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Foreword

The Małopolska School of Economics in Tarnów Research Papers Collection we are handing over to the Readers is devoted to the problems of the organization and management of work in its different dimensions and aspects, as well as to the problems of tourism areas (destination) and tourism cluster management strategy. Most of the Authors assumed that a good diagnosis of the situation of an organization, the internal conditions of its functioning in particular, is the basis for the identification of deficiencies of the organization, as well as forecasting and programming the change in that state.

The collection of the articles constituting the fourth issue of the quarterly includes some information interesting from the cognitive and application point of view. It concerns the problems of managing work relationships and conditions, with special attention paid to the process and instrumental aspect of managing absenteeism in a firm; improving the occupational health and safety management system as a result of the development of internal communication in this respect, or the questions of designing and managing the content of websites of local government units, with special regard to their clarity, the network of relationships, human capital, social and environmental responsibility—the issues emphasized in intellectual capital theories and knowledge management theories.

In this thematic groups there are papers devoted to teaching professional ethics in schools of higher education in Portugal, which is a response to frequently occurring events arising from improper conduct of various decision-makers. The Reader may also be interested in the findings of the research into financing and organizing a large-scale project of the European Union EU-Great!, concerning socio-economic development and innovations.

The articles concerning tourism discuss the principles and methods of strategic and marketing management of the tourism destination of Karlovac municipality (Croatia) and tourism cluster management, illustrated with an example of the Bieszczady Cross-Border Tourism Cluster. This view of the strategic aspects of cluster and tourism destination management shows clearly that we deal with complex organizations the recognition of which requires to consider various points of view. In addition to the diagnosis of the studied organizations, the papers also contain fragments devoted to forecasts for the development of the local labour market and the scenarios of the sustainable development of agricultural farms and rural areas located at the mentioned areas of tourism development.

On behalf of the Authors and myself I would like to thank all those who have contributed to the creation of this *Paper*—Colleague Editors who made an effort to express their opinions on all the papers sent to the editorial board, the Reviewers for the substantive, important and often detailed remarks, as well as the whole Editorial Team and all collaborators.

Leszek Koziol
Editor-in-Chief

ECONOMICS

An outline of the idea of land taxation

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Abstract: There are foundations of land taxing presented in the paper in the context of modification of liberal system. The benefits of shifting taxes from labour and capital towards land are exposed, as well as the arguments against taxing of land. The argument being explored in the article is that if a society is to benefit the economic growth, a permanent and effective transfer of economic resources (including land and its resources as a priority) has to feature contemporary dynamism of economies. And, it is the economic system founded on the 'law' of land taxation that can deliver the appropriate conditions.

The examples of countries who gather taxes from land are highlighted. Post-socialism economies of Eastern Europe, undergoing shocking transformation, many of whom are the European Union members, are poverty stricken even if the statistics report significant economic growth. The concern of economic transformation of post-communist countries is evoked in the light of economic system formation.

Key words: land as the subject of taxation, social justice, economic efficiency

Investigation reveals that differences in civilization are not due to differences in individuals or races, but rather to differences in social organization. Progress is always kindled by association. And civilization always declines as inequality develops.

(Henry George, *Progress and Poverty Introduction*)

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1. Introduction

The fall of the Iron Curtain uncovered overwhelming defeat of the socialist conceptions of governance. The failure of the conception has the source in natural inability of generating economic growth, as the system was not able to adjust the structure of consumption to the structure of production. It was

associated with the lack of necessary and efficient allocation of the factors of production and the alteration of the structure of production.

Capitalists, on the other hand, at least since the crisis of the 1930s, have been searching for the remedies for deficiencies of capitalistic economic system (Lippman, 1945, p. 270). Capitalism of the 21st century is endangered since it prevails almost all over the world and is not a subject to any significant competition. And, that situation is a sort of turn-on for the research of alternative economic systems.

The last decades revealed that Keynesizm despite its renaissance lost its power in the economic debates. The opposite conceptions of Friedman's monetarism and supply economics from the 1980s also lost their significance. Liberal ideas as the theoretical foundations of socio-economic systems have been heavily criticized in literature and in debates concerning alternative socio-economic systems (Sadowski 2003, pp. 30–33).

It is worth mentioning the critics by Stiglitz of 'invisible hand of market' as the generator of high levels of productivity. He shook the basis of the paradigm of neoclassical economics together with the definition of the state of equilibrium to which he attached meaning deemed to be closer to economic reality. The new definition of equilibrium described situation which economic agents do not want to change, but the situation does not, at the same time, signify that a market is cleared (Stiglitz, 2004).

Economic effectiveness and guarantee of fundamental social values, such as social justice and freedom, require unleashed and spontaneous reaction of economic agents to be released. In addition, it is necessary to introduce the criterion of national income distribution and justice widely understood. Such perceived basis of socio-economic system ought to be interpreted as more developed/ advanced level of liberalism directed towards not only methodological and ethical individualism but also primal social value—justice as the full right of all to the fruits of their effort and the right to land and other natural resources. Those attributes of modified liberal system, in which freedom and spontaneity of economic agents as well as 'law' (rule) of land taxing, by operating towards better-being of a society, have the mission to overcome revealed today deficiencies of liberal doctrine.

Not only does the knowledge about the effectiveness of market allocation but also the understanding of the sources of market failures determine the substance of the inquiry whether moving towards higher and higher levels of competitiveness may take place when the dispersion of income and wealth is so wide (75% of the society is situated in the lowest layer of income in the advanced economies). Post-socialism economies of Eastern Europe, undergoing shocking transformation, many of whom are the European Union members, are poverty stricken even if the statistics report significant economic growth. It reflects unequal distribution of income, which releases social frustration and dissatisfaction—potential turn-on of social turmoil.

Leaving such an important factor of production like land to be allocated just by the forces of market may lead to its monopolization, especially in the times of crisis, when prices of all factors of production fall steeply or when the capital in the mostly liquidized form, i.e. money, reaches the level of saturation. It is because of the natural tendency of market economies to supersede competition and create monopolies and oligopolies (Eucken, 1990, pp. 31, 254).

According to Georgists, applying only the order of *laissez-faire* does not guarantee the effective use of production factors. It especially refers to land and through that impact directly

or indirectly impedes effective use of other factors. This sort of danger of capitalism generated by capitalists themselves is maleficent.

It was also W. Ropke who accented that it is natural for economic agents to seek economic rent actively. By doing it they make profits at the expense of those who have to bear the unavoidable loss. The situations of getting round of competition are widely observable, and consequently, monopolistic structures emerge (Ropke, 1994, p. 305).

Nowadays, world economies face complex socio-economic processes. There are challenges carried by globalization, deindustrialization, servicization that consumers, workers, employers, investors and other economic agents need to get accommodated to.

The fundament of economic system that is set on the 'law' of land taxation constructed by Henry George as the result of analysis of over 100-year history of liberal economies is put in the frames of the following postulates: 1) a man has the right to him- or herself, 2) he or she has the right to the effects of his or her work, 3) all have equal right to land and its resources.

The argument being explored in the article is that if a society is to benefit the economic growth, a permanent and effective transfer of economic resources (including land and its resources as a priority) has to feature contemporary dynamism of economies. And, it is the economic system founded on the 'law' of land taxation that delivers the appropriate conditions.

In the face of global and speedy changes, the most effective reaction of microeconomic agents is to adapt quickly. That is also what the European Union promotes in the actions such as Europe 2020.

The social and economic organization based on the system generating economic efficiency and justice delivers the opportunities for the rapid reallocation of resources as the reaction to continuous changes.

The transition of post-socialism economies is the reallocation of all factors of production driven by the socio-economic system alteration.

The chief issue of the economic problems in the long term is the effectiveness and the pace of allocation of scarce resources. The reallocation that is not enough efficient and fast is the main source of any economic crisis (Clark, 1957; Fisher, 1952; Fisher, 1945; Fisher, 1933).

Pareto criterion of efficiency employed widely in economics literature encounters its constraints. The problem became visible enough to provoke the suggestion by A. K. Sen to reject the Pareto optimality. There are a number of alternative criteria of social/ public choice delivered by A. K. Sen, R. Nozick, and J. Rawls (Acocella, 2002, p. 47).

2. The economic and ethical fundamentals of land taxation

And it was at least since the publication of the master-work by Henry George—*Progress and Poverty* (1879) that the conception of taxing value of land gained ground. It was to be the solution of the problem of persisting poverty in the midst of increasing wealth through effective use of economic factors and just distribution of national income among the members of a given society. Thus, efficiency and justice are the pivotal notion of the single tax system.

Land taxing is the result of researching the sources of the benefits of economic progress for all. Taxing land instead of other factors of production is believed to lower poverty by letting economic efficiency and justice flourish.

The foundation of land taxing is set on the ethical (on which the justice is based) and efficiency principles. Justice of land taxing is based on the premises that every person has the right to himself or herself, effects of his or her effort and that every person has equal rights to the natural resources. Taxing land is efficient because it permits to reduce other taxes, to compensate for local externalities caused by use of land, to shift land to the persons who can get higher return from it, to minimize the amount of land speculation.

Taxing according to the products of one's effort (labour) or savings is unjust and lowers the motivation to higher effectiveness (such as patent law for inventions). Introducing land taxing set by the above mentioned premises makes people use all factors of production more efficiently. Economic agents are more motivated to use labour and capital more effectively, because they receive all income from labour and capital as no tax is levied on them any more. Taxing land instead gives opportunity to equal access to the common natural good such as land. Creating incentives to boost productivity from land and other factors of production permits to assume that there would be sufficient amount of income generated in the economy to secure fundamental rights associated with realization the minimum indispensable to develop positive freedom and the full realization of privileges from negative freedom (A. K. Sen, R. Nozicki) (Acocella, 2002, pp. 84–85).

When taxes are gathered from what people earn (working or saving) or levied on spending, it generates excess burden (Figure 1). This means that incentives to work are lower than the value of what people produce and the incentives to save are lower than the productivity of investment financed by saving. Less saving means less investment. In the longer term, discouraging of investment diminishes the capital stock in an economy, and that entails lower productivity and lower wages (Tideman, 2004).

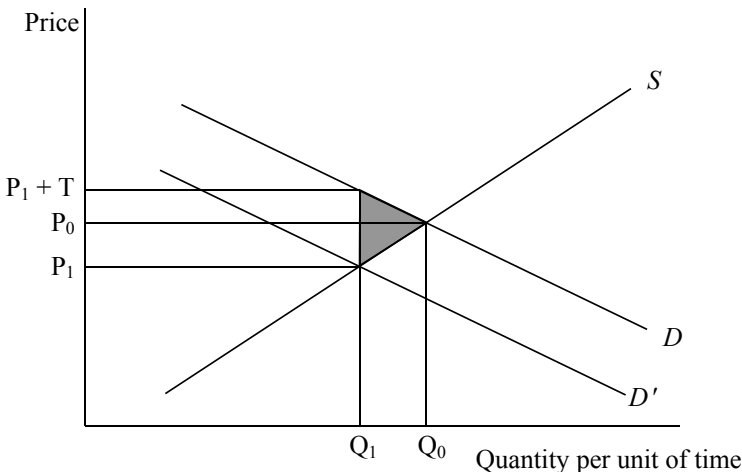


Figure 1. Supply and demand for a taxed good

Source: Tideman, 2004.

In the case of land taxing, there is no excess burden, i.e. the tax is neutral. In the land market, where the supply of land is perfectly inelastic (however, land used for accumulation of

money is characterized by elastic supply), a tax still leaves a wedge between the price for buyer and the price for seller but the quantity does not change (Figure 2). There are, however, some constraints on the analysis. Tax mustn't be of the amount higher than the rental value of land (otherwise, no one would be willing to have the land and pay tax for it), and tax cannot be increased if land is used more productively.

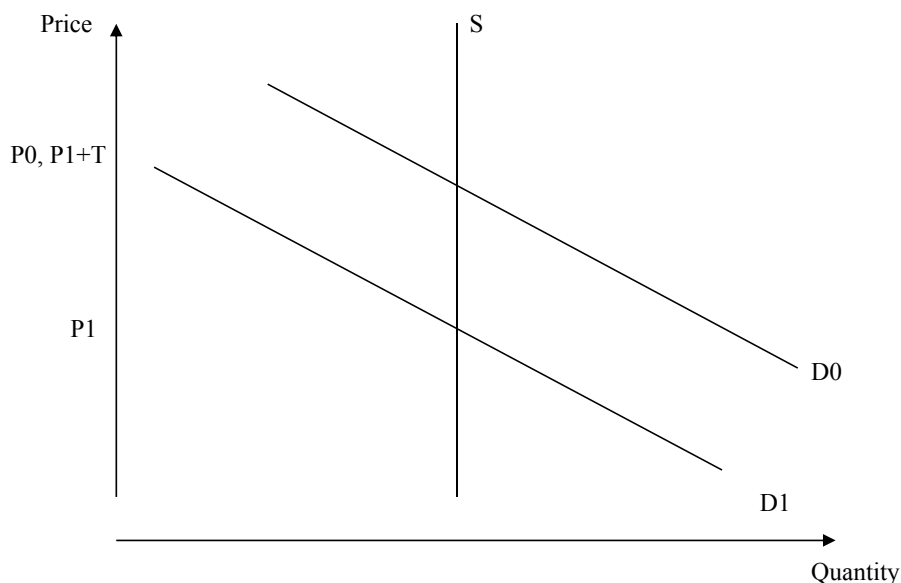


Figure 2. Effects of tax on land

Source: Tideman, 2004.

Land tax is even 'better than neutral'. First, because, it internalizes negative and positive externalities associated with land use. Second, because it is to make lending markets function better. Third, land tax can eliminate those speculations on land that worsen economic efficiency (Tideman, 1994, pp. 103–140).

Economic gains that can be derived from concentrating tax system on land taxing instead of labour and capital taxes resolve to higher motivation to decide more effectively on how much to work and how much to save, as well as to speculate less in land (increasing the quantity of land that can be currently used) (Tideman, 2004).

The main channels of land taxation influencing economic growth is through removing taxes from labour and capital, redistribution taking place from living adults to children and unborn who acquire now the right to the land, increasing efficiency of land use.

When taxes are lowered, the earnings upsurge. Feldstein (Feldstein, 1977) estimates that the elasticity of earnings with respect to that part of income that is not taken at the margin by the state in the form of taxes is at least 1, and even more for workers with higher wages. If the action of removing labour tax is regional it has a tremendous effect in the form of attracting labour to the region. The attraction effect is even stronger for capital, which is highly responsive to the regional changes in net return.

Land taxation through redistribution to the next generations will induce adults with fewer assets to accumulate more intensively than they would otherwise do. Building such attitudes helps to intensify the accumulation of saving and capital.

Land is used more effectively when it is taxed because it is less profitable to speculate in land. Moreover, the capitalization of land taxes into the selling price of land (price of land is lower, but the cost of using it becomes higher—the annual tax) makes land more attractive for bidders with higher discount rates (more entrepreneurial) shifting it at the same time to those who will use it more efficiently. Inefficient use of land creates the income foregone now in the form of tax, which motivates to use land intensively (Tideman, 1998, pp. 263–276).

3. Some of the arguments raised against taxation of land

Taxing land would make rental value of land fall abruptly, which could eliminate lots of bank products impeding banking system function.

The explanation here is much of the virtual value and definitely difficult to proceed. A lot of mortgages would exceed the price of property if land taxes are significantly higher. That creates the need to absorb the lacking value of asset on mortgages already granted, and reform the financial system in respect to the land as collateral.

Economic efficiency could be diminished when the land value would be abated after land taxing as the consequence of reduced possibilities to use land as collateral for entrepreneurs.

Highly possible resulting effect is more attentive investment of financial resources of banks, what is desired (Tideman, 1994).

Shifting the burden of fulfilling treasury to land taxation in the way that those who do not have money to pay tax on land have to let use the land to those who can afford paying assigned amount of tax (as can be derived from above) is contrary to the saint law of private property inviolability.

The benefits and costs should be analyzed by the society as a whole and by every individual and they should have the right to vote in the form of referendum.

The privilege of monopolizing a site is associated with paying a rent for it to the community, a land tax, calculated on rental value excluding land improvements. Excluding land improvements eliminates all speculation on land.

To ensure that land is not monopolized by people who can afford paying high amount of tax it is crucial to share the rent from land equally (at least the part of rent that is not reserved for infrastructure). Then, if every person has his or her share of the rent, then everyone will be able to afford paying the rent for an equal share of the land, out of their share of the rent (suggestion made by N. Tideman).

It is perhaps the greatest impediment in implementing a full version of land value tax that current landowners are not planned to be compensated in any way.

Henry George saw the problem in the same way as compensation for slave owners. The owners of land are perceived to have no right to the ownership in the first place, and any compensation for them that would have to be done from the public money would evidently have the attributes of taxpayers robbery. Furthermore, all those who own land and use it effectively will certainly afford paying taxes on the land, all the more that all other taxes (on labour and savings) will disappear (Kyrizai, 2000, p. 73).

Are there any countries in the world that implemented the land value tax as prescribed by Georgists?

In modern systems, land value tax (tax levied on the value of land excluding the value of buildings, improvements) co-exists alongside other taxes. Land value tax as a single tax is perceived to be not sufficient to raise large enough revenues (Posner, 1986, pp. 458–459) as setting the rate too high can surpass landowner surplus and result in abandonment of property and important decline in public revenue.

The state of New South Wales levies a state land value tax over a certain threshold (farmland and a person's principal place of residence are exempt). Land tax is used by the cities of Sydney, Canberra, and others in Australia, as well as the city of Mexicali in Mexico.

In Hong Kong considerable part of government revenues are generated by high land value tax.

In the US over 20 Pennsylvania cities employ split-rate property tax, i.e. they tax the value of land at a higher rate and the value of the buildings and improvements at a lower rate. This can reflect a compromise between pure land value tax and property tax levied on real estates, as well as gradual approach of the traditional real estate property tax to a pure land value tax. Florenz Plassmann and T. Nicolaus Tideman found that higher land value tax induced higher level of construction (Plassmann and Tideman, 2000, pp. 216–247).

Taiwan, Singapore, Estonia uses land value tax as well.

Moreover, Scotland, Kenya, Namibia, China are gradually shifting towards land value taxation. In many other countries, such as Belgium, Republic of South Africa, Zimbabwe, Ethiopia, Thailand, Hungary, there is rising interest in land value tax.

4. Principle of sound economic system and land taxation

The essence of every concept of economic system is the answer of the question on effective transfer of resources and coordination of economic activity at the macroeconomic level. As Allan Fisher pointed out, if a society is to benefit the economic progress, permanent transfer of economic factors (including land and other natural resources) is essential. Every impediment of the transfer is the source of economic crisis (Fisher, 1945; Fisher, 1933). The solution of the pivotal problem resolves to the equal right of all to natural resources and to the taxation of land—efficient system of prices of land.

The effectiveness of the system of prices (informative function) of land (land taxation) is realized by signalling the scarcity of land and can take place only if market competition exists. Market competition is guaranteed by land tax, which eliminates speculation and monopolization. And, that is the only way the prices of land are objective market parameters. That is the competition that induces the adjustment of economic agents to the scarcity of land reflected in the price of land. And, the process of adjustment dictates the optimality of allocation and transfer of land within an economy. Thus, applying efficient system of prices of land constitutes the basic criterion of the evaluation of every economic system. The parameter of freely operating prices is needed to protect the system against any deformation carried by such undertakings as credit expansion, public subsidies, regulation of selling and buying land.

Lester Thurow underlined that the increase of productivity depends on the velocity of the transfer of production factors, including land, from the activities with low productivity to

the activities with high productivity (Thurow, 2001). The impediment of the process is every form of monopolization and speculation of land, which deforms the system of competitive prices.

Equal access to rent from land (income from land tax) guarantees one of the crucial conditions for market of land to function effectively. Any barriers to enter the market—barriers to market supply or demand—destroy competition and bear the threat of monopolization. Even if there is competition but market is protected to any extent, effective allocation is undermined. Closing a market represents a means of weakening competition and reducing the motivation towards boosting competitiveness.

Private property—an indispensable element of rightly functioning market economy in the conditions of strong competition leads to an equilibrated distribution of economic power among economic agents. In competition private property does not give to economic agents economic power, but it lets them manage the private factor of production for the well-being of society (Eucken, 2003). Private property in the frame of socio-economic system basing on the single land tax is to increase productivity. The mechanism of market competition deprives the right to dispose the factor of production, especially land, every economic agent who will not be able to generate at least average level of productivity.

The freedom of contracting is, on the one hand, the prerequisite of well-functioning competition; on the other hand, it has to be realized as the protection against monopolization (freedom of contracts when competition is defective can lead to fostering monopolized structures).

The freedom in managing the land according to the rule of equal access should be encumbered with responsibility. That function is realized by paying tax for the right to use the land. The land taxation induces economic agents to analyze the market precisely as the responsibility for productive use of the land is accomplished under the threat of losing the right to the land.

It is indispensable that improving rivalry towards the highest efficiency levels is completed with responsibility. That is naturally delivered by the economic system based on land value taxation. Responsibility is necessary in the process of moving towards more advanced levels of productivity and flexible eliminating all those who waste the income from production factors, here, land. Responsibility is closely connected to one of the essential conditions of the productivity advancement, i.e. the rapidity of moving from low- to highly productive activities and excluding ineffectiveness reflected in the loss (Thurow, 2001).

In the analyzes of the patterns of productivity growth, long-term investments as their determinant are very exposed. For the investment to upsurge, the stability of the economic environment is crucial. The stable knowledge on the tax rates or commercial and insurance regulation strengthen the tendency/ willingness to develop investment projects. It perhaps mostly refers to the transforming economies of Eastern Europe. Moreover, the attention should be paid particularly to the aspect of strong natural inducement of investors towards consolidation of capital in the condition of economic instability, especially in taxation policy (the phenomenon of consolidation as the means of minimizing risk of legal and institutional environment).

5. Conclusions

The debates on economic progress in advanced economies concentrated on income inequalities, unemployment, decreasing living standards are often associated with the phenomenon of deindustrialization and accompanying delocalization.

Taking into account high short-term costs of deindustrialization and delocalization, there is a need for active policy in certain areas of economy, such as industrial transformation towards modern economy, researching alternative economic systems. All those endeavors are undertaken to eliminate the short-term, negative consequences of natural processes (necessary and desired) of the evolution of market economy—deindustrialization, delocation and de-investment connected with them.

Deindustrialization and delocalization are highly desired processes if the economic progress is to lead to the transformation towards economies with high levels of productivity. The transformation (reallocation of economic factors—especially land) should be effective and rapid (economic agents should behave as if the reallocation of resources is the nature of the market, otherwise, the criterion of all economic activities and economic successes). The alternative economic system, based on land value tax, seems suitable to face successfully the eternal, economic challenge, to promote the transfer of economic factors and guarantee the well-functioning of market competition. Land tax as a single tax creates the ‘new’ comparative advantage, defined by L. Thurow as the best conditions to localize economic activity and to move it to higher and higher levels of productivity (Thurow, 2004).

Structural alterations, no matter how theoretically positive or negative they are, should be analyzed precisely and separately on each economic ground.

Each reallocation, including those taking place in post-socialism Eastern Europe, which does not catch enough pace, is very often encumbered with such undesired social phenomenon as unemployment, inequalities, lower life standards, decreased level of social protection. The slow structural adjustments are frequently intensified with negative supply shocks (as the example of advanced market economies in the 1970s and the 1980s shows) or negative demand shocks (as can be observed nowadays in the European economies). Thus, driven by deindustrialization, ability to respond flexibly to rapid changes which exposes the potential of economy to adjust structurally, is the most important feature of European economies.

The main barrier in introducing land tax in the economies of Eastern Europe is the lack of awareness of the wide parts of society concerning the advantages and disadvantages of land taxation, as well as comprehension of the ideas which are pivotal for the reform, such as market mechanism, economic freedom, economic justice.

Furthermore, the important barrier of setting tax system on land tax is the value of great part of land that is unknown what makes the reform very costly. The lobbying of minority that would become victims of the tax reform which is powerful prevents it from realization.

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Zarys koncepcji opodatkowania gruntów

Abstrakt: Treści artykułu obejmują podstawy opodatkowania ziemi w kontekście modyfikacji systemu liberalnego. Podkreśla się w nim korzyści z opodatkowania ziemi zamiast z pracy i kapitału, ale również argumenty przemawiające przeciwko opieraniu systemu podatkowego i ekonomicznego na podatku od ziemi. Twierdzi się,

że jeśli społeczeństwo ma korzystać ze wzrostu gospodarczego, musi się w nim odbywać ciągła realokacja czynników wytwórczych, w tym ziemi. Podkreśla się, że propozycja opodatkowania ziemi jest wykorzystywana w wielu krajach oraz że może ona stanowić element tworzenia systemu gospodarczego w krajach postkomunistycznych.

Słowa kluczowe: ziemia jako przedmiot opodatkowania, sprawiedliwość społeczna, efektywność ekonomiczna

MANAGEMENT

Merging digital capital and digital governance: A framework for local government websites

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Abstract: Most studies about websites of local public administration can be found in the area of e-government, where models developed for the management and evaluation of these websites are composed of dimensions based on criteria of technical and technological nature such as accessibility, navigability, usability, aspects decisive for its functionality and quality.

However, they have left in second place the analysis of dimensions related to the management of public organizations, such as transparency, network of relationships, human capital, social and environmental responsibility, aspects that are emphasized in the theories of intellectual capital. In this area websites are considered as strategic tools of knowledge management, however, there are very few models for management and evaluation of websites based on the theories of knowledge management and intellectual capital, and those that exist are mainly for the business area.

Thus, this paper intends to propose an intellectual capital model for contents management of local government websites, as the literature leaves open that possibility. The dimensions of digital capital considered relevant in the development of local government websites were: services, democratic, relational and organizational e-capital.

