learning refers to the processes of sharing knowledge in the organization and providing the conditions for using knowledge to build its potential. Knowledge management and organizational learning is also related to: benchmarking, coaching and mentoring, as well as competency management.

Total Quality Management is the result of the experience of combining the three styles of economic management that was practiced in Europe, the USA and Japan. The inspirers of this concept were the American researchers, Shewhart, Deming, Juran and Feigenbaum. In the early post-war years in Japan, they initiated the creation of the *Quality Control* concept (Zymonik, 2006), which was transformed into *Total Quality Control*, and by then, the already-typical Japanese *Company Wide Quality Control* was adopted by practitioners and theoreticians in accordance with the title of the book Oakland published in 1989 *Total Quality Management* (TQM). *Total Quality Management* is a concept that has its own specific philosophy aimed at stimulating people to act. As part of it, several methods and techniques have been developed for several dozen years to improve organizational management. The controlling dimension of TQM come into being through the adaptation of improvement tools and continuous improvement activity. The main principles of this concept are customer orientation, process approach, leadership, employee engagement, a systematic approach to management and continuous improvement.

Kaizen and the elimination of waste are concepts that form part of the unique Japanese management model of the *Toyota Production System* (TPS), which can be used by controllers in economically developed enterprises. TPS includes the culture principles adopted at Toyota, as well as the company's way of perceiving the world and conducting business. The system focuses on the organization of production and logistics, including establishing positive relationships with suppliers and customers. TPS is a conglomerate of many techniques, concepts and principles aimed at eliminating 3M (i.e. Muri – overburden, Mura – unevenness, Muda – waste). It is based on two pillars: “continuous improvement” (Kaizen) and “respect for people”. The Toyota production system is used in the Kaizen concept as a checkpoint to help employees and management identify areas for improvement. It is a system that uses the PDCA (aka – Deming cycle) approach (*Plan-Do-Check-Act*) to include every employee in the organization in reducing costs, solving problems and improving quality and safety. According to Ohno, in today's enterprises there are seven forms of waste: transport, inventory, motion, waiting, over-processing, overproduction and defects (Ohno, 1995).

In enterprises that do not use Japanese management methods, the presented situations are often treated as normal phenomena that always accompany business processes, and not the sources of potential savings. Countering wastage in the Japanese management model is associated with the application of continuous improvement through the implementation of a large number of minor improvements – the author of which are most often production workers. This approach is the essence of the Kaizen concept (Imai, 2006). Other notable features that distinguish the Japanese management approach that are increasingly widespread around the world, are: team work and job rotation, process management and work standardization, ongoing reporting of results, customer focus and added value priority, immediate elimination of error causes and treatment of employees as the most important resource within the organization.

Time competing is about building a market advantage by optimizing the course of business processes taking place in the enterprise. Effectiveness of management in the discussed concept is related to the implementation of these processes in a shorter time than the competition. This requires continuous comparisons with other organizations and immediate response by introducing changes to the processes carried out (Laskowska, 2001). By way of the use of available tools, the controller can affect the increase of effectiveness of the processes carried out, in the area of time to market a new product or the introduction of product to the new market, contractor service time, as well as time to adapt to change in demand.

3. Performance Management and Business Performance Management in controlling

Contemporary management exists within highly dynamic environments and faces strong developmental pressure that is forced by increased competition and high customer expectations. It requires from controllers and managers, the usage of comprehensive information in their decision-making processes. In organizations, specialists have to be transformed into multifunctional and multidimensional teams, providing solutions to any of the company's problems. However, creating an effective team of leaders requires breaking with many traditions, in particular, with the division into organizational functions. This division is inconsistent with the creation of a company oriented towards process and project implementation of operational and strategic tasks. Such an approach is the essence of the Performance Management concept (PM), which is in current Western practice, and is facing constant development². As a result, new solutions

² The pioneers of *performance management* in the 1970s were Beer and Ruth from Harvard University.

and tools are emerging to support the application of this approach in daily business practice.

In Poland, so far, the issue of Performance Management has not been the subject of wider publications (see more: Nesterak & Ziebicli, 2011; Nita, 2010, 2011; Skoczylas, 2012). The few studies present this issue only in terms of business unit financial management.

Performance Management refers to the assessment of all results obtained in an enterprise, both “hard” and “soft”, financial and non-financial. For this reason, this concept fits perfectly into the tasks performed by controllers and is a comprehensive tool for controlling the company’s operations based on the results achieved by individual managers of responsibility centres.

Initially, PM was a novel concept of personnel management which consisted of the integration of management by objectives, employee appraisals and remuneration based on the achieved results. Prior to the implication of PM, the previously mentioned tools were used independently and without correlation. The proposed approach, which was first implemented in Corning Glass Works, aimed to strengthen the link between the organizational goals and the incentive system (Beer & Ruth, 1976). However, this approach was not systemic in nature and could not be considered as a solution that would set out a new concept for business management. The evolution of performance management led to the emergence of *Business Performance Management* (BPM)³ at the beginning of the 21st century, the development of the importance of decision support systems and an innovative approach to economic and financial analysis, which broadened the scope of the controller’s tools (Fig. 1).

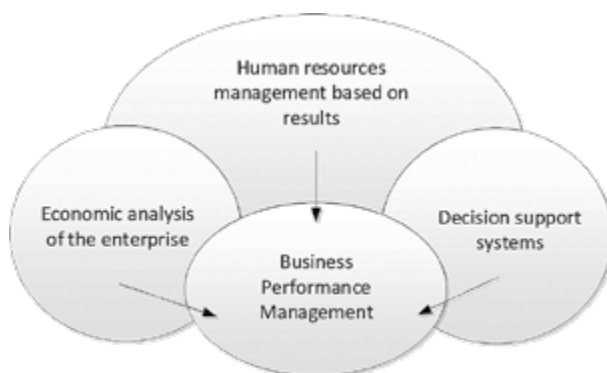


Figure 1. The beginning of Business Performance Management

Source: (Ziębicki, 2011, p. 15).

³ Also referred to as *Corporate Performance Management (CPM)* or *Enterprise Performance Management (EPM)*.

BPM is a combination of strategy and advanced IT technology of the Business Intelligence class, enabling effective implementation of business goals (Ariyachandra & Frolick, 2008). The main focus is on the effective use of data analysis in the business management process. The essential part of the discussed systems are management methods based on results, integrated into a comprehensive management system, using the capabilities of *Business Intelligence* solutions. The evolution of the approach to the economic and financial analysis of the enterprise was also of great importance for the development of *Business Performance Management*. Herein, it moves away from traditional hard and financial areas of analysis and focuses interest on the long-term, intangible and acquired skills of personnel that have a decisive impact on the competitiveness of the company. In Poland, however, the analysis model based on financial accounting still dominates the practice its enterprises and administrative units. In the literature, *Business Performance Management* methodology is presented as both: a comprehensive enterprise management system and a decision support system. The first approach is focused upon organization and uses the PDCA improvement model, the second one is tool-based and focuses on the use of information technology in business processes. Implementing PDCA consists of five stages: modelling, implementing, monitoring, analysing and operational activity (Ballard et al., 2005). Figure 2 presents a methodology integrating both approaches.

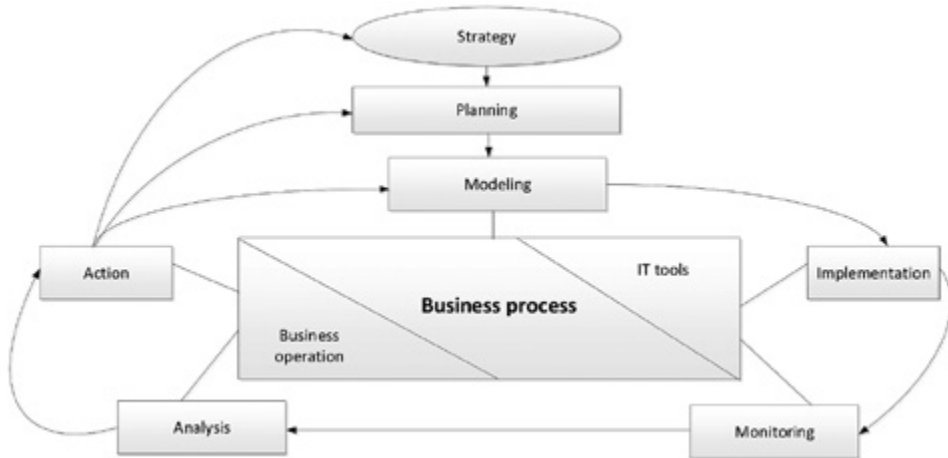


Figure 2. Methodology of Business Performance Management

Source: (Ziębicki, 2011, p. 25).