Key words: digital capital, local e-government, digital governance, websites management, municipal council

1. Introduction

In the literature one can find many references that investigated the processes of management of municipal websites. The majority of studies can be found in the e-government area. However, one can also find some references that investigated the resulting impact of internet based projects, e-government projects and development of websites on the intellectual capital area. The references that studied the application of the theory of intellectual capital to the digital networks say that the digital capital corresponds to the intellectual capital within/in digital networks such as the Internet. Among the references that analyzed the digital capital on websites, only some propose models for the management of digital capital of

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websites, such as the works of Terra and Gordon (2002), Ruta (2009), Liu and Chen (2009), Liu (2009) and Chen (2011). Models that represent the digital capital of websites structure contents and functionalities by a set of categories of digital capital, but they were mainly built for the management of companies' websites.

Then again, studies about municipal websites fit on e-government area where the websites management models are based mainly in measuring technological aspects undervaluing important aspects of organizational management. These aspects are emphasized in intellectual capital area, however, they still have a pioneering and exploratory nature, and it was not possible to identify models for municipal websites management based on intellectual capital theories. Thus this paper tries to connect the knowledge areas of intellectual capital and e-government to analyze the processes of management of municipal websites and intends to introduce an analysis model of intellectual capital for municipal websites management through defining the categories of digital capital important in the development of municipal websites.

This paper is organized as follows. The next section introduces the literature review and describes the theoretical background of digital capital and local e-government. The third section proposes the categories of digital capital of local governments' websites. The fourth section presents the main conclusions.

2. Literature review

2.1. Digital capital: State of the art

One cannot talk about digital capital without mentioning its roots, the intellectual capital theory. Research on intellectual capital has taken different approaches in different areas such as accounting, strategic management, human resources, and finance thus, the concept has many definitions and interpretations. However, these have been converging and it is usual to define intellectual capital as the set of intangible assets (knowledge, information, creativity, competences and skills of workers, trademarks, customer satisfaction, marketing, and quality, among others) that create value and competitive advantages to organizations. And it is usually classified as human capital, structural capital and relational capital. Thus, knowledge and intellectual capital are important production factors in today's economies.

As stated by Serrano and Fialho (2003, p. 112), the concept of intellectual capital was created in 1969 by the economist John Kenneth Galbraith, although Queiroz et al. (2005, p. 213) state that the modern development of intellectual capital was made mainly by Brooking (1996), Sveiby (1997), Edvinsson and Malone (1997) and Stewart (1998) producing scientific texts and studies with practical application, especially in business area.

It is possible to find a multiplicity of intellectual capital management methodologies, especially coming from the business area where the first models were produced. However, it is also possible to observe some other research paths with the application of the concept to the public sector management, to the territories management and to digital networks. Therefore, digital capital perception results from the application of intellectual capital theory to digital business networks made possible by the Internet and the term was initially suggested by Tapscott et al. (2000).

For Tapscott et al. (2000, p. 26), ‘when intellectual capital moves to digital networks, it transforms entire industries and creates wealth in entirely new ways.’ The new value that is created is the digital capital, including Tapscott et al. (2000, p. IX), considered the digital networks of business b-webs (business-webs) as ‘the mechanisms for the accumulation of digital capital, the knowledge- and relationship-based currency of the new economy’ and the increasingly universal business platforms.

Tapscott et al. (2000, p. 5) state that the digital age brought new ways of working and negotiating in an economy that they termed as ‘digital economy’. While industrial economy depended on physical goods, where mass production implied shortages and high mobilization costs of raw materials, manufacturing and assembly of products and their distribution, in the digital economy many products such as software and electronic entertainment are not physical, they are knowledge-based products and even the value of physical goods such as medicines and cars depends on the knowledge embodied in its design and production (Tapscott et al, 2000, p. 5.). Callen et al. (2001, p. 4) state that the third computer revolution was characterized by the emergence of a new way of doing business, the ‘dot com’ company. E-business or e-commerce activities are examples of these business activities online. Callen et al. (2001, p. 4) explain that in this type of business, traditional inputs such as work labour, machines, materials and money are not enough to describe the production process of these companies ‘dot com’ where inputs in the form of intangible assets play a key and leading role in their performance. The importance of these intangible assets such as information, knowledge, intellectual capital linked or presented in digital networks explains the emergence of digital capital concept. Chen (2011, p. 3592) considers that the concept of digital capital developed by Tapscott et al. (2000) is the specific intellectual capital of digital business networks and is the main strategic resource for competitive advantage in the digital economy. To Tapscott et al. (2000, p. 26) one explanation for the high valuations of stocks of companies operating on the Internet is the market’s growing recognition of digital capital. ‘When business-webs grow, digital capital also Increases’ (Liu, 2009, p. 508). Therefore, following these considerations, digital capital corresponds to the intellectual capital within/in digital networks such as the Internet.

Tapscott et al. (2000, p. 26) consider that digital capital adds new dimensions to the three kinds of intellectual capital (human, structural, and customer) described by knowledge-management thinkers as Leif Edvinsson and Hubert Saint-Onge.

Simply put, digital capital results from the internetworking of three types of knowledge assets: human capital (what people know), customer capital (who you know, and who knows and values you), and structural capital (how what you know is built into your business systems). With internetworking, you can gain human capital without owning it; customer capital from complex mutual relationships; and structural capital that builds wealth through new business models (Tapscott et al., 2000, p. 5).

According to Tapscott et al. (2000, pp. 26–27), the digital extension of Human capital includes capacity, skills, knowledge, creativity and know-how of individuals that interconnected share knowledge and commitment to create value and it extends to people across the

b-webs in which an enterprise participates; Relationship capital consists of customer capital that when internetworked in a b-web, it becomes relationship capital, which can be obtained from multidirectional and dynamic relationships/ reciprocal linkages involving all b-web participants as customers and providers of context, content, commerce services, and infrastructure; and the digital extension of Structural capital consists of, first, networked knowledge, processes, and tools available at the point of need and, second, new b-web business models that change the rules of market leadership. Thus, according to these authors, digital capital is the result from the internetworking in a b-web of three types of knowledge assets: human, structural and relationship capital.

2.1.1. Studies on digital capital management

In the literature one can realize that over the last decades research has been made and some methodologies to analyze and manage intellectual capital at organizational level have been produced. Despite that, research at digital networks level did not follow the same constancy and persistence. Anyway, since it is a different manner of establishing the work and activities of private and public organizations that goes beyond the context of their physical existence with specific characteristics that one should know better, then this area should be worthy of attention from researchers.

Owing to the particular characteristics of the digital economy, it is not adequate to use models developed for organizations to analyze the digital capital of websites, for the reason that they do not contemplate all aspects of these digital platforms. Liu and Chen (2009, p. 9416) affirm that the existing studies at the corporate level are inadequate to measure the scale of cyber-entrepreneurship activities or analysis of its determinants. In order to try to overcome this problem, some research that analyzes the digital capital inherent to websites can be identified, such as the studies of Tapscott et al. (2000), Callén et al. (2001), Cinca et al. (2001), Terra and Gordon (2002), Queiroz (2003), Mello et al. (2003), Srivihok and Intrapairote (2004), Carvalho and Ferreira (2007), Bailoa (2007), Ruta (2009), Liu (2009), Liu and Chen (2009), Joia (2009), Gholamian et al. (2010), and Chen (2011).

In the area of intellectual capital, studies about websites try to show that these infrastructures have a role to play in knowledge management, as they allow its creation, use and dissemination. Terra and Gordon (2002) and Ruta (2009) consider websites as essential tools of intellectual capital management, proposing the management of websites based on sources of intellectual capital of the organization as a way to promote the creation, use and dissemination of intangible assets such as information and knowledge and the improvement of processes such as innovation, creativity and learning. The use of websites is seen as a strategic tool to support decision making. For example, in the case of the local public administration websites, it may serve or influence the decision making of a set of agents such as: the municipality, the citizens, local businesses, potential investors, tourists, and others. Thus, the website eventually can serve multiple interests and therefore it requires a suitable governance model.

In general, studies about digital capital try to identify dimensions of intellectual capital (human, structural, customer, relational, organizational, among other categories) important

for a better management of websites of enterprises and other organizations and, in the case of public organizations websites, to achieve better results in e-government projects. It is possible to identify some models that represent digital capital of websites by structuring the applications and features of websites by a set of dimensions or categories of intangible assets considered important for its management. In Table 1 some studies about websites in the area of intellectual capital can be observed and the dimensions/ categories that were considered to represent digital capital in each study and the type of websites analyzed.

Table 1. Studies on digital capital

Studies	Digital capital categories	Websites analyzed
Tapscott et al. (2000)	Human capital, Structural capital and Relationship capital	b-webs
Callén et al. (2001)	Internal structure: management efficiency and External structure: image and customer loyalty	Firms websites
Cinca et al. (2001)	Internal organization, External structural capital, Human capital, and Social and environmental commitment	City councils websites
Terra and Gordon (2002)	Leadership capital, Social capital, Structural capital, Human capital and Network capital	Firms websites
Queiroz (2003)	Human Capital, Internal organization, External relations, Quality and Transparency	City councils websites
Mello et al. (2003)	Human Capital, Structural capital, Relational capital and Transparency	Legislative Assemblies home pages
Srivihok and Intrapairote (2004)	Human capital, Structural capital and Relational capital	SMEs websites
Carvalho and Ferreira (2007)	Organizational capital	Organizations websites
Bailoa (2007)	Human capital, Structural capital, Relational capital and Transparency	City councils websites
Liu and Wang (2007)	Internet relational capital, Internet customer capital, Internet innovative capital and Internet service capital	Job search websites
Liu (2008)	Internet relational capital, Internet customer capital, Internet innovative capital and Internet service capital	Mobile phone service websites
Ruta (2009)	Human capital, Social capital and Organizational capital	A multinational consulting firm website
Joia (2009)	Human, Organizational, Relational and Innovative capitals	G2G (government-to-government) projects connecting a Central Bank to the courts of justice
Liu (2009)	Internet relational capital, Internet customer capital and Internet service capital	Real estate websites

Studies	Digital capital categories	Websites analyzed
Liu and Chen (2009)	Internet relational capital, Internet customer capital, and Internet service capital	Recruiting websites for the armed forces
Gholamian et al. (2010)	Human capital and structural capital (this one divided in customer capital, process capital and innovational capital)	e-business
Liu (2010)	Internet relation capital, Internet patient capital and Internet service capital	Hospital service websites
Chen (2011)	Internet relational capital, Internet customer capital, Internet innovative capital, and Internet service capital	Cargo clearance business websites
Liu (2013)	Internet relational capital, Internet customer capital, and Internet service capital	Job search websites

Source: Author's own elaboration.

Analyzing Table 1, it can be seen that the most studied dimensions and considered as critical components of the digital capital are first the relational capital, then service capital, customer, human, structural and even innovation would appear. Other dimensions related to aspects considered crucial in the management of public organizations also arise, such as transparency and social and environmental commitment, although with less focus than the other dimensions in the various analyses. The relational capital was present in all studies, a key dimension, corresponding to the first function of the portal, to create value allowing and maintaining the interaction and communication of organization with users.

Research exposed in the Table above presents some diversity both in the sectors where organizations studied operate (private or public sector), either in the methodologies used in the studies. Even in the case where the methodologies get close, such as in Liu and Wang (2007), Liu (2008), Liu (2009), Liu and Chen (2009), Liu (2010), Chen (2011), and Liu (2013), the dimensions in which the digital capital is subdivided not always converge, and in each case it is being adjusted for object cases of the study. This diversity presents difficulties in generalizing or confirms the results in adopting general implications due to the pioneering and exploratory nature of studies, limitations which are also recognized by the authors concerned, such as in Chen (2011, p. 3597) and Liu (2013, p. 128). Chen (2011, p. 3593) concludes that even after conducting a series of studies, the digital capital got different dimensions when applied to different industries.

Despite the relevance of digital networks and its intangible benefits for the public organizations, there is a small amount of research that identifies the digital capital present in the websites of public entities. Joia (2009, p. 1397) considers that the evaluation of e-government initiatives is still a challenge for academics and public sector managers since much of the benefits of these projects are intangible. The few examples are the works of Cinca et al. (2001), Queiroz (2003), Mello et al. (2003), Bailoa (2007), Joia (2009), Liu and Chen (2009), and Chen (2011).

Among those studies, it was possible to verify that models for management of websites of local public administration are not proposed. Cinca et al. (2001) and Queiroz (2003), while studying websites of municipalities, propose models of intellectual capital management for organizations in the public sector and not directly for the management of websites. Therefore, in these studies websites were used as a means to analyze intellectual capital of organizations. Studies of Mello et al. (2003), Bailoa (2007) and Joia (2009) analyze websites of public sector organizations but also do not propose management models for websites or e-government projects. The works of Liu and Chen (2009) and Chen (2011) refer to the management of specific websites of certain organizations and represent digital capital adjusted to each situation and as mentioned above, may not be generalized in other cases, as the one that is discussed here, the particularity of local administration.

Anyway, despite the studies of Cinca et al. (2001), Queiroz (2003), Mello et al. (2003), Bailoa (2007), and Joia (2009) do not produce digital capital management models, we find important contributions with respect to intangible assets in them that are critical in the management of organizations and websites in public sector. Similarly, studies of Tapscott et al. (2000), Callén et al. (2001), Srivihok and Intrapairote (2004), Carvalho and Ferreira (2007), Gholamian et al. (2010), Liu and Wang (2007), Liu (2008), Liu (2009), Liu (2013) and models of Terra and Gordon (2002), and Ruta (2009) focus on the analysis of enterprises websites that leave important clues to understand many issues related with the management of the digital capital.

Thus, the literature leaves open the possibility of project models for management of websites of public administration based on the theories of intellectual capital, since it was not possible to find any proposals in the rare existing studies.

2.2. Local e-government: State of the art

Over the last decades, ICTs have brought major impacts on the lives of the public administrations. The construction of the Information Society has brought many challenges, including the modernization of their work processes, so often connoted of regulatory and bureaucratic. Since the last decade of the 20th century, these entities have looked for new ways of providing public services with the use of ICTs and especially with the use of Internet, of which the e-government projects are the most visible face. E-government has brought great changes in the way government works, provides services and interacts with other agents in society. It is a radical transformation process that can be carried out thanks to information and communication technologies enabling a wide range of possibilities to rethink the ways of working of public organizations (Batlle-Montserrat et al., 2009, p. 4). Thus, central and local governments have developed e-government projects aiming to provide information and services to citizens and companies through the Internet.

In the literature e-government definitions converge and, in a simple way, consist in providing information and services to citizens and businesses through the Internet. 'When we talk about e-government we refer to the use that public administration, whether central, regional or local, make of information and communication technologies' (Santos and Amaral, 2002, p. 25). 'E-government refers to the delivery of government information and services online

through the Internet or other digital means. Unlike traditional structures, which are hierarchical, linear, and one-way, Internet delivery systems are nonhierarchical, nonlinear, two-way, and available 24 hours a day, seven days a week' (West, 2004, p. 16). 'E-government is characterized by inter-organizational relationships including policy coordination and policy implementation and by the delivery of services online or through other electronic means to citizens' (UN, 2002, p. 54).

When this supply of information and services by ICTs occurs at the level of local administration, it is called local e-government. 'It is the use of Information and Communication Technologies that offer to individual and businesses in a given territory the services and conditions for the promotion of democracy and quality of life, relating the political power and local Public Administration with the citizen and the companies, resorting the exchange of information of electronic base' (Gouveia, 2004, p. 25).

Based on the same principles of e-government, the author presents a differentiating factor, which is the greater territorial proximity with the citizen (Gouveia, 2003, p. 189). The responsibility for the conduction and administration of local e-government is from local authorities, which can be organized in varying degrees depending on the country concerned but which in Portugal underlies the activities of the City Councils and Parish Councils (Gouveia, 2004, p. 26). Gouveia (2004, p. 36) presents a set of local e-government functions: to publish information; interact with the public; perform transactions with citizens and remaining local public administration; integrate information with other local public administration; and transform information.

Since these situations affect the local public administration, municipal managers need to conduct these processes in order to have satisfactory results, requiring information that could reflect the progress. According to Batlle-Montserrat et al. (2009, p. 4), two important aspects are needed to drive this process to a successful transformation: the existence of an e-government model for cities and measuring the development of e-government in the cities. They state that in order the transformation was a success, municipal managers have to reflect on issues such as: 'How is the city doing the journey? Where is the city going? At which stage of this journey is the city?' (Batlle-Montserrat et al., 2009, p. 4).

2.2.1. Studies on local e-government

The area where we can find the greatest amount of studies on websites of public administration is e-government. In this area, the Internet is now seen as a governance tool and, accordingly, there are many public entities that have designed their websites, making available content and providing services on the network, such as city councils. 'Digital government has the potential to connect every citizen with elected officials and decision-makers like no previous innovation or activity. It offers individuals new and greater access to information and knowledge, subsequently redefining personal freedom' (UN, 2002, p. 54).

In the cities, municipal websites have allowed the modernization of services, and local administration has been able to realize the potential that the good use of digital networks can have on the development and innovation at regional and local level, as well as in the welfare of citizens and businesses. In the digital economy, where networked relationships proliferate,

'Intelligent Cities' are considered, the cities where the local innovation system is supported and updated by means of digital networks and applications (Komninou, 2007).

According to Batlle-Montserrat et al. (2009, p. 4), in Europe the principle of subsidiarity ensures that decisions are taken as closely as possible to the citizen, allowing the cities to benefit from autonomy in a large number of skills and play an important role in the organization of European society, enabling that electronic government has a very strong impact at local level.

Due to this potential, the process of e-government has been widely studied. Research has focused on the benefits, evolutionary stages, barriers to its development, aspects of electronic governance, website evaluation, among others. In literature that studies and evaluates *local e-government* processes, it was possible to identify two different sets of approaches. On the one hand, studies that analyze the electronic governance practices and, on the other hand, studies that evaluate the level of maturity of e-government.

2.2.1.1. Studies on digital governance

The intensive use of ICT, especially the Internet, in various areas of society and within the public administration in particular has allowed new forms of state's relationship with citizens and has influenced public management. It is under the scope of the management of e-government processes that new management paradigms for the public sector arising from the use of ICT in governance emerge, enabling new forms of governance, where you can stand out, among others, the concept of electronic governance. 'With the advent of ICTs, electronic governance appears as an emerging trend to reinvent the functioning of the government, especially in the provision of public services and citizen participation in the management, of online way' (Mello and Slomski, 2010, p. 378).

According to the UN (2002, pp. 53–54), governance is not the government as a physical entity, or the act of governing individuals, but it should be understood as a process by which institutions, organizations and citizens are guided.

E-governance is the public sector's use of the most innovative information and communication technologies, like the Internet, to deliver to all citizens improved services, reliable information and greater knowledge in order to facilitate access to the governing process and encourage deeper citizen participation. It is an unequivocal commitment by decision-makers to strengthening the partnership between the private citizen and the public sector (UN, 2002, p. 54).

The electronic governance has been the theme of multiple studies appearing, represented in models consisting of several dimensions where the devices which comprise the websites according to some criteria are grouped. Thus, this line of research tries to identify the characteristics, features and tools of websites, grouping and sorting the functionalities in a certain number of categories. The electronic governance practices are represented in models that include a set of dimensions based on criteria mainly of technical and technological nature. Examples of dimensions/ categories that are analyzed are security and privacy, accessibil-

ity, navigability, services, usability, content, among others, expressing concern to show the functionality and quality of websites. Some studies that identify the electronic governance practices at the municipal level are the following examples: Holzer and Kim (2004, 2006, 2008), Holzer et al. (2010), Holzer and Manoharan (2012), Goldberg (2009), Mello and Slomski (2010), Moura et al. (2012), Stoica and Ilas (2009), Carrizales et al. (2011), Souza et al. (2012), Vrabie (2010), West (2003), Santos and Amaral (2000, 2003, 2006, 2008, 2012), Santos et al. (2003), Santos et al. (2005), Batlle-Montserrat et al. (2009).

The models of this line of research explain the electronic governance practices adopted by local governments grouping and sorting features and tools of websites on dimensions/ categories that represent these practices. The differences between models are mainly in the way how the characteristics of websites are grouped and classified. The model developed in the study of Holzer and Kim (2004) is among the most referenced, having appeared in several examples of evaluation of digital governance practices at the municipal level as a result of these studies, such as the work of Goldberg (2009), Mello (2009), Mello and Slomski (2010), Moura et al. (2011), Moura et al. (2012), Stoica and Ilas (2009), Carrizales et al. (2011), Souza et al. (2012), Vrabie and Öktem (2012), Vrabie (2010, 2012), Carrizales et al. (2011), Fan (2011). Holzer and Kim (2004) consider that the digital governance includes both digital government (delivery of public service) and digital democracy (citizen participation in governance), and that these two groups are represented by five subgroups practices: Security and Privacy, Usability, Content, Services, and Citizen Participation.

2.2.1.2. Studies on the level of sophistication of e-government

The analysis and review of the literature in the e-government area also points to the existence of a line of investigation where it is possible to verify a set of models that explain the implementation of e-government and classify maturity level of websites as a set of development stages. The various phases show how it develops the government offer of information and services through the Internet platforms, resulting in an ongoing process of integration and incorporation of different levels of technology and levels of sophistication of utilities, services and functions in the websites of organizations.

From the approaches that studied e-government sophistication level, most models that address the evolution of e-government have some differences either in number or in the classification of the considered stages. Nevertheless, when the description of the stages is considered, most of them end up coinciding for presenting similar characteristics or commonalities, varying the number of stages according to the aggregation or disaggregation of the factors that are being analyzed. Each stage ends up representing a greater degree of sophistication of the websites by increasing the capacity to provide information, services and better communication, which is performed by the continued integration of devices from different levels of technology and sophistication of utilities that they claim to offer.

In general, the maturity levels begin with the provision of information at lower levels and may even include the possibility of payments at the highest levels. Models have in general 4 to 5 stages, which may be summarized in: information (online presence with the creation of the website and information availability), interaction (one-way and two-way communica-

tion), transaction (payments, process status consultation, requests), vertical and horizontal integration (integration of public services at different levels of government and different functions in a single website), and citizen participation/ e-democracy (public forums, opinion surveys, suggestions and complaints, comments, chats, e-meetings, soundings, and the possibility to vote).

The model of Baum and Di Maio (2000) (Gartner Group) pioneered the establishment of a set of stages and is the most referenced in the literature, having inspired many others. Some studies that analyze the maturity levels of e-government process specifically at the municipal level are the following examples: Moon (2002), Norris (2003), Santos et al. (2003), Santos and Amaral (2003, 2006, 2008, 2012), Santos et al. (2005), Deloitte and Eurocities (2004), Esteves (2005), Torres (2006), Pratas (2007), Nacke et al. (2012), KEeLAN (2002), Arslan (2008), Batlle-Montserrat et al. (2009), Vrabie (2010, 2012), Fan (2011).

The development stages of e-government suggest a positive change in the relationship between citizens and governments by offering information and services more and more citizen-centric. The main suggestion seems to be that most e-government is better, i.e., more interaction, transaction and integration can generate e-participation and e-democracy, therefore a fundamental change in the relationship between governments and citizens (Coursey and Norris, 2008, p. 525). Although the ordering of stages suggests a continuous sequence of phases, these are not necessarily always consecutive, so not always evolution is necessarily linear and progressive in its technical development (Moon, 2002, p. 427; UN, 2003, p. 18; Coursey and Norris, 2008, p. 533; Stoica and Ilas, 2009, p. 172) and therefore the levels of sophistication are not dependent on each other (Fan, 2011, p. 932).

3. The digital capital of local governments websites

Since the objective of this paper is to define, based on the literature, the dimensions/ categories of digital capital important to the development of the local public administration websites, so the last chapters analyzed the state of the art in the subject of municipal websites management checking the main contributions in the literature.

The analysis allowed discovering that it is in the e-government area that the vast majority of studies examining the management of public administration websites is found and it was possible to identify different groups of approaches. On the one hand, the models that analyze the electronic governance composed of dimensions based on criteria mainly of technical and technological nature (security and privacy, accessibility, navigation, usability, etc.), expressing concern to show the functionality and quality of websites; and, on the other hand, studies that analyze the level of maturity of e-government, where the technological approach is equally dominant, as the succession of stages of development in which the models are based requires the continued integration of devices from different levels of technology and sophistication on the websites. Such a finding suggests that models in the e-government area intend to show that a good management of website is associated with its functionality and quality and this is because such studies and models are from engineering area and not from management or public administration.

In the literature of intellectual capital area it was not possible to find models for management of websites of local public administration. Nevertheless, it was possible to find some models of management and development of websites as the example of the study of de Terra and Gordon (2002) and Ruta (2009), where models structure contents and functionalities of websites by a set of categories of digital capital important to its development and upgrade, but they were mainly built for the management of companies' websites. The few studies that analyze digital capital, however innovative, are rare and present an exploratory and pioneering nature. So, the literature leaves open the opportunity to develop models for management of websites of local public administration based on these theories. Then this article proposes an analysis instrument that tries to fill this gap.

The analysis instrument tries to connect the knowledge areas of intellectual capital and e-government because it is more what complements than what sets them apart. To complement and to contemplate a wider and consistent number of aspects some categories from both areas were selected and intended to express that the website management can be based on the sources of intellectual capital of municipalities. Thus, the set of categories of digital capital considered important to the development of local government websites were: Services e-capital, Democratic e-capital, Relational e-capital and Organizational e-capital (Figure 1). In each category, content, applications and features important in the development, updating and management of municipal websites are included. To designate this set of digital capital elements this paper will use the term digital assets by analogy with the studies of intellectual capital in which it is defined as the set of intangible assets.