The starting point in BPM methodology is setting strategic missions and targets, on the basis of which plans to achieve goals are built. Modelling consists of defining Key Performance Indicators and critical events (alerts) for ongoing

processes, depending on the cause and effect of the adopted objectives. An important element of the implementation is defining the scope of service and scale of access to the system. The purpose of monitoring the implementation of business processes is the ongoing assessment of deviations from accepted plans and the occurrence of critical events for these processes. BPM also enables conducting multidimensional analyses, both in the short-term and in the long-term perspective. These assessments are the basis for taking corrective actions on an ongoing basis (Ziębicki, 2011, p. 25).

4. Business Performance Management as a consequence of the development of Business Intelligence

The use of Business Performance Management systems is associated with numerous benefits (Eckerson, 2004; *Business ...*, 2005):

- better control and better ability to influence business processes in the company,
- integration of many independent processes into one coherent system,
- improvement of strategic planning and more effective implementation of the strategy,
- a holistic approach to management,
- faster response to specific events,
- improvement of business results.

In many studies, Business Intelligence and Business Performance Management systems are treated as identical (see: Orzechowski, 2005; Surma, 2006; Kochański, 2005). In Western sources, however, there are clear differences between these systems, and BPM is considered a broader category that is the result of development and broadening of the use of Business Intelligence (Nesterak & Ziębicki, 2012; Nesterak, 2013). The differences between BI and BPM are presented in Table 1.

The first difference between BI and BPM systems lies in the range of use. BI systems are usually put into place at the individual department level, while BPM systems are used at the level of the entire organization. BI systems are also mainly a tool for analysts, while BPM solutions are available to all employees (Nesterak, 2015, p. 69). Furthermore, the scope of data processing in the case of BPM is more complex. In BI, these are primarily different analyses, while in BPM, specific recommendations and action indications are obtained. This is related to the way the data is presented. In the case of BI, the results are presented in the form of various types of comparisons, as comparative indicators. In BPM, more synthetic information is presented that is in the form of KPIs which are, displayed in the form of managements dashboards and scorecards. BI systems are based pri-

marily on historical analysis of events. BPM systems, however, relate to the current time, and also introduce elements of forecasting specific phenomena. It can therefore be assumed that BPM is a concept, the aim of which is to obtain more synthetic information than in the case of BI that is, in the form of specific decision-making decisions related to the implemented strategy (Ballard et al., 2005).

Table 1. Comparison of Business Intelligence and Business Performance Management

Comparison criteria	Business Intelligence	Business Performance Management
Implementation	in different departments	in the whole enterprise
The nature of the analysis	Historical	up to date
The nature of the decision	strategic and tactical	strategic, tactical, operational
Members	business analysts	all employees
Influence	Reaction	proaction
Results	Analysis	action recommendations
Nature of processes	Endless	finished
Measures	indicators	KPI – key measures of results
Scope of results presentation	general	according to individual needs
Results presentation tools	tables, charts, reports	dashboards and score cards
Cooperation	informal	wide, developing as needed
Logic of system operation	answers to inquiries	signaling threats
Data	structured	structured and unstructured

Source: (Ballard et al., 2005, pp. 28–29).

5. Conclusion

Business Intelligence systems should be treated as a standard tool that enables conducting multidimensional business analyses that support the work of controllers. By way of to the use of Business Intelligence, the quality of decisions and the effectiveness of the company's operation are increased. The efficaciousness of these systems depends, however, largely on the skills of employees and the degree of integration with the business management system. Performance Management and Business Performance Management systems makes it possible to produce a comprehensive business management system that is oriented towards achieving business goals. PM and BPM are the latest generation of decision support systems and were created as a result of the widening of Business Intelligence applications. As the Business Performance Management tools market is growing dynamically, it should be expected that these solutions will gradually replace today's Business Intelligence tools.

Still, the degree to which the methods, techniques and concepts of controlling presented above work in practice will decide the determination of the board and controllers and above all, the dynamics of the entire management team.

Bibliography

1. Ariyachandra, T.R., & Frolick, M.N. (2008). Critical Success Factors in Business Performance Management – Striving for Success. *Information Systems Management*, 25(2), 113–120.
2. Ballard, Ch., White, C., McDonald, S., Myllymaki, J., McDowell, S., Goerlich, O., & Neroda, A. (2005). *Business Performance Management...Meets Business Intelligence*. US: International Business Machines Corporation.
3. Beer, M., & Ruth, R.A. (1976). Employee Growth through Performance Management. *Harvard Business Review*.
4. *Business Performance Management. Nowa generacja systemów Business Intelligence*, Business Vision, *Business Performance Management: Industry Framework Document* (2005). BPM Standard Group. Retrieved on 20/06/2013, from: <http://bpmstandards-group.org>.
5. Eckerson, W. (2004). *Best Practices in Business Performance Management, Business and Technical Strategies*. "TDWI Report Series". Retrieved on 19/01/2018, from: http://download.101com.com/tdwi/research_report/2004_Best_Practices_Business_Report.pdf.
6. Hope, M., & Kral, Z. (Eds.) (2011). *Współczesne metody zarządzania w teorii i praktyce*. Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej.
7. Hossain, M.M., & Prybutok, V.R. (2008). Integration of the Business Performance Management Framework and the Malcolm Baldrige National Quality Award Framework to Address Enhanced Competitiveness. [in:] *Proceedings of the Decision Sciences Institute, Baltimore, Maryland*.
8. Houy, C., Fettke, P., & Loos, P. (2010). Empirical Research in Business Process Management – Analysis of an Emerging Field of Research. *Business Process Management Journal*, 16(4), 619–661.
9. Imai, M. (2006). *Gemba kaizen. Zdroworozsądkowe, niskokosztowe podejście do zarządzania*. Warszawa: Wydawnictwo MT Biznes.
10. Kafel, T. (2005). Metodyka zarządzania procesowego w organizacjach gospodarczych. [in:] J. Skalik (Ed.), *Zmiana warunkiem sukcesu*. Wrocław: Wydawnictwo Akademii Ekonomicznej.
11. Kočański, T. (2005). Informacja i wiedza w koncepcji Business Intelligence. *Ekonomika i Organizacja Przedsiębiorstwa*, 11.
12. Korsan-Przywara, P., & Zgrzywa-Ziemak, A. (2011). Zarządzanie procesowe. [in:] M. Hopej & Z. Kral (Eds.), *Współczesne metody zarządzania w teorii i praktyce*. Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej.
13. Laskowska, A. (2001). *Konkurowanie czasem – strategiczna broń przedsiębiorstwa*. Warszawa: Difin.
14. Maier, R. (2002). *Knowledge Management Systems. Information and Communication Technologies for Knowledge Management*. Heidelberg, Springer-Verlag Berlin.
15. Mikuła, B. (2006). *Organizacje oparte na wiedzy*. Kraków: Wydawnictwo Akademii Ekonomicznej w Krakowie.

16. Miranda, S. (2004). Beyond BI: Benefiting from Corporate Performance Management Solutions. *Financial Executive*, 20(2), 58–62.
17. Nesterak, J. (2013). Controlling and Performance Management as a Business Management Concepts. [in:] A. Mazaraki (Ed.), *Strategy of Enterprises in the Waiting Period of the Crisis: Economic, Social and Legal Aspect*. Kyiv: Kyiv National University of Trade and Economics.
18. Nesterak, J. (2015). *Controlling zarządczy. Projektowanie i wdrażanie*. Warszawa: Oficyna a Wolters Kluwer Business.
19. Nesterak, J., & Staszczuk, J. (2012). Development and Implementation of Performance Management. *Verejná Správa a Spoločnosť*, 13(1), 62–72.
20. Nesterak, J., & Ziębicki, B. (2012). Od business intelligence do business performance management. *Przegląd Organizacji*, 6, 39–43.
21. Nesterak, J., & Ziebicli, B. (Eds.) (2011). *Performance Management. Concepts and Methods*. Kraków: Fundacja Uniwersytetu Ekonomicznego w Krakowie.
22. Nita, B. (Ed.) (2010). *Performance Measurement and Management. Concepts and Applications*. Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu
23. Nita, B. (Ed.) (2011). *Performance Measurement and Management*. Research Papers of Wrocław University of Economics No. 177. Wrocław: Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu.
24. Ohno, T. (1995). *Toyota Production System, Beyond Large-scale Production*. Portland: Productivity Press.
25. Orzechowski, R., (2005). eBusiness Intelligence. *E-mentor*, 2.
26. Perechuda, K. (1999). *Metody zarządzania przedsiębiorstwem*. Wrocław: Wydawnictwo Akademii Ekonomicznej im. Oskara Langego.
27. Romanowska, M., & Trocki, M. (2004). *Podejście procesowe w zarządzaniu*. Warszawa: Oficyna Wydawnicza Szkoły Głównej Handlowej w Warszawie.
28. Senge, P. (1998). *Piąta dyscyplina. Teoria i praktyka organizacji uczących się*. Warszawa: Dom Wydawniczy ABC.
29. Skoczylas, W. (2012). Performance Measurement w tworzeniu wartości małych i średnich przedsiębiorstw. *Zeszyty Naukowe Uniwersytetu Szczecińskiego, Finanse, Rynki Finansowe, Ubezpieczenia*, 737(56), 235–248.
30. Surma, J. (2006). Systemy wspomaganie decyzji biznesowych w kreowaniu wartości firmy. *Zeszyty Naukowe. Prace Instytutu Ekonomiki i Organizacji Przedsiębiorstw/Uniwersytet Szczeciński*, 48(2), 801–809.
31. Walas-Trębacz J., (2013). Analiza procesowa w doskonaleniu łańcucha wartości przedsiębiorstwa produkcyjnego. *Ekonomika i Organizacja Przedsiębiorstwa*, 11(766), 41–54.
32. Ziębicki, B. (2011). Business Performance Management – a New Concept of Performance Management. [in:] J. Nesterak (Ed.), *Business Performance Management. Concepts and methods*. Kraków: Fundacja Uniwersytetu Ekonomicznego w Krakowie.
33. Ziębicki, B. (2013). Performance management jako holistyczna koncepcja zarządzania organizacją. *Zeszyty Naukowe Uniwersytetu Ekonomicznego w Krakowie*, 905(05), 55–68.
34. Zymonik, Z. (2006). Japońska rewolucja jakości – tworzenie koncepcji Quality Control. *Problemy Jakości*, 38(12), 9–14

**University Internationalization:
A Bright Light in a Dark Economy
– How to Use Cross-cultural Marketing
to Expand the International Student Population
in the Italian University System**

Mary Ellen Toffle, Antonino Germanà, Giuseppe Lucchese,
Francesca Scribano, Francesca Pollicino

1. Introduction

The University of Messina is a public Italian university located in Messina, in the region of Sicily. Sicily (including Messina) is located at the crossroads of history and culture. A very brief summary of the immense cultural heritage of Sicily is necessary to understand the incredible cultural diversity it offers to international students. Many cultures have passed through and left their mark. Prehistoric peoples such as the Elymians, Sicani, Siculi and Proto-Celtic peoples left their mark. The Phoenicians settled in western Sicily, followed by the Carthaginians around 500 B.C. (Moscati, 2001). The Phoenician/Carthaginian period (1100–210 B.C.) was followed by Greek rule which lasted from 750–242 B.C. Then the Romans conquered Sicily and took control of all of Sicily except Syracuse. Sicily became an import agricultural province of the Roman Republic and afterwards the Roman Empire. The Roman Period lasted more than 600 years (242 B.C.-440 A.D.), followed by the Franks (280 A.D.-Syracuse) and some 200 years later the Vandals seized all of Sicily. Then during the Gothic War between the Ostrogoths and the Byzantine Empire, Sicily was taken over again. It became the military base for the Byzantines and at one time almost became the new capital of the Byzantine Empire. Then Sicily became part of a Byzantine province joined with Calabria. Then the Muslim conquest began in 826, with a short Viking period in between. Muslim domination lasted from 831–1072. The Norman Period followed from 1068–1194. After the Norman Period came the Hohen-

staufen or Swabian period (1194–1266). The most important figure of that time was Frederick II, or Frederick I of Sicily who is credited with important contributions to the arts, standardization of the Italian language and legal system. Then the Holy Roman empire ruled from 1198–1266 followed by the brief Angevin (1266–1282) rule, followed by the Aragonese rule which lasted more than 400 years (1282–1713). The Savoys took over for a very short time (1713–18) followed by the Bourbons for over 100 years (1734–1861). Finally, Sicily has been part of Italy since 1860 (Privitera, 2008). One can only imagine the incredible cultural richness. Probably no other country in the world has lived through so many conquests and dominations as Sicily. This has left its mark in so many ways, including food, cultural practices, art forms, dialects, values and the people themselves.

The University of Messina was founded in 1548 by the Jesuits. Before that it was a law school founded in the last part of the 13th century. The University has passed through drastic changes, turmoil and even earthquakes, but has always renewed and re-invented itself. Today it is a modern and progressive university with the motto “tradition and change in the heart of the Mediterranean” that provides educational services to more than 26,000 students and employs over 2000 professors and administrative personnel. It is the largest provider of work for the city of Messina, a city of 234,000 inhabitants and is the cultural and social backbone of the community. It has 12 departments and offers 81 degree programs on 4 campuses.

2. Internationalization of the Italian University system

The internationalization process in the Italian university system began with the Bologna Process, (1999) which is an intergovernmental cooperation between European countries to ensure comparability in the standards and quality of higher-education qualifications. It is known as the Bologna Process because the Bologna Declaration was signed at the University of Bologna in 1999. The process created the European Higher Education Area under the Lisbon Recognition Convention. The group involved in the Bologna Process has meetings every three years and continues to develop and improve the cooperation between different national education systems. It is responsible for the creation of the three-cycle system of university degrees, has strengthened quality assurance, and made it easier to obtain and transfer credits from one university to another. It was set up to assist public authorities, universities, teachers and students together with stakeholder associations, employers, quality assurance agencies, international organizations and institutions, including the European community on how to improve the internationalization of higher education (ec.europa.eu 1999). Motivating advantages include the compatibility of education and professional qualifications, easi-

er movement in the labor market, modernization of education and training and quality improvement. The Bologna Process was preceded by the Lisbon Recognition Convention, officially the Convention on the Recognition of Qualifications concerning Higher Education in the European Region (1997). The Lisbon Convention is an international convention of the Council of Europe in conjunction with UNESCO. The purpose of the Lisbon Convention was to promote the internationalization of standards and requirements of European universities. It defined the system of ECTS which can be used in any member university by students from other countries to earn recognized credits. The object was to simplify the legal framework at the European level and structure the recognition of qualifications from one university to another in order to promote mobility (coe.int 1997).

Why internationalization for Italy? Of course, the obvious and primary reason is to be an active participant in the European Union and cooperate with European initiatives. However, there are others. One powerful reason is to promote cultural synergy. That means to generate new ideas, foster creativity, and in some way promote world peace. These are idealistic reasons that are valid anywhere. However, on a more pragmatic level, the university system in Italy is currently experiencing low enrolment for both demographic and social reasons. Currently many Italian universities are having problems in filling their courses and maintaining current levels of financing. Secondly, there is an increasing brain drain to foreign countries. Italy is losing its best minds to other countries that offer better opportunities (La Stampa, 2018). More than half a million young people have emigrated from Italy. One can only guess that there will be a shortage of professional workers in the future as well as contributors to the social security system. Consequently, increasing the population with well-educated and 'Italianized' workers is not a bad idea, if students decide to stay after they graduate.