The category of Services e-capital was considered in the analysis instrument because the provision of public services is a key objective of local authorities. In e-government literature this category is a cornerstone of the concept of electronic government and it is unanimously depicted in the various models that represent the electronic governance. Based on e-government models which study the level of sophistication of e-government services, the maturity levels of these services were considered as digital assets in this category. The justification for this choice has to do with the meaning for maturity level of the service that is associated with a process of integration and incorporation of different levels of technology and sophistication of utilities, services and features on websites, which allow a greater degree of interactivity with the user. Thus, it was decided to consider the four levels of maturity of the model of Santos et al. (2003), which has been widely used in studies on the quality and maturity level of the websites of municipalities and parish councils in Portugal. They assess the state of development of websites (maturity levels of e-government process) based on the degree of interactivity through a model based on four stages: Level 1: Publication of information; Level 2: Download of forms; Level 3: Download and upload of forms and processes status; Level 4: Transaction, online payments and processes status (Santos and Amaral, 2012, p. 10). Therefore Services e-capital represents the provision of local government services through the Internet, considering the following digital assets: Information on municipal services; Services with one-way interaction (downloadable forms); Services with two-way interaction (download and upload of forms and processes status); and Transaction (possibility of payments).

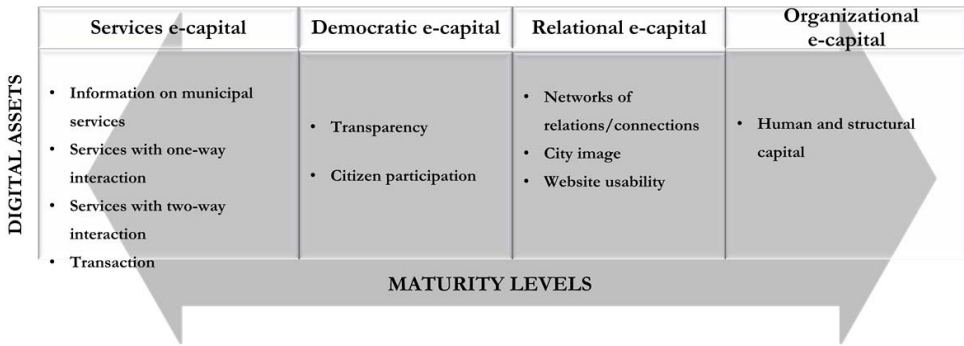


Figure 1. Categories of Digital capital of Local Government Websites

Source: Author’s own elaboration.

The definition of Democratic e-capital category is justified by the role that local governments play in the exercise in democracy allowed by the principle of subsidiarity which gives them autonomy in multiple areas of the organization of local communities. The fulfillment of this responsibility leads local governments to seek ways to improve dialogue and citizen participation, as well as ways to improve accountability and transparency in the municipal decisions and activities, thus electronic government allows an opportunity to exercise those improvements. Thus, Democratic e-capital represent the local government relationship with its citizens through the Internet, and includes as digital assets: Transparency (online publication of budgets and accounts reports, legislation, meetings minutes, etc.); and Citizen Participation (features on the website as suggestions and complaints, surveys, FAQs, forums, chats, newsletters, helpdesk service, contacts, etc.).

The Relational e-capital dimension is intended to represent the web page as a communication channel with external agents. The municipal websites, as ‘front doors’ of a municipality, end up serving multiple interests and support the decision making of various agents. This way, Relational e-capital represents the local government relations with several players in its external environment through the Internet, and includes as digital assets: Relations/ connections network (links to government agencies, municipal associations, suppliers, etc. and divulgation of collaborative projects, partnerships, participation in cooperation networks and other agreements and alliances); Image of municipality (promotion of events, heritage, economic activities, cultural agendas, maps, tourist information); and Usability (users’ registration, site map, search engine, languages, facilities for citizens with special needs).

Finally, the Organizational e-capital dimension has the intention to represent the information that the organization provides in the network about human resources, organizational structure and work processes. Therefore, Organizational e-capital represents the content available online about the composition of local government, organizational structure, competencies, political representation, human resources and includes as digital assets: Human and Structural capital.

Thus, the analysis model (Figure 1) represents the set of categories of digital capital important to the development of local government websites. The use of this instrument implies that not only the existence on website of this set of digital assets should be analyzed but it also implies the analysis of the maturity level of all digital elements in each category. In all categories the maturity level of digital assets should be analyzed because the features/ devices to be integrated on the website represent different levels of technology and sophistication.

4. Conclusions

It was intended that this paper could enable a greater understanding of issues related to management of local government websites, merging aspects of e-government and intellectual capital areas of knowledge. In literature that studies and evaluates processes of local e-government, the analysis allowed to find that the approaches with technological focus are dominant, undervaluing important aspects of public administration management (as transparency, network of relationships, etc.), since they are inspired in models of the engineering area and not from management or public administration (Coursey and Norris, 2008, p. 532).

Given this finding, the area of intellectual capital goes further, suggesting that when a critical technology base (initial priority) in the development of e-government projects is reached, the priorities should now be based on content and mechanisms that foster the creation, use and improvement of knowledge among other intangible resources, determinants to improve the management of organizations and territories such as transparency, quality of services, network and cooperative relations, human capital, social responsibility, environmental responsibility, territorial marketing. Nevertheless, the research has shown that there is a small amount of research analyzing the digital capital of public administration websites. On the other hand, the dimensions in which the digital capital is divided do not always converge, and in each case they are adjusted to specific cases that are studied, highlighting the pioneering and exploratory nature of studies, resulting in difficulty in generalizing or confirming the results and adopting general implications. Moreover, it was not possible to identify models of intellectual capital to local government websites management, verifying a gap in the literature that this study attempted to overcome. Thus, this article proposes an intellectual capital model for contents management of municipal websites, and for the construction of the analysis model a set of categories of digital capital was chosen, considered to be relevant to the development and management of local administration websites: Services e-capital, Democratic e-capital, Relational e-capital and Organizational e-capital.

This research allows to conclude that the electronic governance seems to need a broader vision, because models present in the literature show digital governance practices based mainly on technical criteria, something that does not seem to be sufficient to explain the failure situations and how to overcome barriers to the development of e-government process. The use of information technology in public organizations has a great potential for achieving savings, but the risk of this implementation is unsuccessful is also high (Carrizales et al., 2011, p. 944). The research about issues affecting good digital governance considering a greater compatibility between the challenges of technology and the challenges of organizational management can contribute to improve the development of the process. It can therefore help

local authorities to provide an answer to a demand for more efficient, effective and less bureaucratic services, taking advantage of a set of new opportunities for administrative modernization and reformulation of the forms of governing. The measuring and management of digital capital can be used to help the local governments to provide information and evaluation indicators for websites managers and therefore allow to formulate a better digital strategy trying to improve quality and to provide more valuable online services and contents to citizens and other users.

Despite the relevance of the findings, this study has some potential limitations. This work represents an initial attempt to construct the digital capital of local government websites and further work must be necessary in several ways since the present analysis model has been constructed only based on the literature. On the other hand, the fact that the proposed model is directed specifically to municipalities shows that, like other models in the area of intellectual capital, one must take care in the application of it to other cases, probably leading to adjust the categories of digital capital to the realities in question. Nevertheless, Joia (2009, p. 1389) refers that:

A model is good not because of excessive rigor that applies to it, measured by the number of variables taken into account, but because it models and expresses adequately the reality that it faces. Complexity is not necessarily synonymous of good results, and we need some flexibility when dealing with topics for which a good deal of critical thinking is necessary.

It should be noted yet that the analysis instrument presented was applied in an empirical study that was developed in 2013 in a PhD context and it allowed quantifying the contribution of the measures of the 3rd edition of Simplex Autárquico Programme 2010/2011 to the digital capital of the websites of 125 Portuguese municipalities participating (Bailoa, 2014; 2015). In this way, a possible future work could be to apply the methodology proposed to analyze the remaining editions of the Programme (2008/2009 and 2009/2010 editions) in order to compare the contributions of the respective measures, the dimensions of digital capital with more focus, and the evolution of websites of municipalities that participated in all editions, among other aspects. One other possible future work could be the application of the methodology proposed to analyze the global state of the digital capital of the websites of all the municipalities of Portugal or other countries in order to examine the dimensions with more development, and to analyze the evolution of their digital capital in time.

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Łączenie kapitału cyfrowego i zarządzania cyfrowego: ramy dla stron internetowych samorządów

Abstrakt: Większość badań na temat stron internetowych lokalnej administracji publicznej można znaleźć w obszarze e-administracji, gdzie modele opracowane dla zarządzania oraz oceny tych stron składają się z wymiarów opartych o kryteria o charakterze technicznym i technologicznym, takie jak dostępność, nawigacja, przydatność, aspekty decydujące o jej funkcjonalności i jakości.

Jednakże pozostawiły one na dalszym miejscu analizę wymiarów związanych z zarządzaniem organizacjami publicznymi, takich jak przejrzystość, sieć relacji, kapitał ludzki, odpowiedzialność społeczna i środowiskowa, aspekty, które są akcentowane w teoriach kapitału intelektualnego. W tym obszarze strony internetowe uważa

się za narzędzia strategiczne zarządzania wiedzą, niemniej bardzo niewiele jest modeli zarządzania i oceny stron internetowych opartych na teoriach zarządzania wiedzą oraz kapitałem intelektualnym, te zaś, które istnieją, dotyczą głównie obszaru biznesu.

W związku z tym niniejszy artykuł ma na celu zaproponowanie modelu kapitału intelektualnego do zarządzania treściami samorządowych stron internetowych, ponieważ literatura pozostawia taką możliwość otwartą. Wymiary kapitału cyfrowego uważane za relewantne przy opracowywaniu stron internetowych samorządów to: e-kapitał usług, demokratyczny, relacyjny i organizacyjny.

Słowa kluczowe: kapitał cyfrowy, e-administracja samorządowa, zarządzanie cyfrowe, zarządzanie stronami internetowymi, rada gminy

Methods used for communicating OSH-related issues in companies¹

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Abstract: Dynamic development of IT technologies has had a growing impact on internal communications in companies. However, some researchers dealing with communication processes claim that implementation of the new communication channels precedes the understanding of effects that their implementation brings about and theories about their impact on different organizational processes (Raeth, Zmolnik, Urbach, and Zimmer, 2009). Therefore, a question arises to what extent electronic channels of communication shall be implemented into internal company communication systems. The study has been performed in 86 companies with the aim to identify communication channels which are used and newly introduced in companies for communicating issues related to occupational safety and health (OSH) and to assess their effectiveness. According to the results of the study, the surveyed companies use most often 2–3 communication channels to provide to employees and 2 communication channels to receive from employees information on OSH-related issues. The traditional communication channels (such as formal meetings and training sessions) are most often used; at the same time, they are seen as more effective than electronic ones. The study also confirmed that implementation of an occupational safety and health management system is accompanied by development of in-company communication concerning OSH-related issues.

Key words: communication in OSH management, internal communication channels in companies

1. Introduction

Organizational management is inextricably linked to communicating with other people. Without proper communication, a variety of organizational resources remains either

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completely useless or insufficiently utilized at best (Potocki, 2011). This pertains to the occupational safety and health area as well, as communication is one of the most essential requirements for streamlined and efficient management of occupational risk. The European Agency for Safety and Health at Work has quoted research works concerning communication of occupational safety and health issues among the EU research priorities for years 2013–2020 (EU-OSHA, 2013).

In recent years, dynamic development of IT technologies has had a growing impact on in-company communications. However, despite increasing interest in applying cutting-edge technologies to organizational communications, their effects on organizations have not been fully investigated yet. Some researchers dealing with communication processes claim that implementation of new IT technologies precedes the understanding of effects that their implementation brings about and theories about their impact on different organizational processes (Raeth, Zmolnik, Urbach, and Zimmer, 2009). Therefore, a question arises whether, and if so, to what extent such technologies shall be implemented into in-company communication systems. This question is particularly important when it comes to providing information on subjects such as occupational safety and health as methods of communication involving direct contact have been deemed most efficient for years. Such methods have also been widely advertised in recent years, for example by means of the ‘Partnership for prevention’ information campaign conducted by the European Agency for Safety and Health at Work (EU-OSHA, 2012). On the other hand, more and more companies have been implementing electronic means of communication, i.e. methods of communication that entail the use of computers. Such methods can be divided into two groups: e-mail, Intranet, teleconferences, etc. and social media, consisting of social networks, blogs, hashtags, etc. (Rice, 1987). Oral methods of communication, such as training sessions and formal meetings, discussions during informal meetings as well as written discussions in the form of posters and notice boards or corporate bulletin contents will be referred to as traditional ones in this document. It seems appropriate to explain the role these two groups of methods of communication can play in communication concerning occupational safety and health issues, and which of these shall be nurtured in order to increase OSH management effectiveness. One can pose a question of whether and to what extent the implementation of a formalized occupational safety and health management system supports development of in-company communications and, by the same token, knowledge management in the company. For effective knowledge management is one of the fundamental cornerstones of efficient occupational safety and health management (Podgórski, 2010; Shereihiu and Karwowski, 2006).

The paper presents results of a study aimed at identifying the methods that are currently applied in OSH management for communicating different types of information. Taking into account information management models proposed by, among others, H. Lesca (1994) and J. Bolek (2012), according to which information passed inside a company can be split into categories depending on the purpose for which it is communicated, the following three basic types of information on OSH-related issues have been specified for the purpose of the study (Pawłowska, 2015):

- information needed to ensure that employees are aware of risks present in their place of employment and at work stations and that they use protective equipment provisioned for such risks; this includes in particular information on risks to their safety and health present in the place of employment and at work stations as well as information on protection measures and rules for protection against such risks; the information can vary between different work stations and is addressed to specific employees or groups of employees,
- information needed to increase involvement of employees in activities aimed at improving working conditions; this includes communicating information about identified problems concerning safety and health at work (between employees and to the managerial staff),
- information needed to promote an image of a company that cares for the safety and health of their employees as well as OSH policy among employees and third parties; this category includes information on objectives and plans pertaining to OSH as well as already implemented programmes; the information is addressed to all employees, regardless of their job position.

The study attempted to find answers to the question concerning the most often used methods of communicating these types of information, the relationship between the type and number of methods used in communication pertaining to OSH and implementation of a formalized occupational safety and health management system in a company, effectiveness of various methods of communicating information on OSH-related issues as well as newly-introduced methods of communication and opinions on their cost and implementation results.

2. Method

The study was conducted by way of direct interviews with participation of trained interviewers from the Central Statistical Office (GUS), with the use of a questionnaire developed for this purpose. The questionnaire was addressed to managerial staff and included questions related to:

- a) existing methods of communicating information on OSH-related issues in a company, and particularly methods used to:
 - inform employees on OSH policy, objectives and plans,
 - inform employees on potential risks and protective measures,
 - receive information on OSH-related issues from employees.

Respondents were asked to indicate all the methods of communication used in their companies for each of these purposes. Among the methods which could be used the following have been listed in the questionnaire: formal meetings and trainings, informal discussions, written communication, posters and notice boards, Intranet, e-mail, social media, corporate bulletin, electronic newsletter and website.

- b) effectiveness of various methods of communicating information on OSH-related issues; a ten-point scale was used to assess the effectiveness of these methods, where

- 1 means that the method is not effective at all and 10 that it is very effective and important for increasing effectiveness of OSH management,
- c) newly-implemented methods of communicating; the structure of this part of the questionnaire was the same as this related to existing methods (presented in the point a),
 - d) costs of implementation of new methods of communication which were estimated using the five-point scale (from 5—very high to 1—very low),
 - e) potential results of implementation of new methods of communication (e.g. observing safety rules, increasing involvement in OSH issues, decreasing sick leave rates, decreasing the number of accidents at work, increasing work satisfaction and improvement of company image), estimated using the five-point scale,
 - f) reasons of not improving OSH communication and not introducing new methods of communication.

The study was conducted in 86 companies of various size. 42 of them have implemented a formalized occupational safety and health management system. The group under investigation consisted of 20 small companies, 35 middle-sized ones and 28 large companies. The total number of people employed in the companies participating in the 2013 study was 87,000.

3. Results

Information on issues concerning occupational safety and health is usually communicated to employees using several methods of communication—almost 90% of companies participating in this study use more than one method of communicating information about policy, objectives and plans as well as information on potential risks and protection measures. Similarly, in 86% of companies employees can use more than one method of communication for transferring information on problems concerning occupational safety and health. On the one hand, in the group of companies using two or three methods of communication for transferring information on all OSH-related subjects, the dominant group are companies in which a formalized occupational safety and health management system has not actually been implemented. On the other hand, in the group of companies which use four or more methods for communicating information on OSH-related issues are companies which implemented such systems prevail (Figure 1). Differences between the average number of methods of communication used in companies with implemented formalized OSH MS and without these systems are statistically significant. This pertains equally to communication on subjects concerning policy, objectives and OSH plans [$t(72.2) = -2.787; p < 0.01$], on subjects concerning risks and protective measures applied [$t(69.3) = -2.851; p < 0.01$], and to reporting OSH-related problems by employees [$t(82) = -2.895; p < 0.01$].

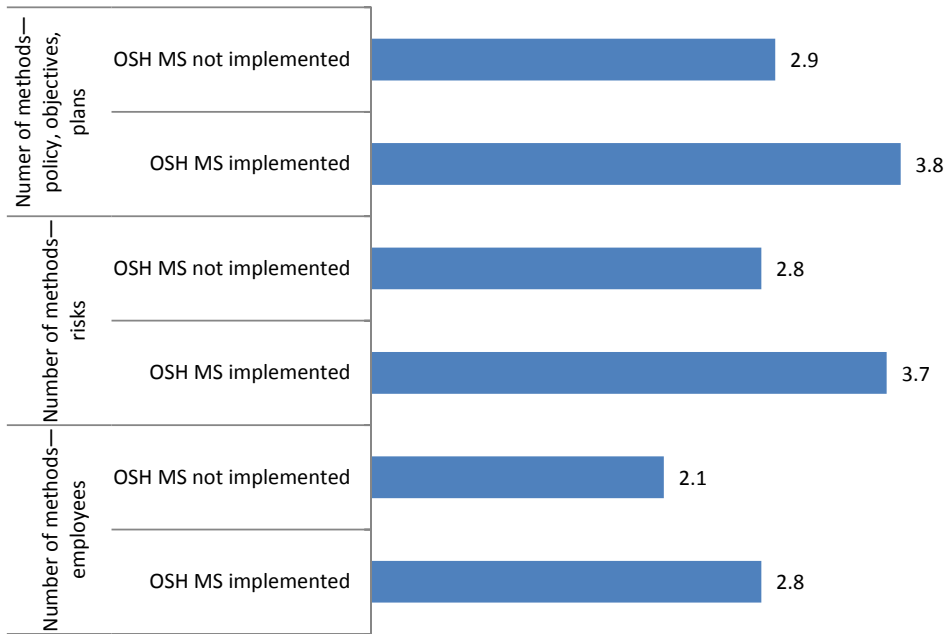


Figure 1. Average number of methods of communication used by companies with implemented occupational safety and health management systems and without such systems in relation to various OSH-related issues

Source: Author's own elaboration.

No significant differences were found between the use of standard, oral methods of communication, such as formal training sessions and meetings or informal meetings in companies with implemented occupational safety and health management systems and in companies without such systems (Figures 2, 3, 4). The differences pertain to more frequent use of the following in companies with implemented formalized occupational safety and health management systems:

- was the same as this concerning potential risks and protective measures [$t(76.48) = -2.47; p < 0.05$] and written form of communicating OSH-related problems by the employees [$t(62) = -3.289; p < 0.01$],
- Intranet and e-mail for communicating information on policy, objectives and OSH plans [$t(82.2) = -2.495; p < 0.05$] and for communicating OSH-related problems by the employees [$t(77.47) = -2.22; p < 0.05$],
- corporate bulletin or newsletter for communicating information on policy, objectives and OSH plans [$t(61.6) = -2.3; p < 0.05$] and information on potential risks and protective measures [$t(54.3) = -2.27; p < 0.05$],
- website for communicating information on policy, objectives and OSH plans: $t(60.29) = -2.56; p < 0.05$.

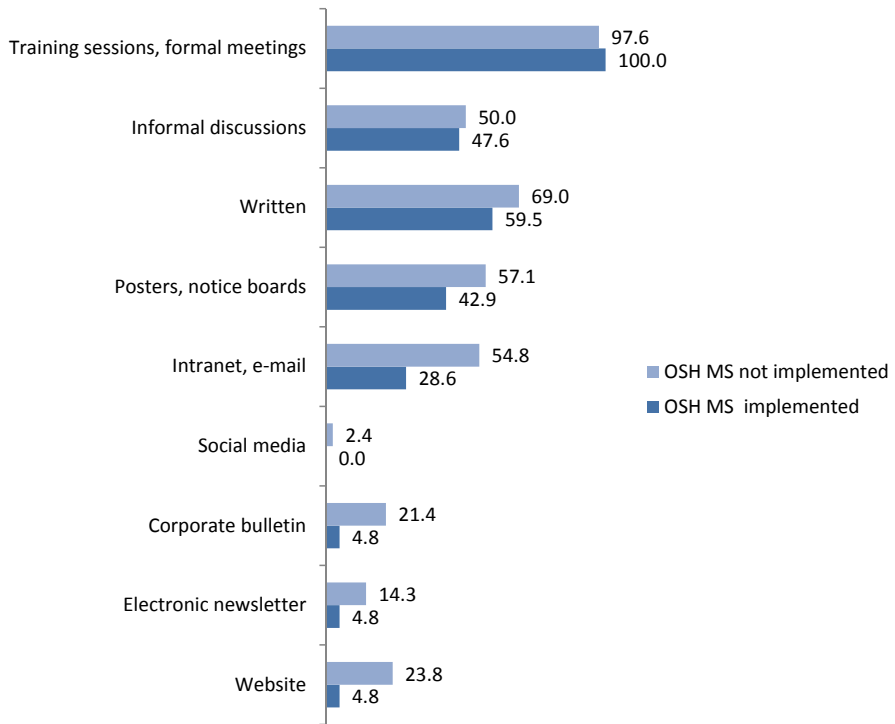


Figure 2. Percentage of companies with implemented OSH MS and without such systems according to types of implemented methods of communication concerning policy, objectives and OSH plans

Source: Author's own elaboration.

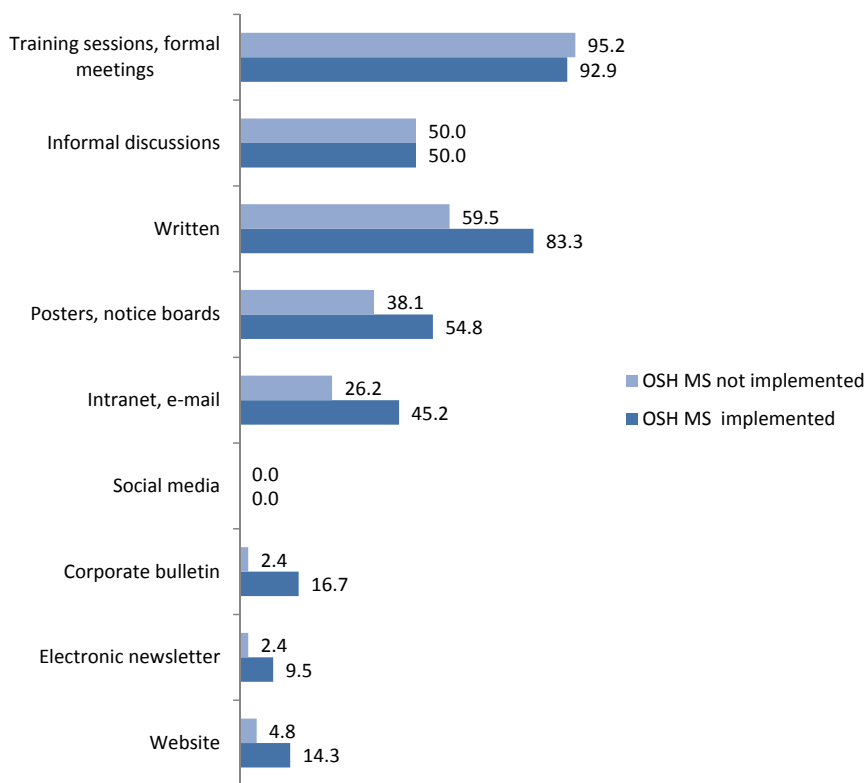


Figure 3. Percentage of companies with implemented OSH MS and without such systems according to types of implemented methods of communication concerning potential risks and protective measures

Source: Author's own elaboration.

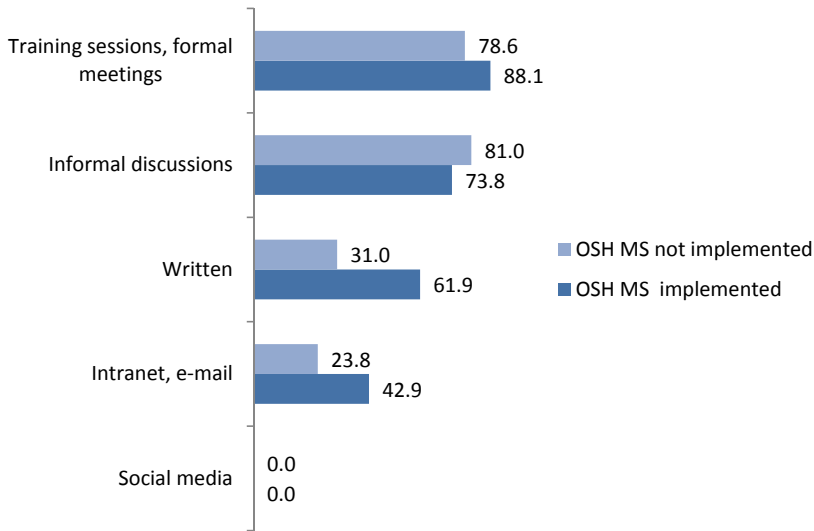


Figure 4. Percentage of companies with implemented OSH MS and without such systems according to types of implemented methods of communication on OSH-related problems

Source: Author's own elaboration.