Internationalization can bring in more students. It can fill classrooms and occupy professors. It brings new ideas, ways of seeing the world, and skills. It can help reduce the brain drain, or at least, it can provide more 'brains' who perhaps are motivated to stay and support Italy. But one very significant aspect is the economic impact of incoming foreign students who inject the Italian economy. As of 2018, it was estimated that there were more than 826,000 foreign students. A quick calculation of how much money these students spend in Italy yields a very positive financial injection into the lagging Italian economy. On balance, local students, professors, members of the community all benefit from the presence of international students. Creating a more multicultural environment brings more creativity, innovation, new ways of thinking. To quote the creator of the world wide web Tim Berners-Lee, "We need diversity of thought in the world to face the new challenges".

In the end, there are overwhelming reasons to conduct internationalization.

3. Description and report of Internationalization process of the University of Messina

The purpose of this paper is to report the results obtained by the University of Messina in the area of internationalization, specifically in the area of student recruiting. Since 2014 the University of Messina has adopted an aggressive internationalization campaign aimed at increasing the international student population, the number of incoming and outgoing mobilities and visiting professors/researchers coming and going. The results have been excellent. There has been an increase of 285% of international students enrolled since academic year 2014–2015. The University of Messina has now more than 300 Erasmus+ international institutional agreements with European Partners. There are 132 bilateral agreements with foreign universities all over the world. An innovative program has just been created, “Students Around the World” which is sending students to partner universities outside of the European Union, such as to Brazil, Argentina, and other places. Various programs such as the Visiting Professor/Researcher and the Mobility Program encourage the exchange and mobility of professors and researchers. Over the last years the International Staff, including the Vice-Rector of Internationalization and the authors of this article, have travelled to China, Southeast Asia, South America, North America and elsewhere recruiting students and promoting exchange and research.

The following comments give some idea of the vast amount of planning and work that go into the process of increasing internationalization. It is a group project, which requires a strong team effort and a joint vision.

4. Reporting from the International Cadre

The amazing 285% increase over five years deserves some discussion. The following section summarizes the answers to four key questions posed to the International Cadre who were on the front lines of the internationalization process for the University of Messina. Professor Antonino Germanà, the Vice-Rector of Internationalization, Dr. Giuseppe Lucchese, Head of the Welcome Office and Global Engagement, and Dr. Francesca Scribano, Head of Cooperation offered the following answers.

4.1. Question 1:

What are the biggest cross-cultural challenges you have faced when recruiting?

Germanà: The hardest challenge I encountered was to introduce our university abroad. We were just entering the international arena, and weren't very

well known. I needed to communicate the positive aspects of our university, our city, to show foreign students and university personnel that our university is great. The message I wanted to give and continue to communicate is that university is great, and the city is safe, and students can live peacefully and study in a high-level university.

Lucchese: We do our homework, someone on staff does research on the cultures and cultural values of the places we are going to market to; also some history and general knowledge is very helpful. Another thing that really yields results is knowing one or two words in the languages of the countries where we are going.

Scribano: The most difficult thing for me was answering the students' questions about their cultural differences as compared to ours. For example, they might ask about differences for female students, or Muslim students. They want to be reassured that everything is going to be fine and they won't have any problems with their cultural differences.

4.2. Question 2:

How do you adjust for cultural differences in your presentations and communication?

Germanà: I speak English or Spanish, depending on where I go; I try to speak as clearly and precisely as possible, and include a lot of images in my presentations. I use videos of students who have spent time at the University of Messina, and are satisfied with their experience. That seems to be working very effectively.

Lucchese: I try to identify the cultural values of the countries I am in, what the students are looking for, and try to show that our university can meet their needs. I mention the areas that I think are important to them, for example, in a culture where relationships are important, I stress the fact that our university and city is very friendly and that our current students have made good relationships. On the other hand, if students of a particular country are looking for work opportunities in Europe, I stress the fact that they will earn a European degree.

Scribano: I try to be as neutral as possible, be open, try not to look at the students strangely. I try to communicate a sense of friendliness. I am also very conscious of my body language.

4.3. Question 3:

What are some problems you encounter with the internationalization process?

Germanà: I have met with a lot of obstacles. The first and foremost is the cultural issue and convincing students that going abroad isn't a waste of time. They have to be told that there are many advantages, they will find better work opportunities, learn a new language. It's important for our students to be com-

petitive. That's why our university invests money and energy to convince the students to go abroad. Also, the professors can be difficult to convince. They can feel less valued if the students want to go abroad and do their exams in a foreign university. They have to be convinced that internationalization is a positive thing. All the students who go abroad, they come back more openminded with more potential to find a job.

Lucchese: Possibly the biggest challenges I have encountered are not just going to foreign countries, adjusting to time differences, dealing with new people and places, exhaustion, etc. I think it is very difficult to get different departments to cooperate at the same time. Some departments are just not ready to deal with foreign students. They do not speak English or any other foreign languages, and on some level they are not sure how to deal with foreigners. They need to be assisted in overcoming their fear of international students. More coordination and communication needs to be involved, so that the students feel welcome. Another problem is the community. The public offices do not have staff that are trained in cross-cultural communication; they do not speak any other languages and they do not try to make it easier for the students to get through the bureaucracy. More training would be very useful, and it would help to increase sensitivity to international students and awareness of their situation.

Scribano: I have the feeling that people think that the internationalization process is an easy process. They don't realize that it has to be programmed, financed, etc. They think you can just try to be international and that's all there is to it. But you need effort, you need money, programming, financing, the right people in the right place. That's a key aspect: human resources and appropriate placement. Also the government should invest more.

4.4. Question 4:

What advice would you give to universities who want to start/increase internationalization?

Germanà: If a university wants to work well in internationalization, it needs to be very organized and it needs good communication and cooperation between various university offices. Then it is necessary to have a good marketing plan, effective communication and good marketing materials. It is also necessary to be well organized to receive visiting professors and students. Service must be well thought-out, with assistance in housing, transport, etc. You need a complete service to welcome professors and students...a complete service. Another important aspect is to offer courses and degree programs in English. Finally, it is necessary to organize high quality research with the necessary instruments available. Good education goes with good research.

Lucchese: I would say that it is a big challenge, involves an incredible amount of planning and organization. They should be very clear on their objec-

tives, and should also be willing to put their resources towards those objectives. There are costs involved and they must be ready to pay; also staff development and training. Recently our university has hired new international staff that speak a variety of languages. They have all lived abroad as well, so they offer that extra sensitivity necessary to work with foreign students. I would also say it is extremely rewarding and definitely worth the time and effort necessary.

Scribano: Invest money, but search for select the right people for the job. Sometimes it's useless to have people if they aren't right for the job because you don't know what to have them do in the organization. Give people also the freedom to act because it's not easy to confine the activity within the normal university process. It's a totally different world. Internationalization pervades all areas of the university. It's not just a sector but it's in everything that universities do now.

5. Final comments and observations

Based on experience and research, the authors would like to add the following tips. First of all, consider recruiting international students and conducting internationalization as a form of marketing. The classic 4P's of Marketing provide an extremely reliable starting point. Consider your product (offer degree programs in English); the University of Messina is doing that. Consider your price (affordable); the University of Messina is doing that. Consider your promotion (go around the world to recruit); the University of Messina is doing that. Finally, consider your place. The University offers student residences, services and world class degree programs. Also Messina, and Sicily, are not only historically multicultural, but offer breathtaking beaches, mountains, fantastic food, nice people (student comments, 2018–19). It would seem that the University is definitely working with the 4 P's. Other aspects include cross-cultural communication and student services. Culture enters into all areas of internationalization. Written documents, even websites, instructions for registration and brochures are dependent on culture. Make sure all written materials are neutral of cultural values and nuances. Presentations and videos must also be created with the end-user cultures in mind. Certain types of pictures may not be appropriate in every culture. Email communication, face to face communication, and of course language are extremely important. Body language, expressions, space, time, context of communication, male-female roles, and hierarchy are also extremely important (Toffle, 2013). But in the end, the most important part of ensuring the success of internationalization is how the students are taken care of and respected. As Dr. Lucchese put it, "It is essential to take care of the students and let them know that we will help them in any way... that we are there for them". The University of Messina is currently developing special counseling/cross-cultural integration assistance to

assist the students in dealing with culture shock and adjusting to their new life. Pre-departure information, followed by orientation upon arrival and cross-cultural training are part of the plan to assist students. In the end, that special caring combined with excellent programs, pricing and service will ensure that a program of university internationalization will flourish.

6. Conclusion

The importance of cross-cultural communication has been the theme of this work. But talking about it and really being able to implement it are very different. It is like the international process, everyone thinks it is easy. For an organization to truly become cross-cultural, it must train all of its staff, from the janitor to the director. And in an ideal world, everyone in the organization would go study abroad for a minimum of two months to find out what it really feels like. And everyone should study another language to understand how difficult it is to express oneself in a foreign language, especially in difficult moments. Perhaps these suggestions are not feasible in every organization, but the following suggestions would definitely assist international students, and hopefully bring about increased awareness and sensitivity. Cross-cultural communication training for all staff of the university, combined with an opportunity to learn English should be implemented. This will bring added value to a program. Additionally, a well-organized public relations campaign for the city and the university will help people understand the benefits of internationalization. And last but not least, there should be countless opportunities for international students to integrate, make friends and learn the national language.

Bibliography

1. *Atti di Concessione 2019* (2019). Ministry of Education, University and Research. Retrieved on 08/06/2019, from: <https://www.miur.gov.it/atti-di-concessione>.
2. *Convention on the Recognition of Qualifications concerning Higher Education in the European Region* (1997). Council of Europe. Retrieved on 08/06/2019, from: <https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/165>.
3. European Parliament (2015). Retrieved on 09/06/2019, from: www.europarl.europa.eu/RegData/etudes/STUD/2015/540370/IPOL_STU2015540370_EN.pdf
4. Genzone, A. (2019). *Studenti stranieri in Italia: quanti sono, da dove vengono, dove studiano*. Retrieved on 12/06/2019, from: <https://www.lenius.it/studenti-stranieri-in-italia/>.
5. Hearder, H. (2001). *Italy: A Short History*. Cambridge University Press: Cambridge.
6. *Istat, in calo le iscrizioni all'università* (2016). Retrieved on 08/06/2019, from: <http://www.quasimezzogiorno.org/news/istat-in-calo-le-iscrizioni-alluniversita/>,

7. *Lisbon Recognition Convention* (1997). European High Education Area. Retrieved on 08/06/2019, from: www.ehea.info/cid102107/lisbon-recognition-convention.html.
8. Moscati, S. (2001). Colonization of the Mediterranean. [in:] S. Moscati (Ed.), *The Phoenicians*. New York: IB Tauris.
9. Piccolo, S. (2013). *Ancient Stones: The Prehistoric Dolmens of Sicily*. Oxfordshire, UK: Brazen Head Publishing.
10. Privitera, J. (2008). *Sicily: An Illustrated History*. New York: Hippocrene Books.
11. Sabbadini, L.L. (2018). *Italy's Youth Part of European Brain Drain*. Retrieved on 12/06/2019, from: <https://www.lastampa.it/2018/01/27/esteri/italys-youth-part-of-european-brain-drain-qzAieSa7idPIbBbcXHI6vJ/pagina.html>
12. Smith, D. (1968). *A History of Sicily: Medieval Sicily 800–1713*. London: Chatto and Windus.
13. *The Bologna Process and the European Higher Education Area* (2019). European Commission. Retrieved on 08/06/2019, from: https://ec.europa.eu/education/policies/higher-education/bologna-process-and-european-higher-education-area_en.
14. *The Bologna Process: Setting up the European Higher Education Area* (2015). EUR-Lex. Retrieved on 08/06/2019, from: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3Ac11088>.
15. Toffle, M.E. (2013). Foodstills as a Cultural Artifact: a Multimodal Study. [in:] M. Cambria, C. Arizzi & F. Coccetta (Eds.), *Web Genres and Web Tools*. Ibis: Como.
16. Tripodi, A. (2018). *Istat: sempre più laureati italiani vanno all'estero, nel 2017 sono 28mila*. Retrieved on 08/06/2019, from: <https://www.ilsole24ore.com/art/notizie/2018-12-13/istat-sempre-piu-laureati-italiani-vanno-all-estero-2017-sono-28mila-112213.shtml>
17. Wolfram, H. (1988). *History of the Goths*. Los Angeles: University of California Press.

Students' Perception on the Institutional Framework of Higher Education*

Verica Babić, Marko Slavković, Marijana Simić

1. Introduction

The end of the 20th and the beginning of the 21st century is characterized by important changes in the field of higher education (HE) (Guri-Rosenblit, Šebkova & Teichler, 2007). For example, the increase in the enrollment rate at higher education institutions (HEIs), the transformation of economic context and the emergence of a “knowledge society” as a goal of European countries contributed to the popularization of HEs in the modern developed world (Dolenec, 2006; Guri-Rosenblit et al., 2007). In the 1990's most of the changes in the higher education field was the result of the adoption of the Bologna process, which aimed to creating a unique academic space. In this way, the freedom and autonomy of the faculty is affirmed, as one of the fundamental principles on which the development of higher education is based (Turajlić et al., 2004).

Intensification of competition in the higher education relates primarily to the increased participation of private HEIs (Dolenec, 2006). The challenge for state universities is not only a struggle for attracting students, but also a selection of high-quality academic staff (Menon, 2012). The lack of qualified teaching and technical staff on the market, with ineffective employee incentive packages and retention schemes, as well as the accompanying demographic changes, are just some of the problems in today's higher education system (Muchie, 2009). In order to overcome the above barriers, the globalization of higher education is stated, as well as the growing importance of the third mission of the university, emphasize the social dimension of HEIs, improve gender balance and expand

* The publication was financed from the fundamental research funds of the Ministry of Education, Science and Technology Development, project no. 179062 and bilateral project Serbia-Slovenia no. 2018/9.

opportunities for access and completion, including international mobility, for students but also teaching staff (Laredo, 2007).

In the domain of raising innovation in the higher education, the changes that lead to extending learning opportunities so that they better meet learners' and employers' needs remains a major challenge (JISC, 2012). Initially, modern technological solutions provide the capacity to build a high-quality learning environment, using visualization, simulation, games, interactivity, intelligent tuition, collaboration, assessment and feedback (Coskun, 2015). For example, research and scholarship can also be placed in the context of opportunities provided by modern technological solutions, helping in the use of computers and social networks to connect researchers to virtual laboratories and providing access to knowledge resources (Duderstadt, 2003). In accordance with the recognized opportunities and challenges, most universities in countries across the EU are currently committed to assessing the effectiveness of their investments in technology (Coskun, 2015).

The presented trends point to the need to implement systematic and institutional reforms within national frameworks. Consequently, the role of higher education institutions is presented below, with a special emphasis on the existing higher education system in the Republic of Serbia. Since a large number of stakeholders in the field of higher education, the most important ones are students, and in order to assess the effectiveness of the existing institutional framework in the Republic of Serbia, a survey was conducted in which students from the University of Kragujevac took part. Namely, the primary goal is the examination of students' perception of the environment in which there are faculties, universities and non-university institutions. By processing data based on the collected 444 valid questionnaires, the degree of student attitudes with the stated items was identified. In addition to descriptive statistics and reliability analysis, a parametric t test was used to identify a significant difference in students' attitudes when group and level of study were used as group variables. Finally, concluding observations and potential issues for future research are followed.

2. Literature review

Transformation of Europe into the knowledge-based economy began with the beginning of the new millennium, with the adoption of the Lisbon Strategy, whose primary goal was that through to developing the human capital (Dill, 1997; Dolenc, 2006), among other things, Europe received the epithet of "the most competitive knowledge economy in the world". The continuation followed in 2010, when the Europe 2020 Strategy was adopted, i.e. strategies for smart, sustainable and inclusive growth. This strategic document and the accompanying

action plans aim to improve the economic development of the European Union (EU), which is knowledge-based, with the preservation of the environment, a high level of employment, productivity and social cohesion. In this way, the guidelines are defined, which European countries should adhere to, when responding to the contemporary challenges with which the EU countries are facing in a constantly changing world (Kronja et al., 2011).