Electronic methods of communication, such as Intranet or e-mail, are used less frequently than traditional methods when it comes to companies participating in the study: 43% of companies use them for communication of information concerning policy, objectives and OSH plans, approximately 37% for communication of information about potential risks and protective measures, and 30%—for obtaining information about OSH-related problems from employees. Only one company participating in this study uses social media in their communication process. In the case of all OSH-related issues, the average number of traditional and electronic methods of communication applied is higher in companies which have implemented occupational safety and health management systems (Figure 5), however, for traditional methods statistically significant differences occur only when it comes to communicating information on OSH-related problems by employees [$t(82) = -2.43$; $p < 0.05$].

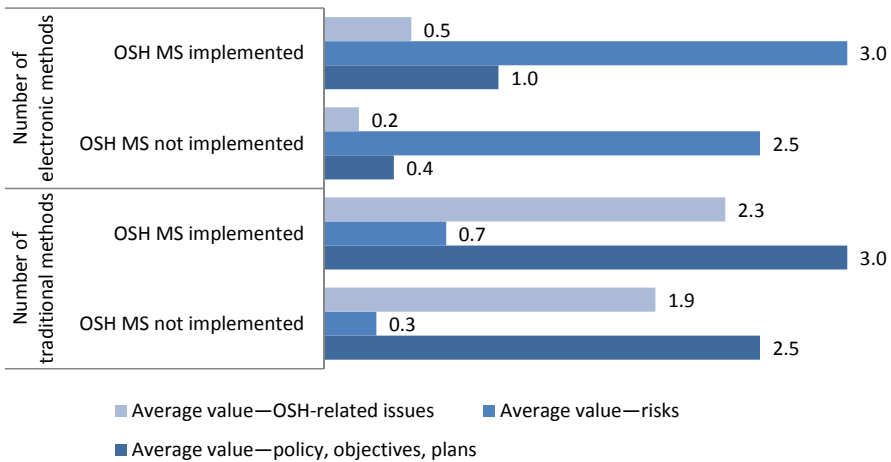


Figure 5. Average number of traditional and electronic methods used for communicating information about various OSH-related issues by companies with implemented OSH MS and companies without such systems

Source: Author's own elaboration.

Electronic methods of communication are significantly more frequently used in the group of companies implementing formalized occupational safety and health management systems when it comes both to communication of information concerning policy, objectives and OSH plans [$t(68) = -3.12; p < 0.01$], information on potential risks and protective measures [$t(66) = -2.23; p < 0.05$], and obtaining information about OSH-related problems from employees [$t(77) = -2.2; p < 0.05$].

4. Evaluation of effectiveness of different communication methods

Effectiveness of different methods of communication was assessed based on the opinions of respondents regarding significance of these methods for the efficient implementation of activities aimed at improvement of working conditions in a company. When it comes to effectiveness, traditional methods received the highest score; such methods include communication of OSH-related issues during meetings, in written form and using visual elements, as well as informal discussions. Significance of implementation of electronic methods of communication was seen as significantly lower. The majority of methods of communication is assessed similarly in companies which implemented occupational safety and health management systems and those without such systems (Figure 6). Statistically significant differences occur only for the three following methods of communication: written methods, which are assessed as more efficient in companies without implemented occupational safety and health management systems [$t(82) = 2.21; p < 0.05$], corporate bulletins [$t(78) = -2.585; p < 0.05$] and social media [$t(79) = 2.01; p < 0.05$], which are assessed as slightly more effective by companies already implementing such systems.

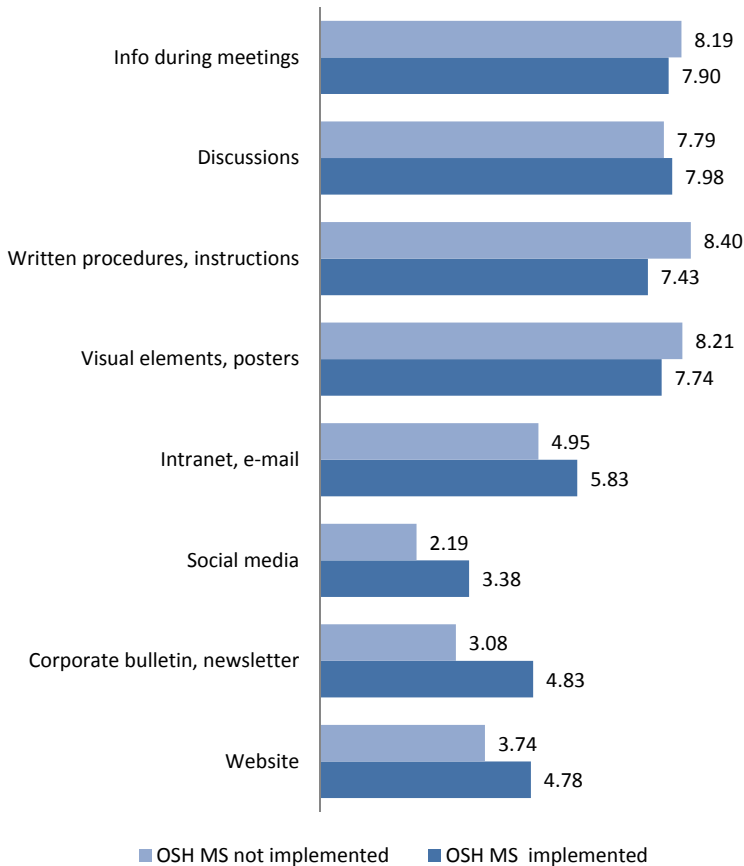


Figure 6. Average rating of significance of various methods of communication for efficient implementation of activities aimed at improvement of working conditions in companies which have implemented formalized occupational safety and health management systems and those without such systems

Source: Author's own elaboration.

4. Newly-implemented methods of communication regarding OSH-related issues and factors relevant for their implementation

27 (31%) out of the 86 companies participating in the study have implemented new methods of communication regarding OSH-related issues in the last three years. The group of companies implementing new methods of communication included 20 companies with formalized occupational safety and health management systems; other companies did not have such systems in place. Among newly-implemented communication methods the traditional ones were listed most often, i.e. written procedures and instructions, formal meetings and informal discussions. They have been implemented during the last three years in over a half of the companies implementing any new methods of communication. Electronic methods were

being implemented notably less often (Figure 7). Among companies with implemented occupational safety and health management systems and without such systems, no significant differences were observed when it comes to implementation of meetings and informal discussions for communication concerning OSH-related issues—the percentage of companies from both groups using these methods is similar. Companies with implemented occupational safety and health management systems implement new methods of written communication significantly more often than those without formalized systems; when it comes to implementation of written instructions and procedures, the differences are statistically significant [$t(19) = 3.56; p < 0.01$]. Similarly, such companies tend to implement Intranet/ e-mail or corporate bulletin/ newsletter solutions more often as well; in one of them, an attempt was even made to use social media for communication of OSH-related issues (Figure 7). However, in the case of electronic methods, statistically significant differences occur only when it comes to implementation of social media [$t(19) = -2.18; p < 0.05$].

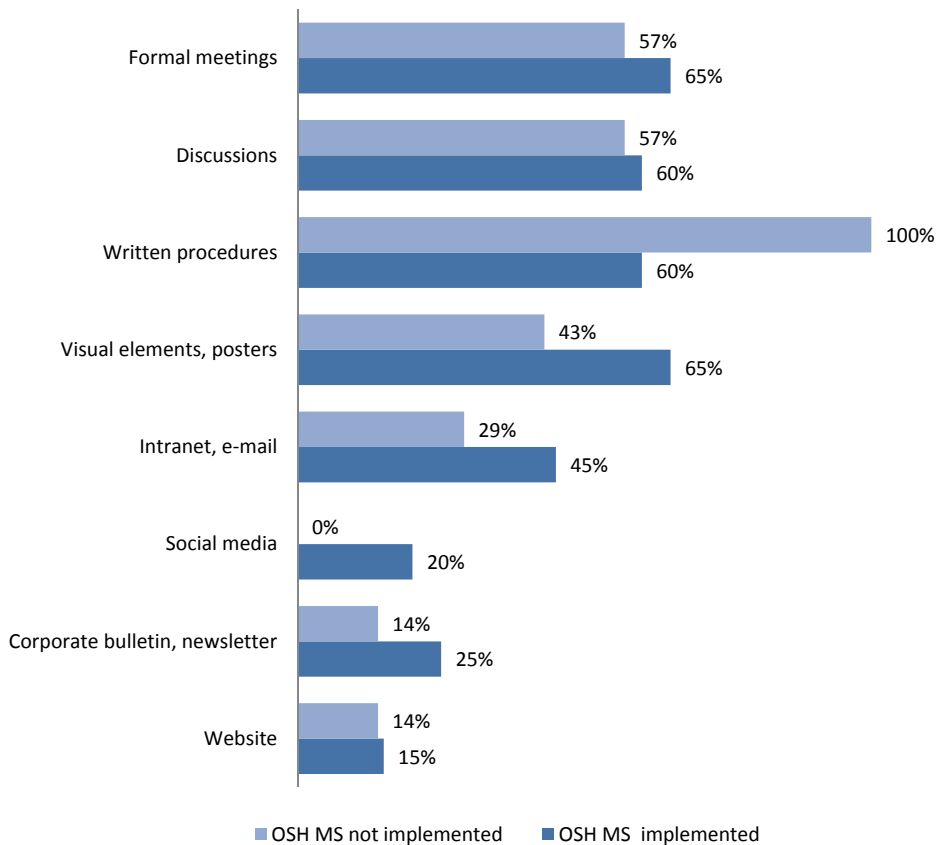


Figure 7. Percentage share of companies with OSH MS and without such systems which have implemented individual methods of communication in the total number of companies with and without OSH MS which have implemented any new methods of communication

Among factors which are relevant for implementation of new methods, the highest mark was given to seeking to improve the *status quo* of occupational safety and health in a company as well as seeking to improve its image. The significance of involvement of top management, whose decisions condition the implementation of new methods, also ranked highly. Representatives of 84% of companies in which the methods of communication regarding OSH-related issues did not change in the last three years declared that they do not see the necessity to implement any changes in this respect because the existing methods are sufficiently effective. At the same time, in approximately 25% of these companies the reluctance of employees and high costs were indicated as barriers for implementation of new methods.

5. Evaluation of costs and effects of implementation of new communication methods

In over 50% of companies which implemented new methods of communication, their cost, understood as time needed for implementation and financial expenditure entailed, was assessed as high. Over 10% of them declared that expenses related to implementation of new methods are very high, however, a similar percentage of company representatives expressed a contrary opinion, declaring that such expenses are actually very low. These opinions are to a large extent conditioned by the type of methods implemented and by participants of the process of their implementation. The study shows that over 80% of companies prepared and implemented at least one of the newly-implemented methods single-handedly; at the same time, approximately 50% of them did this with the support of consultants, which definitely had an impact on the costs incurred. The following were listed most often among expected effects of implementation of new methods of communication concerning OSH-related issues: improvement of company image, better following of OSH regulations and increased involvement of employees in activities to reinforce OSH significance—in all the listed cases, the average results obtained confirmed that this impact was perceived as important or very important.

6. Conclusions

The results obtained indicate that implementation of a formalized occupational safety and health management system is accompanied by development of in-company communication concerning OSH-related issues. Companies that have implemented formalized occupational safety and health management systems are also more likely to use electronic means in communication processes, despite the fact that their effectiveness is assessed as quite poor. Traditional methods of communication, in particular those in use for many years, such as training sessions and meetings, are assessed as twice as efficient. It is also interesting to note that informal discussions are highly assessed.

The results obtained confirm the popular thesis about applicability of traditional methods for communication in the scope of OSH. However, it is not clear whether opinions of respondents concerning applicability of electronic methods—which are often new methods, in particular when it comes to communication in the scope of OSH—are not conditioned by the manner of implementation of such methods. Namely, it cannot be disregarded that one of the reasons for lack of implementation of new methods, as quoted by the respondents, is

the reluctance of employees. Similarly, on the one hand, the study conducted by McKinsey consulting company (Bughin, Chui et al., 2013) with participation of 3,542 representatives of top managerial staff representing companies from different parts of the world and from a variety of industries showed that skills of employees form an important barrier in the use of new methods of communication. On the other hand, a study concerning in-company communication conducted by GFMP Management Consultants in 154 companies showed that among the main obstacles for efficient implementation of new, electronic methods of communication there are imperfect form and lack of functionality of a given implemented solution (GFMP Management Consultants, 2011) as well as organizational culture restricting the willingness of employees to share information and opinions. It can be expected that such factors are also relevant for assessment of applicability of various methods of communication in the scope of occupational safety and health. The results can not only point at lack of applicability of particular methods but also at the necessity of improving them in order to adjust appropriately to the needs of individuals being senders and recipients of specific information.

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Metody komunikacji w sprawach związanych z bezpieczeństwem i higieną pracy w przedsiębiorstwach

Abstrakt: Dynamiczny rozwój technologii informacyjnych w coraz większym stopniu wpływa na procesy komunikacji wewnętrznej w przedsiębiorstwach. Niektórzy badacze zajmujący się procesami komunikacyjnymi twierdzą jednak, że wdrożenie nowych kanałów komunikacji poprzedza zrozumienie skutków ich implementacji oraz teorie na temat wpływu metod komunikacji na różne procesy organizacyjne (Raeth, Zmolnik, Urbach, Zimmer, 2009). W artykule przedstawiono wyniki badań, których celem było określenie, jakiego rodzaju metody są obecnie stosowane w przedsiębiorstwach do komunikowania się w sprawach BHP i czy wdrożenie sformalizowanego systemu zarządzania BHP wpływa na rozwój wewnętrznego komunikowania się, a także pozyskanie opinii co do skuteczności

różnych metod, czynników wpływających na ich wprowadzanie oraz kosztów i wyników ich wprowadzania. Badaniami objęto 86 spółek. Wyniki pokazały, że badane przedsiębiorstwa korzystają najczęściej z 2–3 kanałów komunikacyjnych w celu zapewnienia pracownikom informacji o zagadnieniach związanych z BHP i z 2 kanałów komunikacyjnych, aby otrzymać od pracowników informacje na ten temat. Do przekazywania informacji dotyczących bezpieczeństwa i higieny pracy służą najczęściej metody klasyczne, takie jak formalne zebrania i szkolenia, które są równocześnie uważane za skuteczniejsze od metod elektronicznych. Badania potwierdziły również, że wdrażaniu systemu zarządzania BHP towarzyszy rozwój wewnętrznego komunikowania się na tematy BHP.

Słowa kluczowe: komunikowanie w zarządzaniu BHP, kanały komunikacji, komunikacja wewnętrzna w przedsiębiorstwie

The concept of absenteeism management system in a company

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Abstract: In many enterprises managing absenteeism is dictated by legal regulations in this regard and managerial pragmatics boiling down mainly to the control of absences and disciplining employees. In recent years, the approach of firms to employees has been changing. Caring about their condition, commitment and satisfaction from work are not perceived as a duty any more, but as a chance. However, there is no universal methodology of absenteeism management integrating the holistic approach and interdisciplinary approach, combining various spheres and perspectives. The aim of the paper is to present a concept of the absenteeism management system in an enterprise, aimed at the reduction of sickness absenteeism and the improvement of the enterprise performance. A thesis was adopted that the policy and operational activities undertaken within absenteeism management lead to the creation of common value for the firm and the employees. The presented concept of the system of managing sickness absenteeism includes five elements: goals and subject of the management, diagnosing causes and effects of absenteeism, preventive measures, the measurement of the effectiveness of the measures, as well as the analysis and assessment of the impact of these activities on the company's performance, and the verification of the methods of absenteeism management process. To fulfil the goal defined in this way, the following research methods were used: an analysis of the research findings of predecessors and the findings of own empirical research into the conditions of the humanization of work and the factors of work motivation.

Key words: absenteeism, sickness absenteeism, absenteeism management system in organization, enterprise performance, well-being of employees

1. Introduction

The purpose of this article is to present the concept of absenteeism management system in a company. Management within a company allows us to determine the aspect of a given subject of a study (in this case, absenteeism from work, with particular attention to sickness absence) as well as managerial functions carried out in relation to this subject in the context of management. The usefulness of absenteeism management system in a company is related to the fulfilment of formalization, diagnostic and motivational functions by that system. With

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this assumption, it is emphasized that as an important element of safety management system, the system of absenteeism management is one of the subsystems of company management. As an important determinant of productivity and competitiveness of a company, absenteeism from work should be managed similarly to other productive factors and business areas. It is assumed that good management of absences involves reconciliation of the imperative of organizational effectiveness with improvement of employees' well-being which reduces their absenteeism while maintaining the strategic development prospects of the organization.

The analysis of factors of absenteeism from work, which also affects the employee's motivation and performance as well as the conditions representing the 'ergonomic environment' of a working person, has two objectives. The first one is searching for economic and organizational methods and psychological means to increase the effectiveness of business organizations. The other equally important task is the pursuit of correspondence between the needs of the worker and the working conditions. In other words, the idea is to optimize the 'ergonomic environment' and the superior-subordinate relationship created by the company. Achieving such correspondence is an important issue to be dealt with by the organization and the management.

In this context, the growing interest in employees' satisfaction at work or the lack thereof among practitioners and theoreticians of management is not surprising. This approach is not entirely new—as early as in 1984, with reference to the concept of corporate social responsibility, Peter Ferdinand Drucker noticed that 'the proper social responsibility for business is to transform social problems into economic opportunities and economic benefits' (Drucker, 1984, p. 62). Michael E. Porter and Mark R. Kramer developed the idea presented by Drucker by proposing the concept of creating shared value, defined as 'the policy and operational activities that determine the competitiveness of an enterprise while leading to the improvement of economic and social conditions in the communities in which it operates. The creation of shared value is focused on identifying the links between social and economic development' (Porter and Kramer, 2011, p. 66).

To accomplish the intended purpose outlined above, the following research methods were applied: analysis of results of studies conducted by predecessors, data from the Central Statistical Office, the European Survey of Enterprises on New and Emerging Risks (ESENER)—managing safety and health at work, Pan-European Employer Health Benefits Issues (MERCER, 2016) and results of own empirical study on humanization of work as well as conditions and motivation at work.

Employee absenteeism is the absence of an employee from work, and more specifically, from where such employee should be. According to Wayne Cascio, employee absenteeism is any unplanned failure to come to work or leaving work early for whatever reason (Cascio and Boudreau, 2011, pp. 81–82). In Poland, the implementing provisions of the Labour Code determine the circumstances which justify an employee's absence by virtue of law and leave the determination of other cases justifying absenteeism at the employer's discretion (Striker, 2013, p. 144).

On average, sickness absenteeism in companies from the EU countries is at a level of 3% to 6% of the working time, whereas the costs associated with it are estimated at about 2.5%

of the GDP of those countries. Research has shown that more than 44% of sickness absence from work is associated with inappropriate material conditions of work, 27% is associated with health problems caused by inadequate psychosocial factors occurring in the workplace, and 17% is the so-called accidental absenteeism (Pęciłło-Pacek [ed.], 2013). These determinants of absenteeism are mainly related to the broadly understood working conditions. Therefore, they can be described in a company as internal factors of absenteeism—factors that are significantly affected by the company.

In statistical studies on sickness absenteeism conducted mainly on an international level, some other factors are also indicated (Bartkowski, 2004, pp. 71–72):

- the nature of the social security system—the more extensive the system of allowances and higher social security, the higher absenteeism in that country,
- the size of unemployment—the higher the level of unemployment, the lower the use of sick leave; in the event of reduction in employment, those employees who are more often absent from work lose their job in the first place; moreover, the fear of job loss limits the use of sick leave,
- employees' habits shaped by cultural values characteristic for the given country.

2. The concept of absenteeism management system

One of the key ways of eliminating the causes of sickness absenteeism and reduction of its negative effects is proper shaping of the relations and conditions at work and management of sickness absence in the organization. The growing interest of researchers and practitioners of this phenomenon was followed by the development of management of absences, i.e. absenteeism from work, sickness absence in particular. So far, however, the essence of absenteeism management in a company has not been defined and its fundamental aspects have not been described, i.e. subjective, purposive, structural, procedural and instrumental aspects—it may also be institutional pragmatics and management processes pragmatics. The few authors who deal with this issue are trying to determine the object and scope of absenteeism management and characterize the instruments of such management. For example, Caron Beesley draws attention to the imperative of accurate recognition of the absenteeism policy, in particular giving an acceptable size of absence, rules of its justification and consequences of non-compliance with those rules (Beesley, 2013). The issue of collecting and using information on absenteeism is raised by Stefani L. Yorges. The creation of an appropriate database, on the one hand, makes it easier to identify the causes, size and structure of absenteeism and assess the effectiveness of programmes aimed at reducing this phenomenon. On the other hand, Wayne Cascio and John Boudreau clarified the questions that may be helpful in the absenteeism management: (1) does absenteeism matter in the process of work? e.g. does it concern employees who can determine their working time independently?; (2) does the employer bear significant costs due to absenteeism? Should other people perform the work of the person who is absent? Does absenteeism result in decreased performance? Are there any delays in the processing of important tasks?; (3) What costs are borne by the employer as a result of absenteeism?; (4) What is the programme that would allow the employer to lower the level of absenteeism and what is its cost? (Cascio and Boudreau, 2011,

p. 88). Małgorzata Striker indicates the actions that should be taken in the management of absenteeism: clarification of the existing absenteeism policy, collecting and analyzing information on the size and effects of absences from work, discussion of direct superiors with their subordinates after they return to work, taking disciplinary action and introduction of programmes to eliminate the causes of absence (Striker, 2013, p. 147).

This short overview of the definition of absenteeism management shows a lack of clear structuring of the problem and argues for its treatment as a separate module that requires a holistic approach and operationalization.

The discrepancy between the required and the existing level of competences of managers in the scope of good absenteeism management—more broadly, the well-being of employees and social responsibility—may be a significant barrier to the development of companies and hinder the achievement of their current tasks. Mark Thomas, Gary Miles and Peter Fisk note that proper managerial competences determine good management, i.e. making the right decisions, as well as committed leadership, which would ensure that decisions would be translated into concrete actions while maintaining the strategic perspectives and reconciling the imperative of efficiency with complying with the rules of ethical conduct and social responsibility (Thomas, Miles, and Fisk, 2009, p. 13).

Absenteeism management is understood as planning, programming and controlling of the course of actions aimed at increasing the employees' well-being in order to reduce sickness absenteeism and improve business performance. Such understanding of the management of absences requires the integration of the holistic and interdisciplinary approach, combining various spheres and perspectives.

By studying the object and scope of the sickness absenteeism management, the European Economic and Social Committee identified three levels of management, namely:

- **basic level**—such management is limited to the prevention of accidents at work and occupational diseases and is dictated by applicable laws and regulations, the operation of the basic health care and formal requirements of the analysis of the level and structure of sickness absence in the company,
- **wider approach**—includes the prevention of any discomfort related to work, such as the provision of additional services in the field of health care and organization of recuperation and resting during work,
- **the widest approach**—also includes the prevention of health problems that in the long run result in sickness absence or reduced quality and productivity of work. Moreover, at this level of management, attention is paid to ensuring good mental and physical health through various forms of health promotion, creating the employees' well-being and balance between professional and private life.

The presented concept of sickness absenteeism management system covers five elements of absence management process and conditions of such process: objectives of management and managing bodies, diagnosis of causes and effects of absences, measurement of effectiveness of actions, analysis and evaluation of the impact of such actions on business performance as well as verification of methods of absence management process. The objectives resulting from the company's strategy, occupational safety culture as well as OHS and labour protection rules and regulations are crucial prerequisites for such process, e.g. PN-N-18000

standard. Owing to the limited frames of these articles, only selected and more important ones have been characterized (see Figure 1)

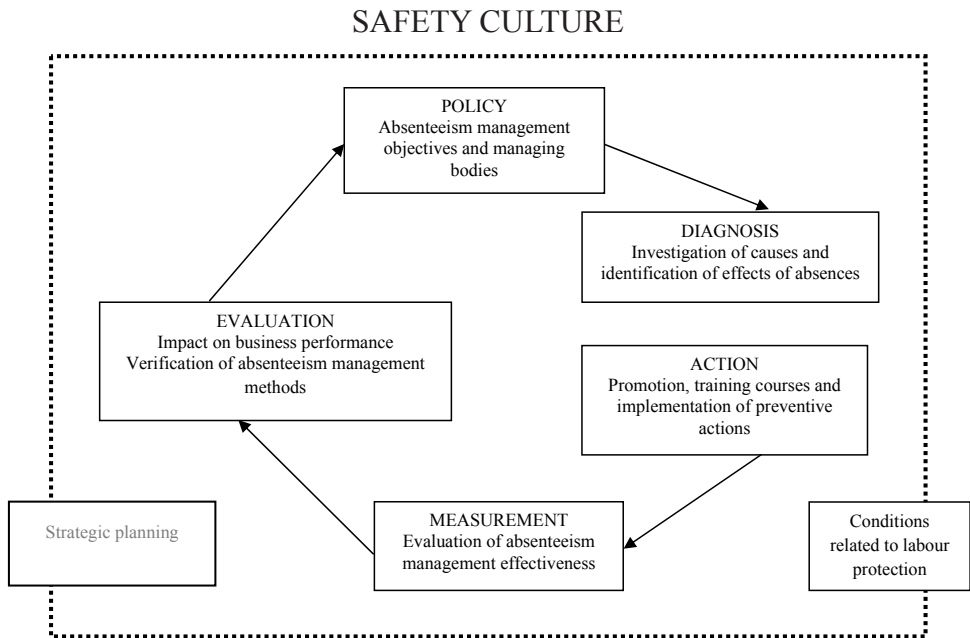


Figure 1. The system of sickness absenteeism management

Source: Authors' own elaboration.