Starting from the assumption that the HEIs are a type of multi-product organization and that the two basic functions are teaching and research, the final results of this production process are the number of graduates and the number of publications as an indicator of research ability (Warning, 2004). In addition, the characteristics of HE sector: it does not make a profit; there is an absence of output and input prices; and HEIs produce multiple outputs using multiple inputs (Vargas et al., 2019). However, HEIs have multiple and complex structures (Arbo & Benneworth, 2007; Denman, 2009), which include groups and/or individuals who are in contact with external stakeholders in order to support regional transition paths to sustainable development (Radinger-Peer & Pflitsch, 2017).

In line with the changes in the education system, which primarily relate to the introduction of the Bologna process, HE systems are significantly “Europeanized”. However, old internationalism, which implies co-operation between institutions and the exchange of individual students and teachers, remains very limited, if the practice in the Western Balkan countries with other European countries is compared. In addition, the introduction of new financing models, such as performance-related financing mechanisms (Dolenec, 2006; Dougherty & Reddy, 2011; Hillman, Tandberg & Gross, 2014), changes in the governance system of HE (Capano & Pritoni, 2019), which stay a serious challenge for countries that have joined the Bologna process.

2.1. Higher education in Serbia

How did these changes affect the HE system in Serbia and what changes in the field of legal and institutional framework need to be implemented? In Serbia, the first amendment to the Law on Higher Education, in accordance with the Bologna process, was carried out in 2005, with the significance of higher education being elaborated as (Article 3): “transfer of scientific, professional and artistic knowledge and skills; development of science and promotion of artistic creativity; provision of scientific, professional and artistic youth; providing opportunities for individuals to acquire higher education and education throughout their lives under equal conditions; to significantly increase the number of inhabitants with higher education”.

On the road to EU accession, Serbia is facing the inevitable need to adapt to contemporary economic and social trends, which affirm the concept based on

knowledge. However, a number of relevant factors have been identified, which are classified as barriers to the process of building a knowledge-based economy and which also explain the problems in the field of human capital management in the Republic of Serbia: 1) the departure of a large number of highly educated individuals from the country in search of work and better living conditions; 2) low level of investment in technology, science and all levels of education (primary, secondary and higher education) and 3) rigidity of the education system (Slavković & Babić, 2013).

In order to overcome the identified obstacles in 2012, the Strategy for the Development of Education in Serbia was formulated by 2020. Presented as an important document aiming to identify the goals, directions, instruments and mechanisms for the development of the educational system in Serbia by 2020, Strategy as the main goal has to determine the best way to shape the development of this system, raising the level of innovation at all levels of education. Regarding higher education, the strategy sets two important goals to be achieved by 2020:

- At least 40% of pupils after completion of a four-year secondary vocational school and 95% of students after high school education should enroll in some higher education institution;
- At least 50% of students who complete graduate academic studies should enroll in one of the offered master programs, ie at least 10% of master's students should enroll doctoral studies.

2.2. Students as stakeholders

The identified changes, but also the objectives set, also affected the relationship between HEIs and their stakeholders (Radinger-Peer & Pflitsch, 2017; Vargas et al., 2019). According to stakeholder theory it is possible to improve the understanding of the process of changing HEIs, which lead the sustainable development of HE system (Freeman, 2010). Internal and external stakeholders are perceived as key drivers for organizational change (Brusca et al., 2018; Ceulemans et al., 2015), and policymakers can provide direction for processes of change and planning (Newig & Koontz, 2014), using social network analysis to identify HE stakeholder networks (Vargas et al., 2019).

Apart from the indisputable importance of external stakeholders, the most important group of stakeholders are students, given that in the context of HEIs, they have the role of customers (Seeman & O'Hara, 2006). Below is an overview of the phases, through which each student passes before, during and after enrollment at the HEIs. Although students contact HEIs before enrollment and start of the teaching process, empirical evidence is limited, emphasizing the importance of perceptions of students and their willingness to engage in the processes of changing the existing HE system.

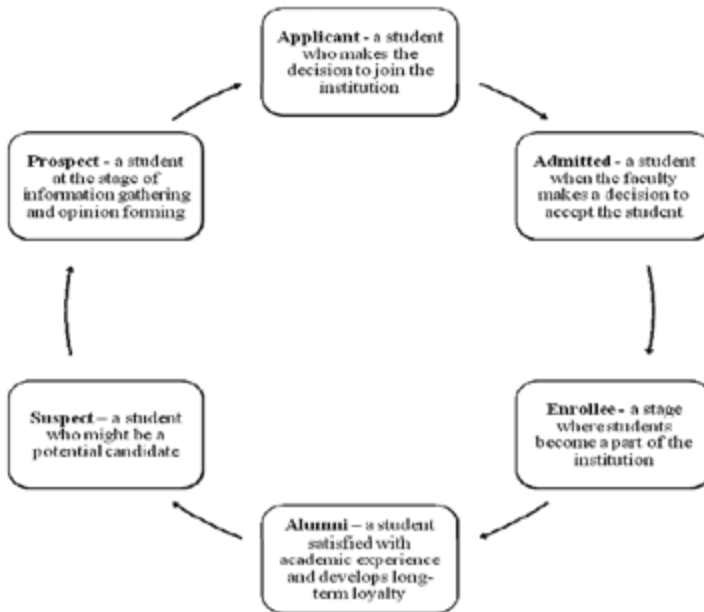


Figure 1. Stages of student life cycle
Source: (Nair, Chan & Fang, 2007, p. 3).

3. Research methodology

The identified gap in existing literature and the given theoretical framework are the starting point for the research of students' perceptions of the institutional framework of higher education. The present research was conducted on 444 students randomly selected from the Faculty of Economics University in Kragujevac. It is imperative to mention that respondents included in the research were bachelor and master students, both male and female. By analyzing the structure of the sample, it was identified: 365 bachelor students and 79 master students; 83 male students and 361 female students.

Data collection was carried out using a questionnaire, which was specially developed for this research. Respondents expressed their views on the 5-point Likert scale on (non)agreement. The research carried out aimed to provide answers to the following research questions:

RQ1: What is students' perception of the environment in which faculties, universities and non-university institutions exist?

RQ2: Is there statistical significant difference in students' attitudes, if gender is used as a grouping variable?

RQ3: Is there statistical significant difference in students' attitudes, if level of studies is used as a grouping variable?

The software package SPSS was used for data processing. In order to make appropriate conclusions about students' attitudes, descriptive statistics analysis, reliability analysis and parametric t test were conducted.

4. Research results and discussion

The results of descriptive statistical analysis are given in Table 1, whereby on the basis of the obtained values of the arithmetic mean and standard deviation, it can be concluded that students express the highest degree of agreement with the assertion concerning the freedom that teachers have in choosing teaching methods. The obtained result, although it is an advantage in carrying out the teaching process, can have a negative impact from the students' perspective, which may imply the use of ineffective teaching methods and uncontrolled freedom of teachers, which ultimately suffers from the unsatisfactory quality of the teaching process. In addition, a high degree of student aggregation has been identified in the case of the possibility of holding discussions on various issues, which also indicates a certain form of freedom in expressing the opinions of different groups of stakeholders. One should not omit the outcome that indicates the attitude of students to use contemporary ICT solutions at the faculty, which is important for the continuity of HEIs in today's challenging digital world.

Table 1. Descriptive statistics and reliability analysis

Items	Cronbach's alpha =0.857	Mean	Standard deviation
IF1	Students actively participate in deciding of changes in study programs.	2.3919	1.12814
IF2	Teachers have the freedom to choose teaching methods.	4.1351	.83638
IF3	The faculty especially appreciate / award teachers who apply new teaching methods.	3.3153	.99871
IF4	New ideas are encouraged at the faculty.	3.4775	1.09871
IF5	There is a possibility to discuss about different issues at the faculty.	3.8581	1.00120
IF6	The faculty supports the implementation of changes.	3.5428	.99000
IF7	The faculty supports proactive teaching approach.	3.4662	.82360
IF8	The faculty applies modern information and communication technology.	3.6554	1.07535
IF9	The faculty continuously supports the development of teachers' competencies (ICT skills acquisition. pedagogical training).	3.5608	.93268
IF10	The state encourages various forms of cooperation between universities / faculties and economies (technological parks, centers of excellence, knowledge transfer centers, curriculum of compulsory study practice).	3.1824	1.14247
IF11	The state encourages the innovativeness of faculty / university.	2.8964	1.04658
IF12	By appropriate acts and measures, the state encourages improvement of the quality of studies.	2.9054	1.05388
IF13	Standards for accreditation positively affect the innovativeness of faculties / universities.	3.4032	1.03313

Source: own work.