3. Characteristics of elements of sickness absenteeism management system

3.1. Policy

In the area of personal strategy (policy), modern companies create programmes and apply reliable methods of investing in their employees' health. In enhancing the potential of work and building the attractiveness of workplaces and even supporting the interests and passions of employees, employers discern considerable benefits in the form of increased commitment and stability of their staff, decreased sickness absenteeism and ultimately increased work performance and productivity.

The results of extensive research carried by ICAN Research entitled 'Healthy Company 2016' (ICAN Research, after: Smoliński and Słowik, 2016, p. 54) show how caring about employees' health affects the performance of a company. During this research, two groups of firms were identified, varying in the level of caring about their employees' health. Every fourth firm (24%) places a strong emphasis on this area, every eighth (14%)—small. The

analysis of both groups allowed to measure the effectiveness of investment in employees' health.

Table 1. How health care influences business effectiveness

<i>Firms caring about health of their employees</i> (24%)	<i>Firms not caring about health of their employees</i> (14%)
<ul style="list-style-type: none"> – They have more satisfied and very satisfied employees—56%. – Their employees are ill less frequently—1.16 times per year. – They have more committed employees—61%. – They have more employees who started to actively care about their health on their own—64%. 	<ul style="list-style-type: none"> – They have less satisfied and very satisfied employees—37%. – Their employees are ill more frequently—1.36 times per year. – They have less committed employees—50%. – They have less employees who started to actively care about their health on their own—49%.

Source: ICAN Research, after: Smoliński and Slowik, 2016, p. 54.

The absenteeism policy should also determine the rules for absenteeism justification and methods of controlling whether sick leaves are used properly as well as other ways of disciplining employees for unplanned absence from work. Properly prepared middle managerial staff and OHS experts are the body that implements the objectives and tasks of sickness absenteeism management. Whereas, the HRM department is responsible for the preparation of health-promoting and training action programmes improving the employees' well-being and coordination thereof.

3.2. Diagnosis

The basis for sickness absenteeism management is the diagnosis of this phenomenon, i.e. examination of its causes and determination of its results. The main reason for which employers carry out health-promoting actions and other undertakings in the field of absenteeism management is the improvement of productivity and competitiveness of their enterprise, attracting and maintaining key personnel and effective management of risk factors.

From the methodological point of view, it is important to distinguish the reasons for long-term absenteeism as well as the size and causes of short-term absenteeism. This is because the sources of both mentioned types of absenteeism and the methods for reducing this phenomenon are very differentiated. Special attention should be paid to the following instruments of absenteeism management:

- monitoring of total absenteeism rates and in relation to the categories of employees,
- examination of reasons and identification of effects of sickness absenteeism,
- rules for supporting employees who return to work after long sickness,
- programming of health-promoting actions,
- monitoring of employees' health condition,
- application of traditional and modern methods and tools in the process of sickness absenteeism management in a company.

Diagnostic research should be focused on the recognition of employees' needs and this requires broad holistic approach.¹ Owing to in-depth analysis, it is possible to design actions that will contribute to better than ever before satisfaction of employees' needs both during working time and during their free time, i.e. time after work. The following techniques of analysis are helpful in looking for solutions to problems:

- a) meeting with employees, experts—suppliers of services and managerial staff,
- b) interviews with employees returning to work after illness,
- c) case studies,
- d) registers of absences,
- e) reports on using the services of experts,
- f) identification and analysis of good practices,
- g) cost-benefit analysis of implementation of health-promoting programmes,
- h) techniques of promotion and social communication and other.

As mentioned before, the basis for building the strategy of caring about employees' health is the recognition of differentiated needs of individual categories of employees. It is exemplified by the aforementioned research carried out by ICAN Research (ICAN Research, after: Smoliński and Słowik, 2016, p. 55) (see Figure 2). The most important for employees are as follows: medical care (51%) and group insurances (27%), also training courses to a lesser extent (10%). Similar opinion was expressed by managers. The perspective of employers is significantly different. According to them, the most important are as follows: group insurances (20%) and medical care (19%); while funding for sporting activities (15%), training courses (14%), and co-funding for holiday travels (14%) are considered as important.

¹ This holistic approach to the research on employees' needs as the subject of the research covers: medical care, promotion of physical activity, employees' well-being and managerial practices connected therewith, balance between professional and private life, training courses, introduction of non-standard and flexible forms of organization of working time and other.

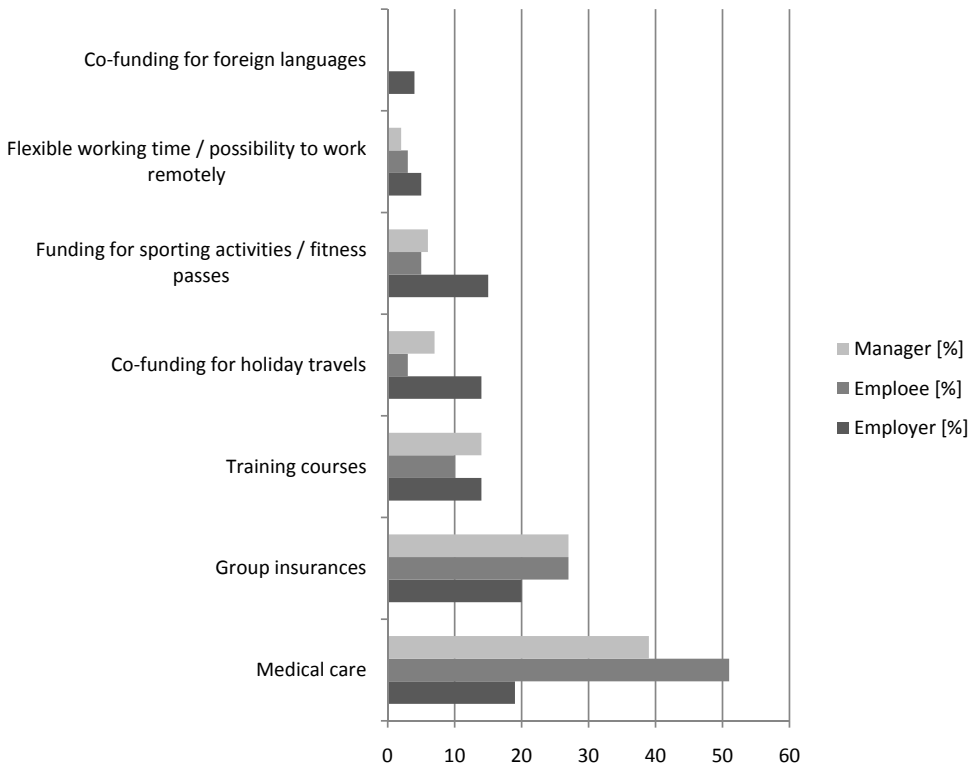


Figure 2. Most important non-salary benefits according to employers and employees

Source: ICAN Research, after: Smoliński and Slowik, 2016, p. 55.

The author's own research on the problem of stress in the workplace and evaluation of the impact of stressors in the workplace on employees' motivation and work performance has shown that the level of stress felt by the respondents may cause incorrect functioning of work organization and methods of individual employees (see Figure 3).

The sources of stress are presented via the following stressors: imposition of working rhythm, work load, performance of monotonous activities, work below qualifications. Apart from the domination of main factors, attention should be also paid to other stressors indicated by respondents, i.e. time pressure, working overtime, imprecise duties of employees.

As results of working in stressful conditions, a considerable part of respondents mentioned the following: no motivation to work, unwillingness to undertake new tasks, increase in sickness absenteeism and accidents at work, employees' complaints and resignations from work as well as frequent mistakes at work and decrease in work productivity.

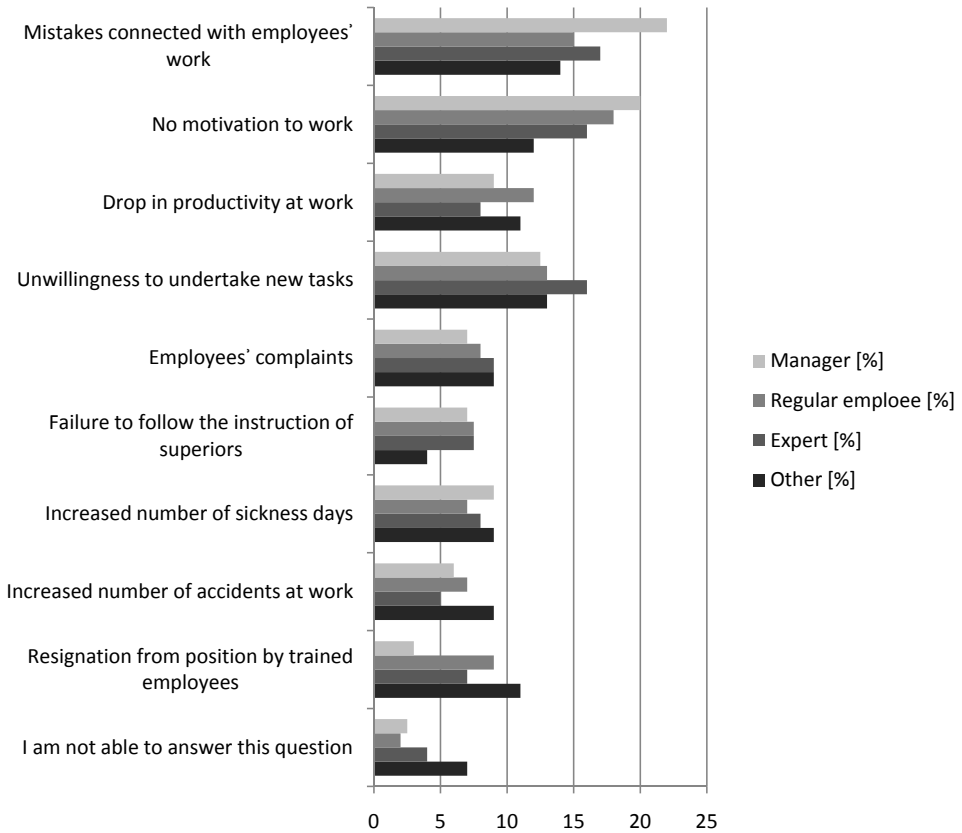


Figure 3. The results of working in stressing conditions by type of the position held

Source: Authors' own elaboration based on research results.

The sources of stress are mainly connected with work organization and individual skills of employees and not with the technical aspects of work. This means that elimination of stress sources does not require large capital expenditures. It will be sufficient to expand the knowledge of employees and develop the competences of managers.²

3.3. Action

During the stage of action, the following phases can be distinguished: planning and designing of actions and implementation thereof. In particular, they refer to the following areas: promotion of healthy lifestyle, medical care, social security, physical activity, balance between private and professional life, employees' well-being, training courses for employees and other various actions taking account of specific needs of employees and their families.

² In order to identify stressors at work, a survey was conducted among 427 employees residing in Tarnów and Tarnów Poviát. This survey consisted of 19 questions and was carried out via Internet.

Promotion of healthy lifestyle is carried out with the use of numerous tools and techniques, e.g. internal newspaper, message boards, leaflets, posters, radio network, e-mail, newsletter, invitations to participate in programmes and training courses, instruments of social communication, organization of workshops, motivation trips, integration meetings, events.

The most effective benefit and at the same time the most valued one by employees is supplementary medical care in addition to publicly funded health care system. Increased access to the services of specialists and providing health care for the employees' family members considerably increases satisfaction from work. Similarly, employees derive large satisfaction from group insurances and social security, the so-called third pillar (see Figure 3).

The research conducted by MERCER (2016) has shown that Poland is the leader in offering private medical services, including ophthalmological care, preventive vaccination and, to a lower extent, dental care. Among health-promoting activities funded by employers, sporting activities and all types of additional insurances are very popular. Furthermore, the possibility of working from home, according to flexible working time schedules and working remotely becomes more and more important. The following programmes are of little interest: anti-smoking, advice from dietitian, training on how to cope with stress, allowances and support programmes for employees after recuperating from an illness (see Figure 4).

3.4. Measurement and evaluation

In their studies, many researchers and practitioners more and more frequently emphasize the existence of a relationship between absenteeism management (more broadly: [employees' well-being] on the one hand and business performance on the other (Chenhall, 2008; Bisbe and Malagueño, 2009). They point out that the benefits generated therefrom lead to the creation of shared value for the employees, enterprises and owners. Certain authors go even further and try to show that caring about employees' well being is an important prerequisite for international operations of enterprises (Maletič, Maletič, Dahlgaard, Dahlgaard-Park, and Gomišček, 2014).

Therefore, this type of research should focus on programme implementation control as well as economic, organizational and social activity control. For this purpose, an appropriate control and reporting system should be created that would contain the rules, processes and procedures for collecting information necessary for making decisions regarding plan progress control, control of operational objectives fulfilment and evaluation of their impact on business performance. This is exemplified in the latest research conducted by ICAN Research (ICAN Research, after: Smoliński and Słowik, 2016, p. 56) (see Figure 5). It has been found that properly created and implemented non-salary benefit package contributed to reduced sickness absenteeism in the case of 52% of the studied enterprises and increased work productivity in 56% of the studied business entities. Almost half of the analyzed enterprises have emphasized that the aforementioned package caused an increase in employees' loyalty, contributed to the creation of employer's image as caring about employees and increase in the employer's attractiveness in the labour market. Moreover, these actions were largely conducive to increased attractiveness of non-salary benefits in the motivation system of the studied enterprises.

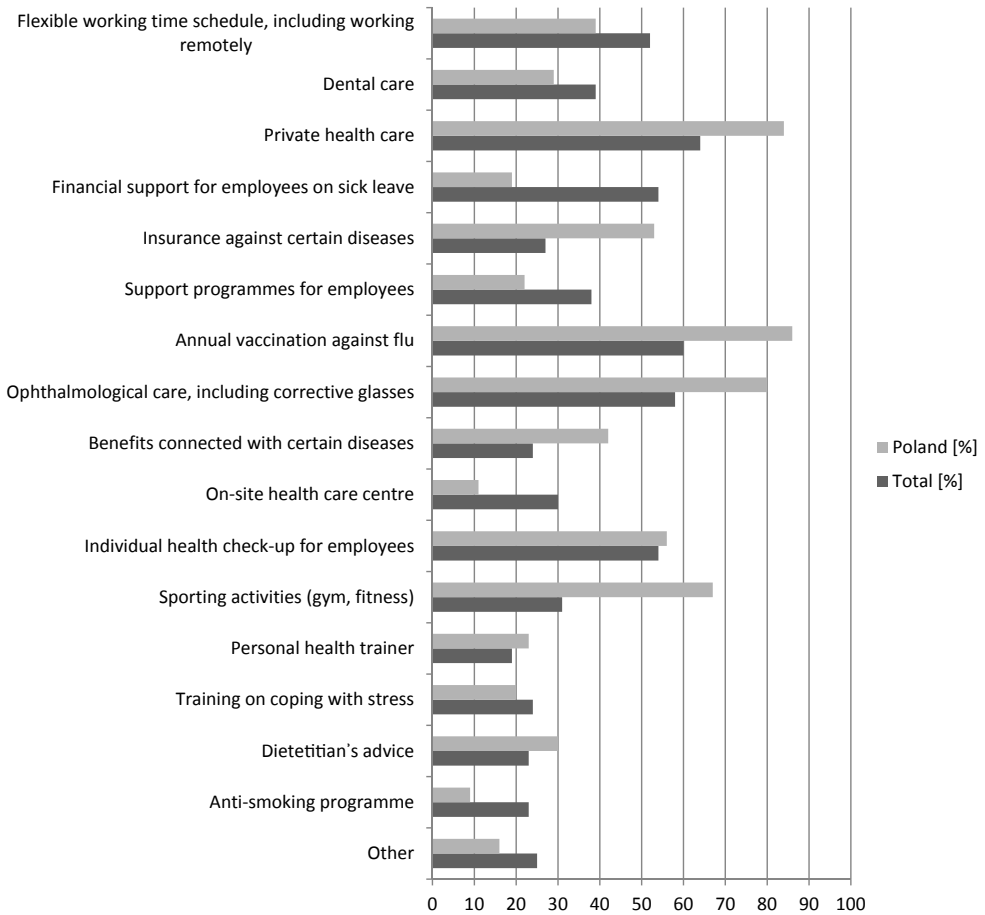


Figure 4. Health-promoting activities undertaken in the studied enterprises in Poland and selected EU countries

Source: MERCER, 2016.

An important issue remaining to be solved is the verification of methods used in individual stages of absenteeism management process. In particular, this refers to traditional and modern management methods, used at the stage of measurement and evaluation. Among traditional methods and techniques of productivity management, the following should be mentioned: cost analysis, profit and loss account, budgeting, cost-benefit analysis that are based on internal financial indicators. Current methods adequate for this type of research are i.a. *balanced scorecard*, benchmarking, controlling, which, in their nature, take account of indicators that reflect internal and external processes as well as social phenomena occurring in an enterprise, considered in operational and strategic dimension (Lopez-Valeiras, Gomez-Conde, and Naranjo-Gil, 2015, p. 3480; Chenhall and Langfield-Smith, 1998).



Figure 5. Benefits brought by non-salary benefit package (in %)

Source: ICAN Research, after: Smoliński and Slowik, 2016, p. 56.

Among numerous specific methods and techniques of sickness absenteeism management, the Bradford Factor should be mentioned (B), which is calculated according to the following formula (<http://www.bradfordfactorcalculator.com>):

$$B = S \cdot S \cdot D \quad (1)$$

where:

S —number of sick leaves during 52 weeks for each employee individually,

D —days of absence during 52 weeks for each employee individually.

The Bradford Factor allows us to identify short-term absences. It is higher for employees who are on short-term sick leave more frequently than for those who are rarely on sick leave but for a long time, e.g.:

– 10 sick leaves, each lasting one day: $B = 10 \cdot 10 \cdot 10 = 1000$,

– 1 sick leave lasting ten days $B = 1 \cdot 1 \cdot 10 = 10$.

This factor helps to identify this problem, however, it does not indicate any cause for this problem. Such reasons may be various i.a. improper psychophysical working environment (e.g. conflicts at work), health problems, no balance between professional and private life, employee's insubordination. The source of information in this regard should be conversations, data analyses and, first and foremost, interviews with employees.

4. Conclusions

To sum up the aforementioned comments and findings referring to absenteeism from work and absenteeism management, it should be emphasized that the basis for preventing discomfort at work and reducing absenteeism, sickness absenteeism in particular, is the improvement of sickness absenteeism management process in the given organization. The policy and operational actions undertaken under absenteeism management lead to increased well

being employees and improvement of business performance, in short—to creation of shared value, i.e. value for the enterprise, employees and owners. The creation of shared value is focused on identifying relations between economic and social development and on managing those relations (see the concepts and suggestions of management practices described by: P. F. Drucker; M. E. Porter and M. R. Kramer; A. M. Grant, M. K. Christianson and R. H. Price; P. Warr and G. Clapperton; T. Chappell; M. Thomas, G. Miles and P. Fisk and others) (Drucker, 1984; Porter and Kramer, 2011; Grant, Christianson, and Price, 2007; Warr and Clapperton, 2010; Chappell, 1993; Thomas, Miles, and Fisk, 2009).

Certain important suggestions on how to improve working conditions and recommendations on how to improve sickness absenteeism management in an enterprise are presented below. In particular:

- the system of preventing work-related health problems should be taken into account in the development strategy of a contemporary organization,
- the essential elements of sickness absenteeism management system, such as: policy, diagnosis, action, measurement and evaluation, should be covered by such system,
- application of modern management methods for the improvement of working conditions and management thereof,
- conducting of in-depth analysis of causes and evaluation of long-term and short-term sickness absenteeism effects,
- creation and improvement of OHS management,
- broader use of disciplinary techniques at work,
- development of work structuring and humanization processes as well as actions aimed at elimination of discomfort at work in terms of ergonomics,
- employees' evaluation of current management practices and health-promoting programmes in terms of improvement of employees' well-being,
- to a wider extent than previously, including psychosocial conditions of working environment in the studies of causes for sickness absenteeism,
- adopting individual approach to the examination of working conditions and absenteeism.

The process of sickness absenteeism management generating a change in the behaviour of management bodies, i.e. employees, organization, external interested parties, is already, and will be increasingly in the future, a permanent element of enterprise competitiveness.

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Koncepcja systemu zarządzania absencją w przedsiębiorstwie

Abstrakt: W wielu przedsiębiorstwach zarządzanie absencją jest podyktowane regulacjami prawnymi w tym zakresie oraz pragmatyką menedżerską sprowadzającą się głównie do kontroli nieobecności i dyscyplinowania pracowników. W ostatnich latach podejście firm do pracowników zmienia się. Dbałość o ich kondycję, zaangażowanie i satysfakcję z pracy nie jest już postrzegana jako obowiązek, ale jako szansa. Brakuje jednak

uniwersalnej metodyki zarządzania absencją integrującej podejście holistyczne i interdyscyplinarne, łączące różne sfery i perspektywy. Celem artykułu jest przedstawienie koncepcji systemu zarządzania absencją w przedsiębiorstwie, ukierunkowanego na ograniczenie absencji chorobowej i poprawę wyników przedsiębiorstwa. Przyjęto tezę, że polityka i działania operacyjne podejmowane w ramach zarządzania absencjami

prowadzą do tworzenia wspólnej wartości dla przedsiębiorstwa i pracowników. Przedstawiona koncepcja systemu zarządzania absencją chorobową obejmuje pięć elementów: cele i podmioty zarządzania, diagnozowanie przyczyn i skutków absencji, działania profilaktyczne, pomiar efektywności działań oraz analizę

i ocenę wpływu tych działań na wyniki firmy, a także weryfikację metod procesu zarządzania absencjami. Do realizacji tak nakreślonego celu wykorzystano metody badawcze: analizę wyników badań poprzedników oraz rezultaty własnych badań empirycznych nad warunkami humanizacji pracy i czynnikami motywacji pracy.

Słowa kluczowe: absencja w pracy, absencja chorobowa, system zarządzania absencją w organizacji, wyniki przedsiębiorstwa, dobrostan pracownicy

TOURISM

Strategic approach to tourism destination management

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Abstract: Managing tourism in a sustainable manner requires a strategic approach and frame thinking, being particularly emphasized at a tourism destination level alluding to collaboration of many and various stakeholders, thus trying to establish and retain a competitive edge. In order to achieve this, tourism destinations have a need for a destination management that is to manage organizations and stakeholders' interests through strategic and operational approach. The aim of this paper is to provide theoretical understanding of strategic tourism destination management and of the Balanced Scorecard, based on the preliminary research of towns and municipalities within the administrative borders of the Karlovac County.

Key words: tourism destination, tourism destination management, sustainability, strategy

1. Introduction

Tourism destination is to govern its development, which requires integrative planning, meaning analysis of the destination, vision, goals, strategy formulation, operative plans, control (Bartoluci, 2013, p. 170) and evaluation of both achieved and not achieved results. As a physical space in which a tourist spends at least one overnight, tourism destination includes tourism products such as support services and attractions and tourist resources, has physical and administrative borders that define its management and market competitiveness defined by images and perceptions of tourists (UNWTO, 2007, p. 1). Destination management can be identified as a strategic approach to the co-ordinated management of all the elements that make up a destination (such as attractions, amenities, access, marketing, pricing) linking sometimes ultimately separate entities with the aim of a better management of the destination (UNWTO, 2007, p. 12). Advantages of (strategic) destination management are (UNWTO, 2007, p. 9): establishing a competitive edge, ensuring tourism sustainability, spreading the benefits of tourism, improving tourism yield, building a strong and vibrant brand identity.

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UNWTO (2007, p. 136) suggests the following forms of governance for destination management: department of single public authority, partnership of public authorities serviced by partners, partnership of public authorities serviced by a joint management unit, public authority(ies) outsourcing delivery to private companies, public-private partnership for certain functions (of a non-profit making company), association or company funded purely by a private sector partnership and/ or trading (for certain functions).

Destination management is to govern the interests of various stakeholders within the tourism destination (Pechlaner, Volgger, and Herntrei, 2012) and keep them in balance. To achieve this, the destination management (Gajdošik et al., 2015) is in need of relevant information provided by the strategic management and strategic management accounting tools (Mihalič, Žabkar, and Knežević Cvelbar, 2012; Antonio and Serra, 2015).

One of the tools of strategic planning and strategic management accounting is Balanced Scorecard (BSC) (Hoque, 2003: 169, Jones, Atkinson, Lorenz, and Harris, 2012, p. 266), proposed by the European Commission as one of the options for strategic management of tourism destination (Blažević, Peršić, 2012, p. 183; EC, 2004, p. 51). BSC model has been developed at the beginnings of the 1990s by Kaplan and Norton, with the idea of steering the business entity towards future events, as opposed to conventional decision making regarding future which was based on financial statements generated from the past events.

Thus, the aim of this paper is to provide understanding to theoretical frame of strategic tourism destination management through the lense of the Balanced Scorecard. The goal is to implement theoretical understanding onto the tourism destination as a micro-location in central Croatia, distinguished by its geographical position and nature, due to which this destination has a potential for development of various forms of tourism, such as transit tourism and continental tourism. Application of these findings refers to the towns and municipalities in the Karlovac County with the intention of implementing these to business cases.

2. Sustainability balanced scorecard (SBSC)

Conventional BSC is made of four perspectives of entity activities (learning and growth perspective, internal process perspective, customer perspective, financial perspective) or areas that are to be monitored simultaneously through both tangible and intangible measurement for successful business.

By determining measurements for each goal set in each of the perspectives, BSC enables translating these goals into measurable values, which measure the level of their achievement. In strategic planning indicators are of an extreme importance, for they provide precise defining of the goals set, assessing the level of their achievement, and the improvement of integrative planning and destination management (WTO, 2004, p. 305).

Since it can accommodate both financial and non-financial measures, BSC model became an object of research for expanding it with the environmental and social dimensions of the sustainable development, being applicable for business entities and tourism destinations alike, the role of it being assisting tourism destination management in governing and carrying out its strategy by implementing sustainability criteria (Vila, Costa, and Rovira,

2010, p. 237), thus formulating a Sustainability Balanced Scorecard (SBSC) (Figge, Hahn, Schaltegger, and Wagner, 2002, p. 277; Hubbard, 2009, p. 187).

There are several suggestions for expanding the conventional BSC model with environmental and social dimension (Butler, Henderson, and Raiborn, 2011, p. 4; Kang, Chiang, Huangthanapan, and Downing, 2015, p. 126) by:

- integrating sustainability indicators into the conventional BSC perspectives,
- adding additional, fifth perspective to the conventional BSC model,
- creating separate SBSC model,

whereas Bieker and Waxenberger (2001, p. 7) suggest a more complex approach for integrating environmental and social dimensions into the BSC model by:

- integrating environmental and social indicators partially or completely into the conventional four perspectives (retaining four perspectives),
- adding the fifth sustainability perspective (amplifying the conventional four perspectives),

all of which complies with the original idea of the BSC model as a strategic management and strategic management accounting tool being adapted to the needs and demands of the entity management (Kaplan and Norton, 1996, p. 34), in this case being the destination management.

The aims of introducing and implementing (S)BSC model are to establish and maintain a balanced management system, improve strategy operationalization as well as transparency and communication of the goals (Peršić and Janković, 2006, p. 557). Another benefit of a BSC model is structuring the indicators based on the value creation process as well as using the strategic map of causal relationships between different variables (Vila et al., 2010, p. 233). The impact and demands of the external and internal entity's environment ought to be considered in the process of (S)BSC creation and selection of its indicators that are to reflect the needs of each individual business entity, i.e. destination management. In a research on the subject of SBSC model for tourism destination done in Spain in 2005 (Vila et al., 2010, p. 234), the following perspectives had been defined:

- infrastructures and resources,
- activities and processes,
- relationships: residents, tourists, visitors, organizations,
- economic results,
- social results,
- environmental results.

These perspectives with its respective indicators have been proposed for the Karlovac County:

- infrastructures and resources: investment capacity, fiscal and economic instruments, infrastructure development, legislative development, human resource training, human resource motivation, human resource productivity,
- activities and processes: tourism planning, destination attributes, resource value enhancement, development of marketing strategies, process quality, product and service innovation and development, managing processes with environmental impact,

- relationships (residents, tourists and visitors, and organizations): residents' satisfaction, satisfaction of tourists and visitors, public and private organizations' satisfaction, cooperation, integration and participation, public administration participation,
- economic results: economic structure, tourism activity's economic impact, tourism demand structure, tourism supply demand, price level, economic profitability, diversification/ specialization, seasonality, destination's competitiveness,
- social results: population's income level, residents' quality of life, integration and social cohesion, social equity, population balance, education, health, employment, safety,
- environmental results: natural heritage and biodiversity, urbanism, planning a construction, landscapes, atmosphere, energy, waste production, cultural and historic heritage.

3. Methodology

The questionnaire used in the research was based on the questionnaire used in a research done in Spain in 2005 (Vila et al., 2010).

The questionnaire was divided into two sections. The first section referred to the principal attributes of tourism destination management (this also being the part of the questionnaire that required adjustments to the area of questionnaire administration), where the following had been required:

- inclination towards a form of tourism,
- presence and the type of the strategic and/ or operative acts for planning and sustaining of tourism in the Karlovac County area.

The second section of the questionnaire dealt with assessing the importance of the indicators proposed on a Likert scale 1–5 (1 being the least important; 5 being the most important). Median of each variable was calculated and the three indicators with the highest scores were proposed for the SBSC model.

The questionnaire was administered through the Google Forms. A link to the questionnaire with the augmented explanation of the research was e-mailed to a total of 22 e-mail addresses found at the Karlovac County directory website (Karlovačka županija, 2014), that is to 5 towns and 17 municipalities within the Karlovac County administrative borders. The questionnaire was available from 23rd July until 11th September 2015. Out of 22 e-mails sent out, 3 of them returned with an automated reply that the e-mail could not be delivered to the recipient (the Barilović municipality, the Generalski stol municipality, the Žakanje municipality), thus reducing the sample to 19 e-mail addresses. Due to a low response, on 7th September 2016 the initial e-mail was repeated, thus increasing the response significantly to 42.10% (4 towns and 4 municipalities).

4. Research results and proposal of the Karlovac County SBSC model

Four (out of 8 responses) towns/ municipalities had some kind of (strategic) act for planning of tourism development, out of which one municipality had even 3 acts for planning and governing the tourism development in their area. As to the availability of these acts on the Internet, the results revealed that 4 (out of 5) towns and 5 (out of 17) municipalities have

some kind of a strategic act that included the development of tourism in the area concerned, while 3 municipalities were in the process of creation of these acts at the time of the survey.

The survey results indicated the following forms of tourism are present in the Karlovac County: hunting and fishing tourism, transit tourism, sports tourism, recreational tourism, cultural tourism, event tourism.

Acknowledging the attributes of the BSC model and the possibility of upgrading it and/ or choosing the perspectives unique to the business entity, six perspectives with respective indicators have been determined for the Karlovac County as a tourism destination. The second section of the questionnaire referring to the assessment of importance of indicators resulted in the following indicators:

- infrastructures and resources: investment capacity (4.50), infrastructure development (4.50), human resource motivation (4.33),
- activities and processes: tourism planning (4.75), resource value enhancement (4.75),
- relationships (residents, tourists and visitors, and organizations): satisfaction of tourists and visitors (5.00), cooperation, integration and participation (4.50), public administration participation (4.50),
- economic results: economic structure, tourism activity's economic impact (4.25), tourism demand structure (4.25), destination's competitiveness (4.25),
- social results: health (4.50), safety (4.50),
- environmental results: natural heritage and biodiversity (4.75), landscapes (4.75).

For each of the perspectives 3 indicators with the highest mean scores have been suggested, thus making a total of 18 indicators for the SBSC model as whole, hence keeping in line with the Kaplan and Norton's suggestion for a total number of indicators in the BSC model that '20 is plenty' (Kaplan and Norton, 1996, p. 36).

Destination management is to decide on the third indicator for the perspectives (social results, environmental results, activities and processes) where only two indicators have been suggested due to the same ranking of several indicators.

The question on the existence of the strategic acts for the planned tourism development of the concerned area was a filter question. The reason for this is the very nature of the (S)BSC as an instrument for strategic planning, i.e. an instrument for translating mission and vision into the measurable values that are designated by strategic acts. Four out of eight questionnaires indicated the existence of the strategic act for governing the development of tourism, the response rate was 21.05%, this being considered a representative result for the Karlovac County. The awareness of the importance of tourism and entrepreneurship activities of the local residents will have a great impact in the assessment of the importance of these indicators.

Strategic acts link different stakeholders present in a tourism destination (Franzoni, 2015, p. 24), recognizing them as strategic business units (SBU).

The determined strategic act for a destination ought to comprise all dimensions that must be managed in order to keep the destination at a competitive edge, thus comprising the product and service sales plan, income plan, cost plan, investment plan, human resource plan and alike (Bakija, 2014, p. 256). All these goals are to be translated into measurable values by choosing the indicators and their measurements through the SBSC model that are to be linked

with lower organizational units of a tourism destination (stakeholders) through the cascading SBSC model, i.e. transformed to the goals of the lower organizations present in the destination.

There is a Tourism Master Plan that as a strategic act encompasses two counties, the Karlovac County and the Lika-Senj County (ADE, 2008), which was a guideline in creating strategic acts of individual towns and municipalities that were regarded as a SBU. As already mentioned, 9 towns and municipalities in the Karlovac County have some kind of strategic act, whereas few towns and municipalities are in the development process of these documents. The above mentioned Tourism Master Plan has set the guidelines for further development of tourism in this area (ADE, 2008): environment protection, engaging in tourism development adjusted to the market trends, area unity assessment, cohesion assessment of the area. These guidelines can be easily recognized in the suggested perspectives of the SBSC model which was tested in the developed tourism destinations (Spain).

When considering external and internal environment of the Karlovac (and Lika-Senj) County (Counties) as determinants of mission and vision of the destination, the goals of this tourism destination are considerably different than the goals of tourism destinations in Spain (Vila et al., 2010, p. 237). Therefore, the operationalization of mission and vision through the SBSC model for the Karlovac County is to be grounded in the goals listed in the Tourism Master Plan of the Karlovac and Lika-Senj County (ADE, 2008, pp. 44–46) and the actions necessary for their achievement (Table 1).

Table 1. Objectives and actions for tourism development in the Karlovac and Lika-Senj County

Objectives	Actions
1. Creating a supportive environment for tourism development of the project area.	1. Creating and establishing a well defined institutional framework for development of tourism and quality of destination management of the area by a) redesigning present tourism-relate institutions, b) initiation of a new structure established on public-private partnership. 2. Creating a service network for private entrepreneurship and investments for tourism-development related projects (financial and advisory support, tax and other alleviations) as well as continuous support to the development related initiatives (new forms of accommodation, product sources, rural tourism, local cuisine, souvenirs, crafts, etc.). 3. Careful protection of the natural environment of the national parks, other protected areas and of the project area in general. 4. Enhancement of tourism standards and the qualification level with the aim of providing qualitative tourism management and services in aforementioned mission. 5. Defining a unique tourism-oriented policy that is to cover the whole project area with a special emphasis on traditional values, customs and local lifestyle.

2. Establishing tourism infrastructure that will answer the demands by offering various tourism experiences in the project area.	<ol style="list-style-type: none"> 1. Accommodation section improvement (availability, quality, diversity). Improvement of present hotels according to international standards and requirements; diversification of present accommodation by starting small family-managed hotels, bed and breakfasts, and thematic hotels compatible with the tourism offer of the area. 2. Improvement of restaurant and retail sector offer—food, beverages and retail trade ought to reflect the overall uniqueness of the area. Increase the number of restaurants and retail units with local cuisine, beverages and crafts. Improve their quality (sort, diversity of the offered dishes, general appearance) and service quality.
3. Diversification of tourist products/ attractions.	<ol style="list-style-type: none"> 1. Develop diverse high-quality tourist experiences (integrated tourist products) grounded in a diversity of natural and cultural resources that provide tourist activity throughout the whole year. 2. Create new and innovative tourist experiences and/ or products as a result of an established tourism value chain in the area. 3. Create prerequisites for perennial tourism activities with the purpose of reducing the tourism seasonality.
4. Achieving recognition in the tourism market.	<ol style="list-style-type: none"> 1. Market repositioning and creating image by the means of effective commercialization of key tourist experiences and products. 2. Decreasing dependence on a low number of the former markets, market segments and distribution channels. 3. Establishing effective and coordinated marketing and sales efforts.

Source: Authors' own elaboration according to ADE (ADE, 2008, pp. 44–46).

In order to operationalize the objectives set forth in the Tourism master plan of Karlovac and Lika-Senj Counties, the creation of individual strategic acts of towns and municipalities ought to comply with the master plan, and the objectives in these documents are to be derived from the objectives listed in Table 1. When considering the current resources and level of development as a tourism destination, it can be suggested that not all towns and municipalities in the Karlovac County need these strategic acts, but that there is a need for planned and coordinated management of the County's stakeholders' activities of those towns and municipalities that do have strategic acts referring to the planned tourism development. A suggestion is also to align the goals in the Masterplan with the objectives of the existing strategic acts. After alignment, the next step for destination management is forming a 'tourism' strategy map for the Karlovac County (Vila et al., 2010, p. 238) where the objectives are to be interlinked pointing out to the operationalization of the vision of the Karlovac County to create a 'thriving entrepreneurship environment and economy, quality human resources, sustainable development and quality life' (Županijska razvojna strategija Karlovačke županije 2011–2013, 2011, p. 14).

The very nature of the SBSC model requires specific objectives that are to be achieved, activities to be performed for achieving these objectives and indicators that will measure the achievement level of these objectives which will result in their further adjustment in the

terms of setting SMART objectives within the framework of sustainable development and sustainability management of tourism destinations (e.g. objective 2, activity 2).

5. Conclusions

Destination management in Croatia is still underdeveloped (Gržinić and Safti, 2012, p. 63). In order to retain and in some segments to achieve competitive edge in the tourism market, tourism management in Croatia must be approached from the position of a meta-organization of a destination management, regardless of its legal form. Destination management is a precondition for removing obstacles for destination's competitiveness by coordinating destination's stakeholders' activities, thus managing brand, spatial planning and sustainability of a tourism destination (Gržinić and Safti, 2012, p. 59). In managing destination, destination management ought to utilize strategic management tools when planning and strategic management accounting tools when analyzing achieved results. An SBSC model is suggested as a tool that encompasses both, planning and reporting/controlling stages of business cycle, which has also been a recommended approach in destination management by the EC. The aim of the destination (S)BSC model is to provide a better monitoring, assessment and reporting on the achieved objectives compared to the objectives planned.

The suggested 3 indicators for each of the perspectives with the highest mean scores make a total of 18 indicators for the SBSC model as a whole. It is up to the destination management to decide on the number and kind of the indicators to be included in each of the perspectives. Although a total number of sustainability indicators is dependant upon the destination's stakeholders (community, tourism destination, individual organizations), there should not be more than a total of 20 indicators in the (S)BSC model. Measuring the achievement level of the objectives through the accomplished results can have a positive impact on the motivation of the individual business entities present in the destination by guiding them towards the common goal, i.e. sustainable management of a destination (Franzoni, 2015, p. 26).

The destination's potential for development of forms of tourism specific to the destination in focus ought to be included into the strategic planning of the tourism destination.

Although not fully developed, the Istria County has been recognized as the only county in Croatia that approaches the destination management from the aspect of destination management as a meta-organization (Gržinić and Safti, 2012, p. 66). This indicates a need for further researches in defining a tourism destination and creating destination management as a meta-organization that is to manage sustainable development of tourism of an area in short- and long-term.

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Podejście strategiczne do zarządzania destynacjami turystycznymi

Abstrakt: Zarządzanie turystyką w sposób zrównoważony wymaga podejścia strategicznego oraz myślenia ramowego, szczególnie podkreślanych na poziomie destynacji turystycznych, który nawiązuje do współpracy wielu różnych interesariuszy, próbujących w ten sposób stworzyć i utrzymać przewagę konkurencyjną. Aby to osiągnąć, destynacje turystyczne wymagają zarządzania destynacjami, czyli zarządzania interesami orga-

nizacji i interesariuszy poprzez podejście strategiczne i operacyjne. Celem niniejszej pracy jest zapewnienie teoretycznego rozumienia strategicznego zarządzania destynacjami turystycznymi oraz umożliwienie wprowadzenia Zrównoważonej Karty Wyników na podstawie wstępnego badania miast i gmin w obrębie granic administracyjnych gminy Karlovac.

Słowa kluczowe: destynacja turystyczna, zarządzanie destynacjami turystycznymi, zrównoważony rozwój, strategia

Clusters as a form of cooperation and innovation on the example of the Bieszczady Cross-Border Tourism Cluster

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Abstract: Clusters are today one of the forms of association of small groups in a large community. They create favourable conditions for the activities of small entities whose growth potential is limited. The aim of the article is to show the importance of clusters as a means of stimulating cooperation of companies in the tourism industry. The publication is based on available literature, statistical data, as well as on websites. The article presents briefly the nature and origins of clusters. The concept of cluster has been characterized and the benefits of membership in clusters have been identified, their life cycle and division have been characterized, and the most important examples discussed. The article contains the characteristics of tourism clusters, as a special kind of interaction entities. The article shows the role of such forms of cooperation on the example of the Bieszczady Cross-Border Tourism Cluster. The research method used in the article was a critique of stationery and analysis of existing data. On the basis of the available literature books, websites and statistics, it is clear that clusters contribute to increasing market opportunities for businesses, also for those who work in the tourism industry. Publication shall also attempt to forecast the situation of clusters in the future in the face of changing economic realities.

Key words: cluster, cross-border area, tourism, cooperation

1. Introduction

Clusters are a form of association of small groups in a large community. They create favourable conditions for the activities of small entities whose growth potential is limited. In the framework of cooperation between the entities they receive a number of economic benefits that can contribute to a significant improvement in the market situation.

The aim of this article is to characterize the essence of clusters on the example of the Bieszczady Cross-Border Tourism Cluster. The paper exposes benefits for members of the cluster, resulting from a combination of joint efforts to develop tourism.

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The article is based on statistical data, literature books and websites. Thesis to be put in the publication is the assumption that clusters can significantly boost economic development entities affiliated to it and contribute to the growth of innovation.

The methodology and research method used in the article is the analysis of existing data and writing criticism, aimed at showing the current state of knowledge and directions of scientific discussion.

2. Comprehending the cluster

A cluster is a wide notion which is existing in many fields and a huge interest in it provide scientists, politicians and entrepreneurs. The English word 'cluster' is bearing the notion of what the word 'circle' is determining, a 'bunch'. The concept of industrial cluster for the first time was described by Alfred Marshall, who identified it with outside economies of scale resulting from the presence of production companies in industrial districts (Gorynia and Jankowska, 2008). In literature with reference to clusters industrial bundles, local production systems, producer's groups and innovative network are other met notions.

Contemporarily cluster was defined by an American economist Michael E. Porter (Rapacz, 2008). Porter described cluster as the group of companies and institutions connected with them, being in a geographical proximity, dividing the same abilities, the technology and the infrastructure which stay with each other both in cooperative, as well as competitive relations (Porter, 2001).

Clusters are an innovative form of cooperation of a so-called coepetition, which means that competition between business partners of partial convergence purposes is treated as a game that benefits all participants, without eliminating any of them from the market (Vanhaverbeke, 2001).

Formally or unofficially business entities cooperating with each other and institutions and organizations which they are carrying out constitute joint undertakings and are reaching profits in the local, regional, and domestic scale, as well as on the international level (Sölvell, Lindqvist, and Ketels, 2008). The most important features of clusters can include:

- system connection, network of formal and unofficial connections of cluster,
- concentration, concentrating in certain area and in the given time stores (material, financial and human) what the increase in the productivity of the non-current asset causes,
- the cooperation, the mutual aid and the cooperation of many autonomous business entities,
- ability to generate and to keep the competitive edge,
- reduction in the risk what allows to reduce management costs,
- achieving the synergy effect.

Companies in cluster can achieve tangible benefits. The most important of them include (Palmen and Baron, 2008):

- reduction in transaction costs,
- diffusion know-how and rotation of the staff,
- openness to innovations,
- easy access to key resources,

- the highest level of the productivity and profitability.
- simpler access to markets.

The formation of clusters can be done from the bottom up or the top down. In the first case group there are the regional initiative, while in the second the government or local authorities (Scott, 1988).

Functioning of cluster is connected with distinguishing the life cycle. The life cycle of cluster consists of the following stages: embryonic stage, of the height, the maturity and the fall (of close). In the first phase the cooperation among existing companies is beginning only to create, as these are most often clusters operating on relatively young markets, e.g. in the area of high technologies. The stage of the height is being marked bigger, much better with dynamics of creating connections. A stage of the maturity is educated stable forms for which the more distant height is heavy for the achievement (Gancarczyk, 2010).

Clusters in the final phase are able to reorganize their structure, the change of the production and repeat beginning the life cycle.

In the literature you can meet several divisions of clusters. Basically, most often we divide them to:

- technological—tied together with chain of the value added, strongly oriented to high technologies, keeping close connections with research centres, often straight out growing out of them,
- traditional (historical)—based on the know-how and the knowledge developed for many years but even of generations.

The world's best-known technology clusters can include Silicon Valley (semiconductors and computer technologies), Lombardia (ICT and chemical industry), Cambridge (biotechnology, computer and IT industry), Austin, Montpellier (telecommunications, software). Amongst traditional clusters, vineyards of the area Bordeaux or also a Swiss clockmaker's industry can be mentioned.

Professor Ann Markusen, expert from the regional and industrial policy from the Minnesota University, suggested the division of clusters to (Markusen, 1996):

- network clusters,
- concentric clusters,
- satellite clusters,
- institutional clusters.

Network clusters are being identified with industrial districts which smaller companies form in similar areas of production. A lack of one focal point around which enterprises are concentrating is a feature of the circle of the network type. A diversified store of enterprises is replacing them.

Concentric clusters are characterized by an existence of large enterprises (of axis), which the network of suppliers of goods and services is located around (spokes). In the interrelation large enterprises are dominating.

Satellite clusters, as in the above case are dominated by large companies, acting like spokes. In this case, there is a minimum exchange and cooperation, and most of the links comprising outer link manufacturing and other compounds with the axis.

In case of institutional clusters main and public institutions or non-profit organizations are acting the decisive part, so as: research-developmental laboratories, universities, defensive systems or the civil service. Institutions have an ability to attract suppliers, meeting their needs.

3. Clusters in tourism

Within a cluster it is possible to use benefits and profits resulting from the cooperation also in the tourism activity (Włodarczyk, Kaczmarek, and Stasiak, 2005). One should state that more and more initiatives of this type are arising worldwide, but also and in Poland. In the world the concept of tourist clusters has been known for ages. In the approach it constitutes the example of the innovation tourisms (Enright, 2000). In Poland, it is a new and still little popularized form of cooperation in tourism, including farm tourism. Its dissemination contributes, among others, to European Union programmes in support of regional development, in which the operators making network connections obtain specific financial support (Hansen, 1992), (Storper and Walker, 1986).

One of the proposed definitions of a tourism cluster defines it as an active network of tourism enterprises interacting with each other within a specific tourist product and at the same time competing the quality of tourist services offered. These clusters use unique resources of the area (Kubiak, 2009). They can decide about it among the number of natural attractions, fast and convenient communication, a sense of security, advertizing, high-quality services in accommodation, meals, etc. A tourist cluster is an active network of:

- authors of tourist products,
- entrepreneurs supporting from other industries,
- tourist organizations,
- local authorities and self-government,
- business environment institution,
- educational background (colleges).

Particular elements are cooperating with each other in the frames of one brand (of tourist product) and simultaneously competing with one another with quality, uniqueness and innovation. The basic attributes of this cluster include:

- space (defined area, in frames of which entities are functional),
- economic-social relations occurring between participants,
- network (entities are aspiring for achieving individual and shared purposes),
- services (the consumption of tourist products is taking place in the place of producing them).

The cluster will be effective, provided it is not leading the competition for the elimination from the market, but contributes to derive profits by the entities involved in this structure, and in addition it leads to improvements of quality of life of the residents on the area of the cluster (Kaczmarek, Stasiak, and Włodarczyk, 2010).

In the case of tourism clusters, factors contributing to concentration of a specific group of companies and institutions connected with their activities are undoubtedly endogenous factors, which include:

- beneficial location on account of the wealth of natural stores and natural advantages,
- communications' best combinations,
- the highest level of technical infrastructure,
- the highest level of knowledge.

There should also be mentioned soft development factors, such as tradition, knowledge and skills, norms and values, work culture, and social activity (Zorska, 2002).

The first tourist cluster in Poland came into existence in 2005 under the name 'Beskid 5', into composition which accessed in 2005 five communes of the Cieszyn district with Ustroń at the head. In 2009, in Poland in the tourism industry there have already worked several clusters, examples of which are among others: 'Via Sudetica', 'Sun Region', 'Crystal of Europe', and others are in the organizational phase or project (Staszewska, 2009). Examples of tourism clusters in Poland are presented in Table 1.

Table 1. Examples of tourist clusters in Poland

Cluster	Region
Cluster Ceramics and Tourism	Wrocław
Cluster of Culture Lublin	Lublin
Wine and Honey Trail	Gorzów Wielkopolski
Łódź Cluster 'Tourism Horse'	Łódź
Tourism Cluster Valley of Wisłoka River	Krakow
Tourist Cluster Mazovia	Warsaw
Opole Tourism Cluster 'Land of Milk and Honey'	Opole
Sopot Tourist Cluster	Gdańsk
Tourist Cluster 'Valley of Noteć River'	Poznań
Cross-Border Cluster Tourism Water Trail Berlin–Szczecin–Baltic	Szczecin

Source: Author's own elaboration.

Tourist clusters are undergoing the constant development thanks to uniting entities. In Europe it is possible to meet with numerous initiatives, encouraging the development of clusters which on the Old Continent were identified over two thousand. A synergy effect of action, impossible to get individually and innovating, is an important reason of their functioning and development (Nordin, 2003). Cooperation within tourist cluster may include:

- creating and managing tourist products of the area,
- joint promotional measures (fair, Internet advertisement, cooperation with media),
- organization of common trainings and raising qualifications,
- joint efforts against the EU centres,
- conducting researches including making results available and implementing the innovation (Jackson and Murphy, 2006).

Tourist clusters can constitute the model of the innovation, also in Poland. They came into existence in 2008 and Cross-Border Tourist Cluster watercourse Berlin–Szczecin–Baltic can constitute the good example. The cluster repeatedly was awarded the title among others in

2008 'Innovative organization' in frames of the competition 'Domestic Leader of the Innovation' in Szczecin, and Eden 2010 and Przyjazny Brzeg 2011 were also awarded to the cluster. In an effective way it was able to use the abolition border in frames of Schengen in 2007. The innovation consists in promoting the tourist staple product that tourism constitutes along the trail, in frames of the tourist offer of Pomerania Euroregion, the completion of recreational-sports events, as well as activity in the cooperation between neighbours (<http://www.um-zachodniopomorskie.pl/index.php?wiad=1517>).