In Table 2 and 3, the results of the parameter t test are given. If a gender-based variable is used as a grouping, it is possible to notice a statistically significant difference in the attitudes of female and male respondents regarding the role of the state and its authorities in raising innovation and improving the quality of the teaching process, with a more positive attitude of female students expressed. In addition, a similar situation exists in the case of the way in which professors are dedicated to innovating the teaching process and who are inclined to introduce changes.

Table 2. Results of t test for two independent samples (male and female)

Items	Male M (SD)	Female M (SD)	t value	Sig.
IF1	2.2892 (1.18456)	2.4155 (1.11514)	-0.920	0.358
IF2	4.1084 (0.79652)	4.1413 (0.84623)	-0.322	0.747
IF3	3.1446 (1.01372)	3.3546 (0.99249)	-1.731	0.084*
IF4	3.1687 (1.21795)	3.5485 (1.05857)	-2.863	0.004*
IF5	3.5904 (1.17946)	3.9197 (0.94673)	-2.721	0.007*
IF6	3.3012 (1.05617)	3.5983 (0.96718)	-2.480	0.014*
IF7	3.3494 (0.95552)	3.4931 (0.78922)	-1.435	0.152
IF8	3.5904 (1.12658)	3.6704 (1.06428)	-0.611	0.542
IF9	3.4819 (1.06338)	3.5789 (0.90062)	-0.854	0.393
IF10	2.9518 (1.21879)	3.2355 (1.11926)	-2.047	0.041*
IF11	2.5904 (1.09362)	2.9668 (1.02415)	-2.981	0.003*
IF12	2.5301 (1.05157)	2.9917 (1.03679)	-3.647	0.000*
IF13	2.9518 (1.17809)	3.5069 (0.96930)	-4.509	0.000*

*The value is significant at the level 0.1; M- mean; SD – standard deviation

Source: own work.

The results of the second t test (Tab. 3) indicate a significant difference in the attitudes of bachelor and master students in terms of two statements, and they concern the freedom of teachers in the choice of teaching methods and the role of the state in fostering the improvement of the quality of studies, with a higher degree level of students' on graduate academic studies. The reason for this result is based on the fact that at HEIs there are a large number of bachelor students and that graduate academic studies last 4 years, compared to a one-year master program, due to which bachelor students have the opportunity to gain a more comprehensive insight into the existing practice at the given HEIs.

Table 3. Results of t test for two independent samples (bachelor and master students)

Items	Bachelor students M (SD)	Master students M (SD)	t value	Sig.
IF1	2.3616 (1.12692)	2.5316 (1.13041)	-1.215	0.225
IF2	4.1836 (0.81655)	3.9114 (0.89428)	2.640	0.009*
IF3	3.3397 (0.97760)	3.2025 (1.09052)	1.107	0.269
IF4	3.5123 (1.11335)	3.3165 (1.01961)	1.438	0.151
IF5	3.8493 (1.01190)	3.8987 (0.95535)	-0.397	0.691
IF6	3.5397 (0.99542)	3.5570 (0.97068)	-0.140	0.889
IF7	3.4548 (0.81622)	3.5190 (0.86024)	-0.628	0.531
IF8	3.6630 (1.08125)	3.6203 (1.05373)	0.320	0.749
IF9	3.5288 (0.95926)	3.7089 (0.78694)	-1.559	0.120
IF10	3.1890 (1.15068)	3.1519 (1.11042)	0.262	0.794
IF11	2.9233 (1.03224)	2.7722 (1.10882)	1.164	0.245
IF12	2.9479 (1.02712)	2.7089 (1.15639)	1.833	0.067*
IF13	3.4219 (1.00688)	3.3165 (1.14963)	0.822	0.411

* The value is significant at the level 0.1; M- mean; SD – standard deviation

Source: own work.

5. Conclusion

Research findings reveal that students' perceptions differ, if gender is used as a grouping variable, while a statistically significant difference in students' attitudes does not occur when we group them by the level of study. In addition, findings suggest that students hold strong views about the freedom of lectures in teaching methods section and the possibility of discussing different issues within the faculty as an institution.

The results obtained may have important practical implications when designing study programs. Based on the obtained results, it is evident that students highly value the use of information technologies and the possibility of discussion, which indicates the need to change the way in which the teaching process is conducted in the direction of greater use of digital content and team work. Also, a high evaluation of the freedom of the professor in conceiving the teaching process can be a good opportunity for introducing group discussions and linking different thematic areas. In addition to positive attitudes, negative attitudes also provide significant practical guidance. For example, a low average value indicates the need for greater involvement of students in the process of conceiving curricula, as well as the need for a more active role of the state in fostering innovative processes in higher education.

The obtained results point to possibilities for researching higher education in the future period. In this regard, special attention will be paid to innovation in

higher education, with two aspects: the role of the existing institutional framework, as well as the influence of the intellectual capital of higher education institutions.

Bibliography

1. Arbo, P., & Benneworth, P. (2007). Understanding the Regional Contribution of Higher Education Institutions: a Literature Review. [in:] *Education Working Paper*, 9. Paris: OECD Publishing.
2. Brusca, I., Labrador, M., & Larran, M. (2018). The Challenge of Sustainability and Integrated Reporting at Universities: A Case Study. *Journal of Cleaner Production*, 188, 347–354.
3. Capano, G., & Pritoni, A. (2019). Varieties of Hybrid Systemic Governance in European Higher Education. *Higher Education Quarterly*, 73(1), 10–28.
4. Ceulemans, K., Molderez, I., & Van Liedekerke, L. (2015). Sustainability Reporting in Higher Education: a Comprehensive Review of the Recent Literature and Paths for Further Research. *Journal of Cleaner Production*, 106, 127–143.
5. Coskun, Y.D. (2015). Promoting Digital Change in Higher Education: Evaluating the Curriculum Digitalisation. *Journal of International Education Research*, 11(3), 197–204.
6. Denman, B.D. (2009). What is a University in the 21st Century?. *Higher Education Management and Policy*, 2(17), 9–28.
7. Dill, D.D. (1997). Markets and Higher Education: an Introduction. *Higher Education Management and Policy*, 10(3–4), 163–166.
8. Dolenc, D. (2006). Marketization in Higher Education Policy: An Analysis of Higher Education Funding Policy Reforms in Western Europe between 1980 and 2000. *Revija za socijalnu politiku*, 13(1), 15–35.
9. Dougherty, K.J., & Reddy, V.T. (2011). *The Impacts of State Performance Funding Systems on Higher Education Institutions: Research Literature Review and Policy Recommendations*. CCRC Working Paper, 37.
10. Duderstadt, J.J. (2003). Preparing for the Revolution: The Future of the University in the Digital Age. [in:] L.E. Weber & W.Z. Hirsch (Ed.), *As the Walls of Academia Are Tumbling Down*. London: Economica.
11. Freeman, R.B. (2010). What Does Global Expansion of Higher Education Mean for the United States?. [in:] *American Universities in a Global Market*. University of Chicago Press.
12. Guri-Rosenblit, S., Šebková, H., & Teichler, U. (2007). Massification and Diversity of Higher Education Systems: Interplay of Complex Dimensions. *Higher Education Management and Policy*, 20(4), 373–389.
13. Hillman, N.W., Tandberg, D.A., & Gross, J.P. (2014). Performance Funding in Higher Education: Do Financial Incentives Impact College Completions?. *The Journal of Higher Education*, 85(6), 826–857.
14. JISC (2012). *Learning in a Digital Age*. Report. Retrieved on 30/05/2019, from: <http://www.jisc.ac.uk/media/documents/programmes/elearning/Digilifelong/Lifelong%20Learning%20accessible%20PDF.pdf>.