In area provided with activity of cluster both water and land tourism are developing. The organization is being promoted, bicycle, walking watercourses being found on its area and valuable areas among others: the Wolin National Park and numerous Landscape Couples. In the area of the group on the Polish and German border, there are approximately 105 marinas and ports. It enables the activation of navigation in the area of cluster. This area has the biggest number and surface of water basins in this part of Europe, through which towards the Baltic Sea and inland, sailing and motor yachts are flowing. For a number of surface ships sailing from the region of the capital Berlin and the State of Brandenburg it is a unique and at the same time the shortest connection with the sea water (http://www.pi.gov.pl/PARP/chapter_86197.asp?soid=B5F607FB9E1E41BBA80E24F34813EC44).

These are the obvious benefits of the activities of the tourism clusters, helping to increase their popularity in Europe and in Poland.

4. The Cross-Border Tourist Cluster of the Bieszczady mountains as the example of a tourist cluster

The Cross-Border Tourist Cluster of the Bieszczady mountains came into existence in Ustrzyki Dolne and is spreading through the areas of Poland and Ukraine. It is the only such organization covering areas of Poland and Ukraine. Its broker is the Association of Bieszczady Cross-Border Tourist Cluster. The Cross-Border Tourist Cluster of the Bieszczady mountains was created as part of the project implementation 'Polish-Ukrainian strategy of the development of tourism as the essential element of joint undertakings' which received funding from the European Regional Development Fund, partially from centres (ERDF) Programme of the INTERREG IIIA/ Tacis CBC Neighbourhood Poland–Belarus–Ukraine.

A Cross-Border Tourist Cluster of the Bieszczady mountains is a network of subjects which are next-door neighbours and are cooperating, using supporting the local government, the institution and the organization. Gathering all individuals which are interested in the development is planning tourism for them and preparing proposals interesting for tourists of the rest (<https://rzeszow.uw.gov.pl/wojewodztwo-podkarpackie/gospodarka/klastry/bieszczadzki-transgraniczny-klaster-turystyczny-2/>).

On the Polish side, it includes the villages of the district Bieszczady. They are Jałowe-Bandrów, Dzwiniacz, Czarne, and Lutowska. On the Ukrainian side they are towns of regions—Stary Sambor and Turka. These are in addition to the headquarters town areas such as the Stara Sól, Chyrów, Rozłucz.

Towns of the district of the Bieszczady mountains are representing a high tourist indexation and a quite unique tourist offer. With advantages of the Ustrzyki Dolne commune are

national parks and landscape and tourist routes and ski lifts put near the farm tourism objects, led by persons involved in activity of the cluster.

Jałowe-Bandrów as well as Dzwiniacz are the places put in the vicinity of the forests full of forest fleece and the wild game. As a tourist offer, there is a possibility of horse riding or carriage through the picturesque grounds. In the local households it is possible to take part in wicker and paper-tissue workshops. A questing tourism is also developing (Fedas and Florys, 2010).

In Czarne, the Gallery of the Bieszczady mountains 'Barak' is located, where it is possible to read and to buy artistic works of authors of the Bieszczady mountains. A little mine of petroleum is put up at the southern part of the village. Mineral springs are also appearing in the town, having a status of the spa. In the future a chance of the spa development of infrastructure exists.

Lutowiska village has 12 teaching, historical and natural paths and 116 kilometres of bicycle routes in their offer. For tourists there are also 2 ski lifts and 3 points are awaiting using the horse riding. With the advantage of communes Lutowiska and Czarne there are also abundant brines and bathing beaches.

Sambor is a town connected with folk culture and with rich collections of sacred art. Unique Orthodox churches are attracting tourists along with wonderful iconostases and roadside shrines. The area of Stary Sambor is abounding also in mineral waters, used for healing purposes.

In Chyrów, ponds for recreation and fishing were created. Also a camping site came into existence with lodging houses and a camping place. Town of Rozłucz, however, is putting for active rest associated with the skiing and bicycle routes. A unique appeal presents the town Turka.

It is a base for exploring the highest part of the Bieszczady mountains on the top of the Pikui and numerous forest complexes. The town is famous for its festivals and folk museum. As a part of the discussed cluster it is accessing 50 subjects, hotels, boarding houses. On account of country character, entrepreneurs acting in the farm tourism industry constitute the most numerous group of participants. They grouped together farm tourism households from a few Polish villages and put on the other side border of Ukrainian towns.

Low level of industrialization and urbanization of this area and the wealth of cultural-natural legacy kept thanks to that are supporting the development of farm tourism. Farm tourism households have more attractive prices compared to big hotel objects, being out of order in frames of cluster. Their localization guarantees easy access to tourist routes and is supporting the rest in a quiet surrounding (http://www.pi.gov.pl/PARP/chapter_86197.asp?soid=B5F607FB9E1E41BBA80E24F34813EC44).

It is possible to acknowledge the idea as a very valuable one in relation to the way of economic stimulation of regions and microregions of the so-called eastern wall.

The discussed form of cooperation is based on essential premises. The usefulness of creating relations of cooperation in the area of the borderland of Poland and Ukraine is being motivated relatively with its low position in the economy of both countries. Districts and provinces of this border zone belong to the most poorly developed regions with high unemployment rates.

Raising the tourist potential by exploiting existing advantages is a purpose of activity of the cluster. In the area of functioning of the circle it is worthwhile exploiting rich both natural and anthropogenic advantages (Kurek, 2007). A possibility of preparing and unwinding unique tourist brand-name products exists from the scope of educational-cognitive, trapper's tourism, or also a tourist full service.

Participants in cluster have one common goal, that is to enable everyone of the tourists, depending on their expectations, the most interesting spending their leave in the best possible conditions and using the substantial amount of available attractions in Bieszczady mountains, both on the Polish as well as on the Ukrainian side. The tourist product is being shaped by features of uniqueness being characteristic of a core of the product.

The cooperation initiative in frames of the cluster is realized in the name of 'Hotels dispersed in frames of the Cluster'. In practice towns, in which a few households are cooperating with one another, are such hotels.

A tourist who will like to take advantage of services in one of them will receive information and proposals to use offered attractions. Consisted entities in the cluster are acting in frames of 'dispersed hotel' in towns:

- on the Polish side: Jałowe-Bandrów, Dzwiniacz, Czarne, and Lutowiska,
- on the Ukrainian side: Stary Sambor and Turka.

A tourist who will visit the villages mentioned above or other objects is learning about the possibility of using the offer of the neighbour, where other attractions are waiting. Creating the base as a part of the computer system was a founding of the efficient flow of information of data, which every participant in the cluster is having access to. The tourist is able to enquire about accommodation in the high standard, about interesting gastronomy or functioning of the stud of horses. Joint advertizing in frames of the cluster is publishing folders and booklets in both languages, reaching urban centres of Warsaw, Krakow or the Silesian agglomeration.

In frames of the discussed cluster construction, plans of the next Polish-Ukrainian border-crossing points are being made, which additionally can strengthen the cooperation (<http://forum.bieszczady.info.pl/showthread.php/6328-Nowe-przej%C5%9Bcia-graniczne-z-Ukrain%C4%85-w-budowie/page6>). At present, the only possibility of crossing border exists in the entire district of the Bieszczady mountains through the border crossing point Krościenko-Smolnica. There are plans to create three another road border-crossing points in the subregion of the Bieszczady mountains what can considerably influence the exchange of tourist movements and facilitation in contacts between towns cooperating on both sides of the border.

5. Conclusions

The conclusions arising from the research results indicate that the Cross-Border Tourist Cluster of the Bieszczady mountains can constitute interesting and at the same time all innovative form of cooperation between Poland and Ukraine. It may be the beginning of an important collaboration between countries outside the Schengen zone. First, attention to overcoming mutual prejudices and barriers in contacts should be paid.

The cooperation can concern the social-economic activation of the residents, marketing, flow of knowledge, development of infrastructure, shared protection and exploiting natural and anthropogenic advantages. Everything is used for the needs of development of the widely comprehended tourism in distinguished regions on the Polish and Ukrainian side. The tourist offer in frames of the cluster should try to meet the quickly changing and not very predictable demands of tourists, as well as often provide them.

Tourist clusters enable to achieve the synergetic effect of the functioning of individual companies. They are carrying it out by conducting action on different plains, which for the single entrepreneur, or also a self-government unit, are unfeasible. All action can contribute to the economic recovery on both sides of the border and to serving for the improvement in conditions of the development of tourism, raising the level of the competitiveness of the tourist trade and integration for the tourism and for its surrounding in the spatial, economic, and especially social dimension. Achieving this objective is possible in the structures of Euroregions and centres from the cross-border cooperation programmes in which Poland is participating. These benefits can help to increase the popularity of tourism clusters in Europe and Poland alike.

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Klustry jako forma współdziałania i innowacyjności na przykładzie bieszczadzkiego transgranicznego klastra turystycznego

Abstrakt: Klustry stanowią współcześnie jedną z form zrzeszania małych grup społecznych w dużą zbiorowość. Stwarzają korzystne warunki do działalności dla małych podmiotów, których potencjał rozwojowy jest ograniczony. Celem artykułu było przedstawienie znaczenia klastrów jako instrumentu pobudzającego współdziałanie przedsiębiorstw w branży turystycznej. Publikacja powstała na podstawie dostępnej literatury książkowej, danych statystycznych, jak również wiadomości netograficznych.

W artykule przedstawiono pokrótce istotę i genezę klastrów. Dokonano charakterystyki pojęcia klastra, wskazano na korzyści wynikające z członkostwa w klastrach, scharakteryzowano ich cykl życia i po-

dział oraz podano najważniejsze przykłady. Artykuł zawiera również charakterystykę klastrów turystycznych, jako szczególnego rodzaju współdziałania podmiotów. Tekst ukazuje rolę tego rodzaju form kooperacji na przykładzie bieszczadzkiego transgranicznego klastra turystycznego. Zastosowaną metodą badawczą była krytyka piśmiennicza i analiza danych zastanych. Z dostępnej literatury książkowej, netografii i danych statystycznych wynika jasno, że klustry przyczyniają się do zwiększania szans rynkowych dla podmiotów gospodarczych, również dla tych, które działają w branży turystycznej. Publikacja podejmuje ponadto próbę prognozy sytuacji klastrów w przyszłości w obliczu zmiennej sytuacji gospodarczej.

Słowa kluczowe: klaster, rejon transgraniczny, turystyka, współpraca

RESEARCH AND EDUCATION

The financing large scale research, development and innovation initiatives across Europe

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Abstract: Funded by the European Commission through Horizon 2020, Topic NMP-37-2014—‘Practical experience and facilitating combined funding for large-scale RDI initiatives’, EU-Great! (web page: <http://eu-great.com>) project is an investigative study that will identify the best practices, approaches and policy framework to boost the financing of large-scale research, development and innovation initiatives across Europe. The EU-Great! will focus on investigating the best approaches adopted and the barriers encountered by stakeholders when combining funds from different public and private sources, specifically to translate successful fundamental research results and lab-scale prototypes into industrial demonstrators, production pilot lines, first market replications and commercialized products and services. Through interaction and dialogue with industry, researchers, investors, and governmental stakeholders the consortium will identify, analyze and validate the best practices adopted by consortia when forming and managing large-scale RDI initiatives. The EU-Great! consortium will also make recommendations to policy-makers for improving the administrative and policy framework of public-private funding instruments for combining funding, in order to stimulate greater investment and creation of more large-scale RDI initiatives in Europe. The purpose of the article is the description of the results of the EU-Great! project regarding definition and characteristics of large-scale research initiatives as well as issues on combined funding.

Key words: large-scale research initiative, financing of large-scale research, combined funding

1. Introduction

Funded by the European Commission through Horizon 2020, Topic NMP-37-2014—‘Practical experience and facilitating combined funding for large-scale RDI initiatives’, EU-Great! (web page: <http://eu-great.com>) project is an investigative study that will identify the best practices, approaches and policy framework to boost the financing of large-scale research, development and innovation initiatives across Europe. The project started on the 1st January 2015 and has been running for a period of two years.

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Today, Europe faces the challenge of translating lab-scale research outcomes into useful and commercialized products and services in order to boost industrial competitiveness, economic growth and job creation. This in turn demands a boost in finance, strategically targeted at Research, Development and Innovation (RDI) initiatives that successfully bridge the ‘valley of death’ that separates basic concepts (science) from commercial products (market).

Stakeholders of large-scale RDI initiatives often face the challenges of applying for and combining funding from different public and private sources including European Structural and Investment Funds (ESIF), Horizon 2020 and national, regional and private investment programmes in order to build and manage a portfolio of synergetic projects. Such initiatives often need to utilize or result in the creation of new open access research facilities, innovation value chains and shared knowledge.

The EU-Great! focuses on investigating the best approaches adopted and the barriers encountered by stakeholders when combining funds from different public and private sources, specifically to translate successful fundamental research results and lab-scale prototypes into industrial demonstrators, production pilot lines, first market replications and commercialized products and services.

Industrial stakeholders of such initiatives face the task and challenge of raising investment and administrating multiple projects that have different financial rules, audit requirements, legal frameworks and state-aid implications along with the risks and uncertainties that come with commercializing any new and disruptive technology. Governmental stakeholders, at the same time, deal with the demanding tasks of stimulating innovation, often at a regional level, providing co-finance, monitoring initiatives, running audit checks and the need to demonstrate impact to citizens in terms of economic growth, environmental sustainability, improved public services and job creation.

The EU-Great! consortium comprises of TECNALIA R&I, CEA, TNO, VTT, High-Value Manufacturing Catapult, INESC TEC, Plastiques, NANO*utures*, ArcelorMittal, CDTI and Wrocław University of Technology. Through interaction and dialogue with industry, researchers, investors, and governmental stakeholders the consortium will identify, analyze and validate the best practices adopted by consortia when forming and managing large-scale RDI initiatives. The EU-Great! consortium will also make recommendations to policy-makers for improving the administrative and policy framework of public-private funding instruments for combining funding, in order to stimulate greater investment and creation of more large-scale RDI initiatives in Europe.

The purpose of the article is the description of the results of the EU-Great! project regarding definition and characteristics of large-scale research initiatives as well as issues on combined funding.

2. Rationale

Research, Development and Innovation (RDI) are seen as main drivers to tackle the different socio-economic challenges encountered by modern societies and this belief has been also crucial in the definition of the Horizon 2020 (H2020) EU R&D programme. However, RDI activities are not straightforward in all cases and some important economic sectors, such as

manufacturing, very often require RDI activities that take long periods of maturation (lead time), cause uncertainties about successful final results and/ or require expensive infrastructures, thus having to go through what has been called the ‘valley of death’ before turning into successful results in the form of new products or processes. In order to take into account the long term needs of the society, public support to European industrial RDI activities is needed.

The term ‘research and development infrastructure’ has been used to refer to facilities, resources and related services used by the scientific and innovation communities to conduct top-level research and experimentation in their respective fields, ranging from social sciences to astronomy, genomics, nanotechnologies, etc. Examples include singular large-scale research installations, collections, special habitats, libraries, databases, biological archives, clean rooms, integrated small research installations, high-capacity/ high speed communication networks, highly distributed capacity and capability computing facilities, data infrastructure, research vessels, satellite and aircraft observation facilities, coastal observatories, telescopes, synchrotrons and accelerators, networks of computing facilities, as well as infrastructural centres of competence which provide a service for the wider research community based on an assembly of techniques and know-how. The current project is not ignoring these domains and their knowledge with respect to funding and overall management; however, it is going to focus on innovation initiatives and thus later stages in the development process, closer to production or manufacturing, namely, higher Technology Readiness Levels (TRLs). In that sense, it is more concerned with industry and applications than with basic science and scientific infrastructures.

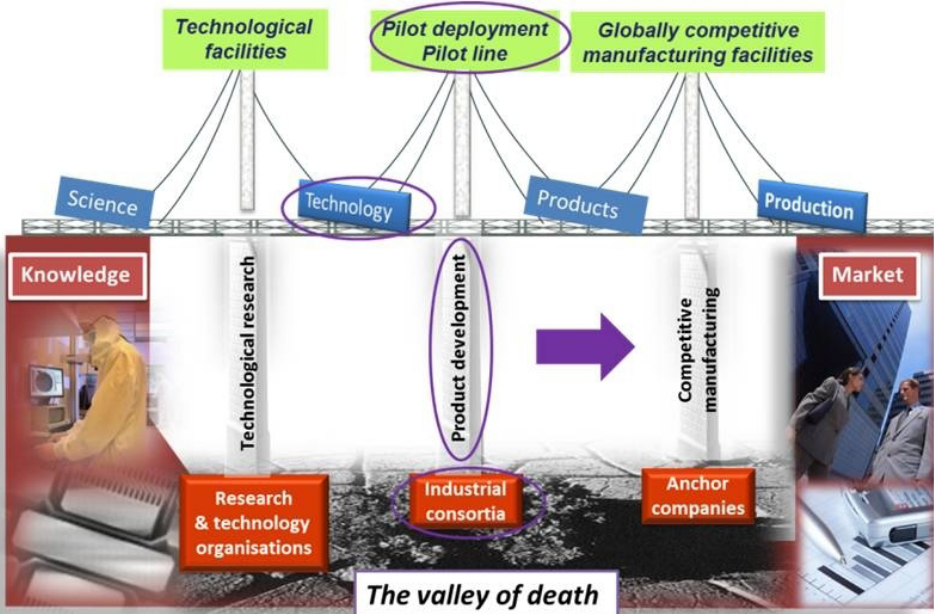


Figure 1. The three-pillar ‘valley of death’

In the case of *key enabling technologies* (KETs), a group of six technologies that are expected to be at the core of many new products, and thus, become a source of growth in the coming years and decades, one of the main concerns stated by the group of experts in the High Level Expert Group—HLG (KETs High Level Group activity report, 2015) for their successful development and later production in the EU is the ‘cost of the infrastructures required to go from early research to almost-final prototypes’, as it will be further explained later (also see Figure 1). For this reason it is key, in particular with the aim to bridge this part of the ‘valley of death’ due to expensive infrastructures, to design strategies and prepare guidelines to allow for these new manufacturing capacities that will often need a combination of funding instruments, including the EU, national and regional funding, making use of structural and regional funds, as well as private financing. By doing so, more companies are expected to take advantage of those facilities and reduce their aversion to participate in RDI activities.

The KET HLG underlines the need for efficient combination of funding as a key factor for investments into large-scale pilot lines as a crucial step towards commercial exploitation of new developments. New public programmes are being developed and implemented in connection with the next EU multi-annual financial framework including Horizon 2020 and regional and structural funds. While the responsible authorities are committed to make the instruments compatible, industrial stakeholders including SMEs need to understand what this means, how best to use this for their project, and how to combine public support with private financing as needed. They need to satisfy the different requirements in relation to project quality, cooperation arrangements, reporting, risks and other aspects, while also smart specialization strategies, competition and state aid rules as well as industrial decision structures need to be respected.

The rationale for EU-Great! stems from the observation that more funding is needed and public and private sectors must join forces to increase the number of large-scale RDI initiatives (LSIs) in Europe, in order to ultimately boost the commercialization of new technologies, products and services able to strengthen the competitive-edge of the European Industry (bridging the so-called valley of death).

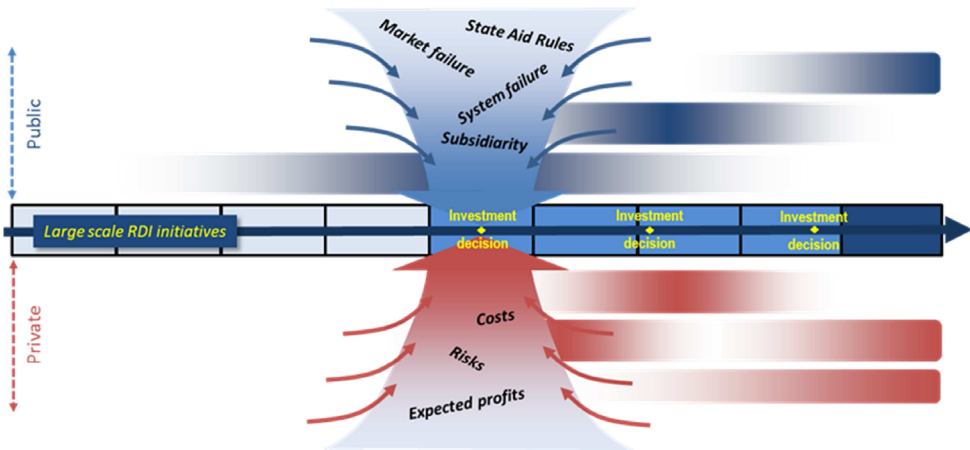


Figure 2. Key elements to analyze large-scale RDI initiatives

As shown in Figure 2, LSIs are the result of complex processes that often require stakeholders to secure and combine funds from multiple channels including public sources at European, national and regional levels as well as private origins like angel funding, venture capital, banks and company equity.

The concept of *Large-scale RDI* relates to high-TRL (demonstrators), which have been difficult to finance in the past and for which the solutions proposed by the European Commission (financial engineering, mixing funding from heterogeneous sources) are still theoretical and difficult to implement.

3. Definition of a large-scale RDI initiative

RDI initiatives have not been created equal: objectives, circumstances, sectors, technologies, consortia, etc. may vary extensively from case to case and, thus, finding a definition fit for all cases may be close to impossible. For this reason, the following definition tries to be the first and stable approach to start working under a common understanding (following the EU-Great! consortium):

Large-scale RDI initiatives (LSI) are industry and application driven, long-term, broad (open) access, multi-stakeholder partnerships strategically targeting large-scale research, development and innovation activities using a combination of different funds aiming at accelerating the commercialization of technology, boosting competitiveness of companies and renewing industrial ecosystems towards sustainable economic growth and well-being of society.

On the one hand, this definition is open enough to include many different patterns or instances and, besides, it also includes key concepts that are especially important. First, being industry and application driven, LSIs have to be useful for production with a clear market-oriented perspective. Secondly, the facilities have to be open; they may not be free and/or privately owned, but should be accessible to third parties. Third, the concept of multi-stakeholder is important, thus being beneficial to more than one institution or company. And finally, the objective is to cover big initiatives that by nature request a combination of different funding sources.

One RDI initiative is not the same as the other, especially from the perspective of funding needs. A good example is the difference between the following two examples. First, is a large scale RDI initiative to develop a pilot line for mass manufacturing of power electronic systems. Investments are high, but the organization is usually an innovation ecosystem dominated by a large multinational. A second example is a multi-user technological infrastructure that facilitates testing and validation of different new products in a high-tech manufacturing environment. Different companies and even research organizations can use this high-tech environment and available expertise to take the first step in scale-up to commercial production. These large scale RDI-infrastructure have different business models, different possible investors and different investment decisions to make. The research methodology is, that during the project, at least 100 RDI initiatives will be identified and characterized, a survey

undertaken and some 20 in depth cases studies conducted. The selection will be based on a theoretical framework to ensure good coverage and assessment.

4. Characteristics of large-scale RDI initiatives

In close connection with the above definition, the following elements are decisive to understand any of those initiatives:

- 1) Multiple number of industrial parties involved in the adoption of the outcomes.
- 2) Can be led by a single industrial company who is orchestrating a large supply chain; or it can be led by a number of industrial parties who are collaborating to share risks at a sector or cross-sector level.
- 3) Combines research, development and innovation activities that include significant technological and commercial risk.
- 4) Runs over several years and contains a significant degree of uncertainty of outcome and might fail.
- 5) Requires combination of funding from different public and private finance sources.
- 6) Is holistic taking into consideration environmental and societal issues, and is often leading a paradigm change and/ or giving rise to a new industrial sector.
- 7) May require new research and innovation infrastructure and buildings as well as harnessing existing facilities.
- 8) Often requires use of open access facilities and may lead to multiple spin-off technologies, products and applications.
- 9) May require the need to develop initial market entry products for actual industrial trials.
- 10) Often forms part of a national and/ or regional economic development strategy; could be initiated by industry or government.

Besides the elements above, other complementing issues to ponder in the cases to be analyzed to gain practical knowledge are the following:

- Who initiates a large-scale RDI initiative? How is the decision made?
- Uncertainty at the early-stages of a large-scale RDI initiative as to its technological and commercial feasibility.
- Different views, positions and interests between industrial stakeholders, RTOs and public authorities in selecting large-scale RDI initiatives for co-funding via public money.
- Administrating the funding requirements of multiple funding sources.
- Funding requirements can stretch years after the completion of projects financed by certain funding sources. This risk continues because the co-funding public authorities and/ or the European Commission as stakeholders cannot fully check subsequent projects' developments during delivery or upon their completion. As a result the risk is transferred to the Large-Scale RDI initiative and one or more partners from the initiative then run the financial risk of a potential claw back of money.

Table 1 summarizes the elements that can help define, from a practical point of view, large scale RDI initiatives.

Table 1. Characteristics of large-scale RDI initiatives

a) Minimum requirements
Involving one or multiple KETs
Involving multiple number of industrial partners
Aimed at commercial exploitation of technologies and/ or accelerating the market up-take of technology breakthrough
Involving both private and public funding
Duration more than one year
b) Possible characteristics
Involves physical infrastructure (e.g. pilot line)
Led by single industrial company
Led by network of industrial companies
Involving variety of stakeholders (universities, RTOs, public policy, etc.)
Open access
Responses to societal/ environmental challenges (e.g. resource efficiency, climate change, etc.)
Is aligned with national/ regional economic development strategy
Has potential for ecosystem renewal/ paradigm change/ new industry creation

Source: EU-Great! Consortium.