15. Kronja, J., Avlijaš, S., Matejić, V., Todić, D., Kovačević, A., & Branković, J. (2011). *Vodič kroz strategiju Evropa 2020*. Evropski pokret u.
16. Laredo, P. (2007). Revisiting the Third Mission of Universities: toward a Renewed Categorization of University Activities?. *Higher Education Management and Policy*, 20(4), 441–456.
17. Menon, A. (2012). The Role of Higher Education Funding in National Development. *Educational Research*, 3(6), 525–536
18. Muchie, M. (2009). Higher Education, Research and Knowledge for African Integration. [in:] *Challenges of Regional Integration and Its Implications for Higher Education*. SARUA-South African Regional Universities Association.
19. Nair, C., Chan, S., & Fang, X. (2007). A Case Study of CRM Adoption in Higher Education. [in:] *Proceedings of the 2007 Information Resources Management Association International Conference, Vancouver*. Retrieved on 30/05/2019, from: <http://citeseerx.ist.psu.edu/viewdoc/download>.
20. Newig, J., & Koontz, T. M. (2014). Multi-level Governance, Policy Implementation and Participation: the EU's Mandated Participatory Planning Approach to Implementing Environmental Policy. *Journal of European Public Policy*, 21(2), 248–267.
21. Radinger-Peer, V., & Pflitsch, G. (2017). The Role of Higher Education Institutions in Regional Transition Paths towards Sustainability. *Review of Regional Research*, 37(2), 161–187.
22. Seeman, E.D., & O'Hara, M. (2006). Customer Relationship Management in Higher Education: Using Information Systems to Improve the Student-school Relationship. *Campus-Wide Information Systems*, 23(1), 24–34.
23. Slavković, M., & Babić, V. (2013). Knowledge Management Innovativeness and Organizational Performance: Evidence from Serbia. *Ekonomski Anali/Economic Annals*, 58(199).
24. *Strategija razvoja obrazovanja u Srbiji do 2020. godine*, („Službeni glasnik RS”, br. 107/2012).
25. Turajlić, S. (2007). *Savremene tendencije u finansiranju visokog obrazovanja*. XIII Skup Trendovi razvoja: „Akreditacija Bolonjskih studija“, Fakultet tehničkih nauka, Novi Sad.
26. Vargas, V.R., Lawthom, R., Prowse, A., Randles, S., & Tzoulas, K. (2019). Sustainable Development Stakeholder Networks for Organisational Change in Higher Education Institutions: A Case Study from the UK. *Journal of Cleaner Production*, 208, 470–478.
27. Warning, S. (2004). Performance Differences in German Higher Education: Empirical Analysis of Strategic Groups. *Review of Industrial Organization*, 24(4), 393–408.
28. Zakon o visokom obrazovanju, Beograd: Službeni glasnik RS br. 99/2014. Retrieved on 30/05/2019, from: <http://www.mpn.gov.rs/wp-content/uploads/2017/12/visoko-zakon.pdf>.

Authors

- Tindara Abbate – University of Messina, Italy
Patrizia Accordino – University of Messina, Italy
Slavko Arsovski – University of Kragujevac, Serbia
Zora Arsovski – University of Kragujevac, Serbia
Antonina Astone – University of Messina, Italy
Verica Babić – University of Kragujevac, Serbia
Maurizio Ballistreri – University of Messina, Italy
Myroslava Bosovska – Kyiv National University of Trade and Economics,
Ukraine
Roberto Caratozzolo – University of Messina, Italy
Giovanna Centorrino – University of Messina, Italy
Anna Charytanowicz – Cracow University of Economics, Poland
Raffaella Coppolino – University of Messina, Italy
Dragomir Dimitrijević – University of Kragujevac, Serbia
Aleksandar Djordjević – University of Kragujevac, Serbia
Ganna Duginets – Kyiv National University of Trade and Economics,
Ukraine
Fabio Fragomeni – University of Messina, Italy
Anzhelika Gerasymenko – Kyiv National University of Trade and Economics,
Ukraine
Antonino Germanà – University of Messina, Italy
Nataliia Ilchenko – Kyiv National University of Trade and Economics,
Ukraine
Anastasia Iliina – Kyiv National University of Trade and Economics,
Ukraine
Vladan Ivanović – University of Kragujevac, Serbia
Andrzej Jaki – Cracow University of Economics, Poland
Nenad Janković – University of Kragujevac, Serbia
Milan Kostić – University of Kragujevac, Serbia
Elvira Tiziana La Rocca – University of Messina, Italy
Giuseppe Lucchese – University of Messina, Italy
Olga Malinovska – Lviv State University Ivan Franko, Ukraine

Authors

- Francesco Martines – University of Messina, Italy
Anatolii Mazaraki – Kyiv National University of Trade and Economics,
Ukraine
Bogusz Mikoła – Cracow University of Economics, Poland
Valeria Naciti – University of Messina, Italy
Janusz Nesterak – Cracow University of Economics, Poland
Anna Pietruszka-Ortyl – Cracow University of Economics, Poland
Francesca Pollicino – University of Messina, Italy
Valentina Prudente – University of Messina, Italy
Dariusz Put – Cracow University of Economics, Poland
Maria Grazia Recupero – University of Messina, Italy
Rosalba Rizzo – University of Messina, Italy
Tomasz Rojek – Cracow University of Economics, Poland
Daniela Rupo – University of Messina, Italy
Valeriy Sai – Kyiv National University of Trade and Economics,
Ukraine
Francesca Scribano – University of Messina, Italy
Marijana Simić – University of Kragujevac, Serbia
Marko Slavković – University of Kragujevac, Serbia
Viktoriia Svystilnyk – Kyiv National University of Trade and Economics,
Ukraine
Wojciech Szymła – Cracow University of Economics, Poland
Mary Ellen Toffle – University of Messina, Italy
Maria Francesca Tommasini – University of Messina, Italy

TOWARZYSTWO NAUKOWE ORGANIZACJI I KIEROWNICTWA

STOWARZYSZENIE WYŻSZEJ UŻYTECZNOŚCI

DOM ORGANIZATORA

ul. Czerwona Droga 8
87-100 Toruń
tel. (56) 622 38 07, (56) 622 28 98

www.tnoik.torun.pl
e-mail: sekretariat@tnoik.torun.pl

www.wydawnictwo.tnoik.torun.pl/sklep/
e-mail: wydawnictwo@tnoik.torun.pl



DZIAŁ WYDAWNICTW

Wydajemy drukiem
poradniki, podręczniki akademickiej i komentarze
z zakresu prawa, ekonomii, organizacji i zarządzania

DZIAŁ EDUKACJI


Organizujemy szkolenia, seminaria,
konferencje naukowe krajowe i międzynarodowe

Chcesz wiedzieć więcej?

zapraszamy
do naszej księgarni internetowej



www.wydawnictwo.tnoik.torun.pl/sklep/



Constant changes taking place in the world economy are currently related to the processes of globalisation and economic integration, as well as to various types of development, which is implemented to a different scale, at a different pace and in a different form. At the same time, what is significant for the contemporary economy is an increase in the scale and scope of international capital flow, interpenetration of physical, financial and human capitals. Global processes take place primarily in the economic area. They mean freer flows of capitals, a more mobile location of production or service activities. The characteristic feature of the contemporary economy is not only the global scope, but also an unprecedented volume of the engaged financial means, as well as the acceleration of the pace of conducting activity and increasing its flexibility. Also competition is becoming fierce. Stronger and stronger international competition is becoming the reason for searching for extra savings, new technological opportunities, new sales markets. Hence, this publication adopted as its basic aim to present, analyse and exemplify the conditionings of the functioning of the contemporary economy, identify its determinants, as well as to present concepts, models and tools of managing contemporary economies and organisations in the conditions of the volatile economic, social and political environment. Partial issues which constitute the accomplishment of this aim are exposed in the form of the following three parts of the presented work:

1. Challenges and Dilemmas of Contemporary Economies – Economic, Social and Legal Aspects.
2. Knowledge and Innovation as Determinants of Effectiveness and Development.
3. Transformations and Development in the Face of Changes.

This book has a character of a theoretical and cognitive, as well as methodological study whose aim is the presentation and systematization of the scientific and practical output concerning selected content areas, discussion and critical assessment of this output, as well as the presentation of own thoughts and proposals on the analysed issues and problems. The involvement of a large group of Authors enabled showing the discussed issues in a broad and many-sided way.