5. Combined funding

Many industrial investments into research, technological development and innovation in Europe, in particular with the aim to bridge the ‘valley of death’ and prepare new manufacturing capacities, often need a combination of not only public funding instruments (including the EU, national and regional levels) but also private financing. About this latter, banks are the financial organizations traditionally supporting innovation and industrial activities. But also institutions like angel funds, venture capitalists, regional investment organizations, equity based funding as well as new equity, debt and risk sharing instruments in Horizon 2020 and the Risk-Sharing Finance Facility offered by the European Investment Bank (EIB) can be seen as important investment sources. However, the recent crisis of 2008 has altered this landscape. Banks are more reluctant to provide loans and American Venture Capital funds are looking at Europe for investment opportunities. Public/ private partnerships are considered important and the European Investment Bank is enhancing its participation in innovation. As policy, the economy and our society shift towards industrialization of research, these private funding mechanisms are more and more seen as highly dynamic.

6. Funding instruments

Recalling what was said for the definition of large scale RDI, the objective is to cover initiatives that require ‘combined’ funding, which should be understood as a tantamount for ambitious, complex initiatives. By *combined funding* it is meant, most importantly, bringing together public and private funds, but also opportunities to mix various public or various private funding mechanisms. Analogously, the concept of public funding allows for sources at multiple levels such as: the EU (EC, EIB, etc.), national programmes and even regional and municipal measures.

The simplification of funding programmes at a European level has resulted in more harmonized instruments, specifically: Horizon 2020, COSME and the European Structural and Investment Funds (ESIF). This, combined with the possibility to use different public funding sources within a programme, project or group of projects (combined funding), aims to enhance the synergies between those funding instruments and others defined at national, regional levels and even private funds for ambitious industrial projects.

At the EU level, funding programmes adopt different objectives and Figure 3 by the EC, shows the different types.

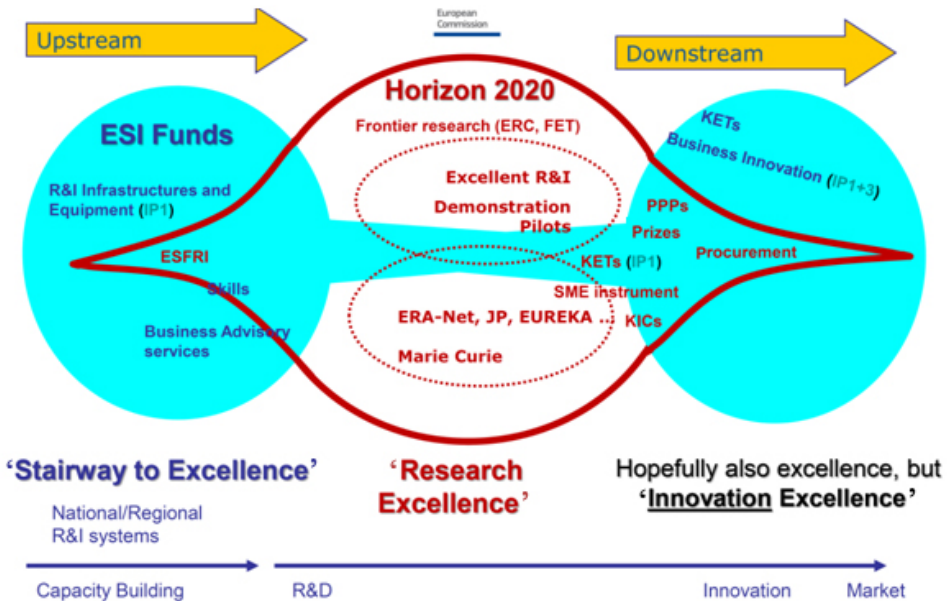


Figure 3: RDI-oriented EU funding programmes

Source: European Commission, Enabling synergies between European Structural and Investment Funds, 2014.

There is certainly some complementarity in the different funding programmes (Towards Smart Everywhere. Fostering Innovation through combining funding sources from Horizon 2020 and Structural Funds, 2015) as shown in Table 2. Whilst H2020 and ESIF are administered differently, they both include a provision for funding research, development and in-

novation activities. Complementing the other ‘open’ programmes COSME, EU programme for the Competitiveness of Enterprises and SMEs, aims at improving access to finance and markets, supporting entrepreneurs, and improving conditions for competitiveness.

COSME, H2020 and ESIF are funding instruments part of the European strategy for smart, sustainable and inclusive growth. The High Level Expert Group on KETs recommended, among other actions, to implement effective solutions for combined funding mechanisms if KETs industrial deployment is to be accomplished. They encouraged that funding instruments (H2020, ESIF, COSME...) should provide a workable solution allowing to cumulate different funding sources aligned with the industrial competitive and timeframe constraints.

The determination to exploit synergies between ESIF and H2020 and other EU-related programmes is backed by the European Parliament and Council, and is accompanied by the ‘Guide on how to enable synergies between Europe and Structural and Investment Funds, Horizon2020 and other research, innovation and competitiveness-related Union programmes’ (Commission Staff Working Document circulated during the meeting of the EARTO Structural Funds Experts Working Group, 2015). The guide contained commitments for further action by the European Commission services to facilitate synergies such as: the update of the guide, supporting potential beneficiaries beyond public authorities, helping them to identify the most suitable EU funding or support sources (Guidance for policy-makers and implementing bodies: Enabling synergies between European Structural and Investment Funds, Horizon2020 and other research, innovation and competitiveness-related Union programmes).

Table 2. Characteristics of large-scale RDI initiatives

<p><input type="checkbox"/> H2020—Top-down approach: Funding coming from European Level</p> <ul style="list-style-type: none"> • Apply for funding at EU-level. • Consortia include complex Pan EU networks of competent centres.
<p><input type="checkbox"/> ESIF—Bottom-up approach: Funding coming from own region</p> <ul style="list-style-type: none"> • Concrete objective: Get regions to dedicate investments to Information and Communication Technologies (ICT), innovation... in order to foster the emergence of clusters through smart specialization. • Apply for funding in each region and with the relevant authority. • Prerequisite: There must be a hook in the operational plan of the region in terms of a high keyword.

Source: European Commission web, 2015.

7. Conclusions

Defining large-scale RDI initiatives implies taking into account issues such as: technologies, TRLs, openness, ownership, funding, use, networks and risk to name some of the most relevant. This complexity makes it difficult to grasp a unique (and simple) definition that may cover all those issues to the required extent.

Logically, such initiatives require significant investment and commitment in order to establish new state-of-the-art research infrastructure and/ or business incubation facilities and they are accessible to the investing partners and open to third parties. Those projects go

through a board lifecycle where the risks and uncertainty faced by stakeholders during the early-stages are very high and then, towards the later demonstration, scale-up and industrial adoption stages, the risk starts to reduce. LSIs also tend to be ambitious holistically addressing sector level, societal and environmental challenges. Large-scale RDI initiatives require stakeholders to use and secure funding from different public and private sources in order to share risks and to fund different components of the initiative using and combining finance from appropriate instruments.

Large-scale RDI initiatives, by their very nature, usually adopt some ingredients of open innovation approaches as participating partners collaborate to share know-how, intellectual property or capabilities. While most operate in an open access mode, especially whenever funding comes from public sources, it is true that large-scale RDI initiatives also operate under some other modes: accessed only by all the investing partners that form the consortium and who need to manage their interests; accessed by the investing partners (designers of the initiative), who can enable other parties use the facilities as a means to reduce overall risk and costs.

In general, these LSIs can combine existing and new research and innovation facilities and may also need different types of infrastructures: some will be research-focused, with partners later developing industrial demonstrators and production pilot lines. During the early stage, it is more likely that facilities can be operated on an open access basis, whilst in the later stages when production pilot lines are developed, it may be found that these facilities are more specific and dedicated to the partners commercializing their products. Innovation also involves stages beyond the production pilot line, for initial trials and adoption.

In summary, a large RDI could be seen as an initiative where one or several elements mentioned above are extended in terms of capacity, geographical coverage and integration of Science and Technology (S&T) fields (including integration of KETs). Clearly it is not a ‘unique purpose’ infrastructure, as it should rather be conceived as a ‘testing bench’, including a clear ‘virtual capacity’ (services provided electronically). Ideally, these large initiatives should cover a wider TRL perspective by incorporating stakeholders all long the value chain.

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Finansowanie inicjatyw w zakresie badań, rozwoju i innowacji o dużej skali w Europie

Abstrakt: Celem finansowanego przez Komisję Europejską w ramach programu Horyzont 2020 projektu o akronimie EU-Great! jest przeprowadzenie badań, które pozwolą wskazać najlepsze praktyki, podejścia oraz ramy polityczne w celu zwiększenia finansowania inicjatyw w zakresie badań, rozwoju i innowacji o dużej skali w Europie. Projekt UE-Great! skupia się na badaniu najlepszych przyjętych rozwiązań i barier napotykanych przez zainteresowane strony w przypadku łączenia środków finansowych z różnych źródeł publicznych i prywatnych, szczególnie w celu przekształcenia wyników badań podstawowych oraz prototypów laboratoryjnych na demonstracje przemysłowe, pilotażowe linie produkcyjne, pierwsze edycje rynkowe oraz skomercjalizowane produkty i usługi. Dzięki interakcji i dialogowi z przemysłem, naukowcami, inwestorami i pod-

miotami rządowymi konsorcjum dokona identyfikacji, analizy i zatwierdzenia najlepszych praktyk przyjętych przez konsorcja podczas tworzenia i zarządzania innowacyjnymi inicjatywami badawczymi o dużej skali. Konsorcjum projektu EU-Great! wystosuje również zalecenia dla decydentów politycznych na rzecz poprawy ram administracyjnych i politycznych publiczno-prywatnych instrumentów finansowych do łączenia funduszy, w celu stymulowania większych inwestycji oraz tworzenia większej liczby innowacyjnych inicjatyw badawczo-rozwojowych o dużej skali w Europie. Celem niniejszego artykułu jest przedstawienie wyników projektu UE-Great! dotyczących definicji i charakterystyki inicjatyw badawczych o dużej skali oraz problematyki dotyczącej łączonego finansowania.

Słowa kluczowe: inicjatywa badawcza o dużej skali, finansowanie badań o dużej skali, łączone finansowanie

The teaching of ethics in higher education schools: The reality of a Portuguese institution

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Abstract: In the last years, the world has been witnessing a succession of events resulting from misconduct by various decision-makers. This awareness has led schools to adopt in their curricula subjects with content in the area of ethics and similar. With the present research, on the one hand, it was tried to verify whether the teaching of ethics is present as a discipline in the courses taught in institutions of higher education. On the other hand, it is also intended to verify the expressiveness of the discipline of ethics in the curricula of the courses, in comparison with other disciplines that are taught in those courses. The present study focused on a Portuguese higher education institution, and the data collection was carried out with resources to the technique of content analysis. The results allow us to infer that the expressiveness of the teaching of ethics is reduced, being the teaching of the discipline, within each course, oriented to the area of professional ethics.

Key words: ethics, teaching, higher education, expressiveness

1. Introduction

There is growing recognition that good ethics can have a long-term positive economic impact on the performance of firms, that is of strategic significance to the company's management. Many statistics support the premise that ethics, values, integrity and responsibility are required in the modern workplace. For consumer groups and society at large, research has shown that good ethics is good business (Joyner and Payne, 2002). During the last decade, highly publicized incidents of business misconduct have occurred in virtually every major industrial economy. These scandals have played a critical role in increasing public, business, and academic awareness of issues of business ethics throughout the United States, Europe, and Asia (Vogel, 1992).

Solomon (1997) postulates that the demands for ethical behaviour by corporations and their leaders are today stronger than ever before, for the following reasons: first, the enormous success of American businesses has bred extravagant expectations by the public; second, the new nobility, the priv-

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ileged class that has emerged because of this enormous success, is corporate business—and society has always made demands of its nobility (*noblesse oblige*); and finally, Solomon states that ‘now that businesses are often the most powerful institutions in the world, the expanse of social responsibility has enlarged to include areas formerly considered the domain of governments: quality of education and support of the arts, funding and facilities for basic research, urban planning and development, world hunger and poverty, hardcore unemployment. The more powerful business becomes in the world, the more responsibility for the well-being of the world it will be expected to bear’ (pp. 204–206).

For Joyner and Payne (2002) businesses will in fact engage in ethical business practices for one of two reasons, one ethical in nature and one more Machiavellian. The ethical motivation guiding business is related to a desire to do the right thing, without external pressure or governmental constraint. These business people recognize their own personal existence in society and thus acknowledge that their firms must also operate in this sphere in an ethical manner. The more Machiavellian approach that businesses espouse in their use of ethics has its roots in a desire to convince the stakeholder that the firm is doing the right thing. The firm’s end here is either to avoid legal consequences of its actions or to convince the stakeholders that the firm does have their best interests at heart and seeks to serve their interests rather than their own.

Ethics are defined as the conception of what is right and fair conduct or behaviour (Carroll, 1991; Freeman and Gilbert, 1988). ‘Ethics is a system of value principles or practices and a definition of right and wrong’ (Raiborn and Payne, 1990, p. 879). Velasquez (1999) defined ethics as being concerned with judgements involved in moral decisions: normative judgements which state or imply that something is good or bad, or right or wrong. Thus, these statements of ethics or value judgements attempt to ascribe value to actions, so the actor can determine whether or not he should engage in the action.

According to the non-profit organization Business Social Responsibility (BSR), the role of business is to create and deliver products and services in a way that treats people fairly, meets individuals’ needs and aspirations within the boundaries of our planet, and encourages market and policy frameworks that enable a sustainable future. The role of BSR is to catalyze change within business by integrating sustainability into strategy and operations, and to promote collaboration among companies and their stakeholders for systemic progress towards a just and sustainable world.

In this way, Graafland and Smid (2012) said that business schools may provide information and training that form the mindsets of executives. Fligstein (1990) found that corporate executives’ management styles were dependent on the type of training they received in business schools. For example, the European Business Ethics Network (EBEN) appeared to promote ethics and excellence in businesses, to increase awareness about ethical challenges in the global marketplace and to enable dialogue on the role of business in society. In the same way, the Business Social Responsibility believes that a just and sustainable world will result when the unique skills and resources of all sectors—business, civil society, and government—are aligned with this vision.

Vogel (1992) argues that business ethics has not yet globalized; the norms of ethical behaviour continue to vary widely in different capitalist nations. However, academic interest in

business ethics has substantially increased in a number of countries in Europe. For example, in 1983, the first chair in business ethics was established in Europe at the Netherlands School of Business; the second was established at another Dutch university three years later and four more have been founded subsequently in other European countries. In 1986, the Lord Mayor of London organized a formal conference on company philosophy and codes of business ethics for 100 representatives from industry and the professions. The following year, a group of 75 European business managers and academics established the European Business Ethics Network (EBEN); its first conference was held in 1987. In 1987, the first European business ethics journal, *Etica degli Affari*, was published, in Italy.

Since the mid-1980s, two ethics research centres have been established in Great Britain, in addition to one each in Belgium, Spain, Germany, and Switzerland. A survey of developments in European business ethics published in 1990 reported that, 'since three or four years ago the stream of publications (on business ethics) has been rapidly growing', with a disproportionate amount coming from Great Britain, Germany, Austria, and Switzerland (van Luijk, 1990).

Three leading European business schools—INSEAD in France, the London Business School, and Italy's Bocconi—have established elective courses in business ethics and several others have held public conferences on this topic; some have also begun to include sessions on ethics in their executive educational programmes. The first European business ethics casebook was published in 1991 and the first issue of a management-oriented publication, *Business Ethics: A European Review*, appeared in the winter of 1992 (Donaldson, 1991).

Derived from business misconduct, business educators emphasize the need for additional instruction in ethics, to be taught in an ever increasing number of business ethics courses designed to assist the next generation of managers in avoiding the pitfalls of their predecessors (Vogel, 1992).

'Despite the all pervasive scandals of the 1980s, there is a tendency in Europe to regard the study of business ethics as faddish', as the *Financial Times* noted in the summer of 1992 (De George, 1992, p. 12).

A typical discussion about how business ethics education should be conducted often appears around the question of whether business ethics should be taught via a separate course or by integrating business ethics content across the curriculum, or perhaps whether cases or some other pedagogical approach should be used (Trevino, 1992).

Bennis and O'Toole (2005) argue that today MBA programmes face intense criticism for failing to impart useful skills, failing to prepare leaders, failing to instill norms of ethical behaviour—and even failing to lead graduates to good corporate jobs. These criticisms come not just from students, employers, and the media but also from deans of some of the most prestigious business schools. In business research, the things routinely ignored by academics on the grounds that cannot be measured—most human factors and all matters relating to judgment, ethics, and morality—are exactly what makes the difference between good business decisions and bad ones.

In this paper, we address the topic of the presence of the ethics content in the curriculum of undergraduate courses and we investigate to what extent can we compare the presence of this ethics content to the presence of other contents taught in the curricula of those undergraduate courses. For that, we used the expressions 'expressive' and 'expressiveness' as the

meaning of the presence of teaching of ethics or similar content compared to teaching of the disciplines in the course that have been analyzed in the present study.

A question arises: do the higher education institutions seek to prepare their students, in the various courses that they teach in their schools, with ethical values? For example, we can look at the impact that various online communities (e.g. Avaaz, One, Change) have been exerting on companies, governments and decision-makers in general, particularly when they feel that the decisions of these bodies question the balance, well-being and sustainability of society, which is increasingly a requirement of today's society.

Knoch (2004) argues that in Portugal the teaching of ethics does not currently have a very expressive role. Only a few higher courses contain this discipline in the curriculum, and even in these cases, however, this chair is usually given little relevance. The interest in ethical issues lies mainly in the field of ethics or professional ethics.

We used that as a base to create our hypothesis that the ethics contents present in the curriculum of courses are mainly oriented for professional ethics.

In the next sections, we present the methodology we used and next we describe the results and make the discussion of results. We finish with the conclusion and contribution of the present work, and we give suggestions for future research.

2. Methodology

This study seeks, on the one hand, to identify if the academies of higher education instill norms of ethical behaviour in their students and if the presence of the teaching of ethics is expressive according to all other subjects taught in those courses. On the other hand, it will be verified if the ethics contents that are taught in the courses are focused in the professional ethics area of the courses where it is taught. For that, an empirical identification and description of these issues within a higher education institution in Portugal was conducted.

To answer the issues raised above, the curricular units (disciplines) of 14 undergraduate courses taught in each of the four schools (organizational units)—School of Agriculture, School of Education, School of Technology and Management, School of Health—that constitute the Polytechnic Institute of Beja were analyzed. The website of the Polytechnic Institute of Beja in <https://www.ipbeja.pt> was consulted and a research were made in the website of each of the courses offered in each of the four schools of the Polytechnic Institute of Beja (see Table 1).

First, an analysis of the disciplines taught in each of the 14 courses was conducted. In each course it was identified whether a kind of discipline of ethics or similar was taught. When there was no explicit reference to the discipline of ethics, it was sought to identify other units (with meaning related with professional regulation, corporate social responsibility, sustainability) that did not have designation of ethics, however the name of the discipline induced that contents of ethics or similar were taught in the unit. When an explicit reference to the discipline of ethics wasn't found, a content analysis of the syllabus of different disciplines was carried out, through the name of the disciplines that were potentially an indicator of which of the contents of ethics or similar was taught in the unit.

According to Bardin (1995, p. 42), the content analysis appears as 'a set of techniques of analysis of the communications aiming to obtain, by procedures, systematic and objective

description of the contents of the messages, indicators (quantitative or not) that allow the inference of knowledge regarding the conditions of production/ reception (variables inferred) of these messages' (p. 42).

After identifying the discipline of ethics or similar taught in each course, and as a second step, a research was made to identify, in each course, the discipline that has the less number of hours taught and the discipline that has the more number of hours taught in the course. The number of hours taught in the discipline of ethics or similar in each course was further also analyzed. This procedure allowed to perceive the existence of the expressiveness of the teaching of ethics comparatively with other disciplines taught in each one of the courses. A third step was performed, with resource to content analysis, that will help us to clarify the hypothesis formulated.

The findings of the study will be presented in the next section, as well as the discussion on them.

Table 1. Website of each of the courses offered in each of the four schools of the Polytechnic Institute of Beja

	Schools of the Polytechnic Institute of Beja	Courses	Website
Polytechnic Institute of Beja	School of Agriculture	Agronomy	https://www.ipbeja.pt/en/Courses/esa-eag/Paginas/Curricular%20Units.aspx
		Food Science and Technology	https://www.ipbeja.pt/en/Courses/esa-fst/Paginas/CurricularUnits.aspx
		Environmental Engineering	https://www.ipbeja.pt/en/Courses/esa-ee/Paginas/CurricularUnits.aspx
	School of Education	Arts and Multimedia	https://www.ipbeja.pt/en/Courses/ese-apm/Paginas/CurricularUnits.aspx
		Education and Multimedia Communication	https://www.ipbeja.pt/en/Courses/ese-emc/Paginas/CurricularUnits.aspx
		Elementary and Early Education	https://www.ipbeja.pt/en/Courses/ese-eee/Paginas/CurricularUnits.aspx
		Social Work	https://www.ipbeja.pt/en/Courses/ese-sw/Paginas/CurricularUnits.aspx
	School of Technology and Management	Sport	https://www.ipbeja.pt/en/Courses/ese-sc/Paginas/Curricular%20Units.aspx
		Attorneyship	https://www.ipbeja.pt/en/Courses/estig-attorn/Paginas/CurricularUnits.aspx
		Business Management	https://www.ipbeja.pt/en/Courses/estig-bm/Paginas/CurricularUnits.aspx
		Computer Science	https://www.ipbeja.pt/en/Courses/estig-cs/Paginas/CurricularUnits.aspx
	School of Health	Tourism	https://www.ipbeja.pt/en/Courses/estig-tourism/Paginas/CurricularUnits.aspx
		Nursing	https://www.ipbeja.pt/en/Courses/ess-nur/Paginas/CurricularUnits.aspx
		Occupational Therapy	https://www.ipbeja.pt/en/Courses/ess-ot/Paginas/CurricularUnits.aspx

Source: Author's own elaboration based on the website of the Polytechnic Institute of Beja.

3. Findings of the study

In analyzing the results of the data collected, through the application of the techniques mentioned above, it was sought to understand whether the teaching of ethics is expressive, in terms of the number of hours allocated for the teaching of this discipline, in each of the 14 courses assigned to the 4 schools that constitute the Polytechnic Institute of Beja, compared to the number of hours allocated for the teaching of the other subjects in each of the 14 courses, respectively.

Through the observation of Figure 1, it can be seen that in the generality of the 14 courses taught at the Polytechnic Institute of Beja, with the exception of the Tourism course, the number of hours attributed to the teaching of ethics content or similar is very close to the minimum number of hours attributed to the teaching of other subjects taught in each of the courses analyzed. For example, for the Agronomy course one discipline was identified that had 50 hours more of teaching than ethics or similar, and in the same course one discipline was identified having 25 hours less than teaching of ethics or similar in that course.

It was verified that in 3 of the 14 courses analyzed there was no identification of any programmatic content related with the teaching of ethics or contents related with ethics, such as, for example, contents related with professional regulation, corporate social responsibility or sustainability. These 3 courses are assigned to the School of Education.

It will also be relevant to note the fact that the Business Management course is the only course in which the minimum number of teaching hours of another discipline is equal to the number of teaching hours of the discipline of ethics.

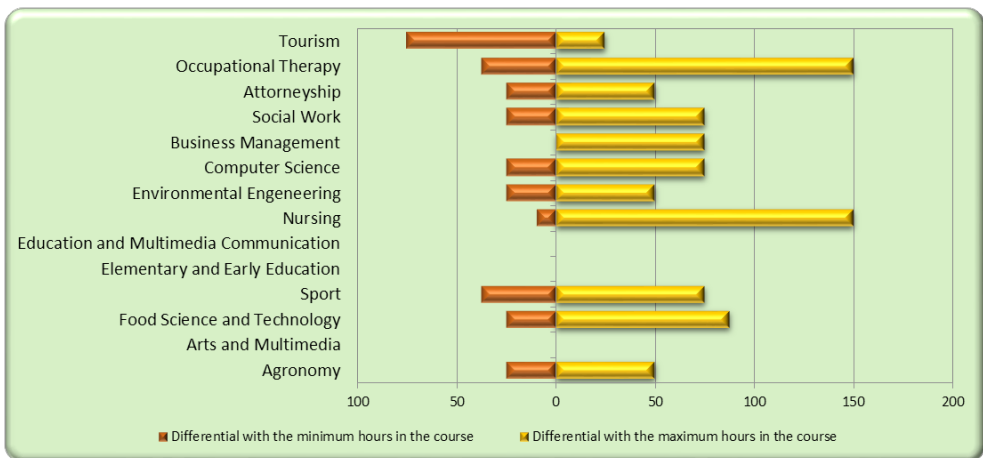


Figure 1. Differential of the number of hours the subject of ethics is taught comparatively with the minimum/ maximum of the number of hours the other subjects are taught in each course

Source: Author’s own elaboration based on the website of the Polytechnic Institute of Beja.

From the range of 11 courses where teaching of ethics or similar content was identified the Business Management course is the course where there is less expressiveness of the discipline of business ethics, compared to the other courses taught at the institution that supports

the present research. In the remaining 9 courses, it is verified that the presence of ethics or similar teaching is not expressive, given that the number of teaching hours of the ethics or similar discipline is close, although higher, to the minimum number of teaching hours of other discipline in each of the courses in question. However, this occurrence is clearly contradicted by the Tourism course, where it is verified that the presence of ethics or similar teaching is significant, compared to the other courses taught at the institution. That is, the number of teaching hours of the discipline of ethics or similar is close, although inferior, to the maximum number of teaching hours of another disciplines in the course in question.

Through the analysis of data presented in Figure 2, it is also verified that more than a half of the subjects with ethics or similar content are taught in the third year of the course (in the first or the second semester).

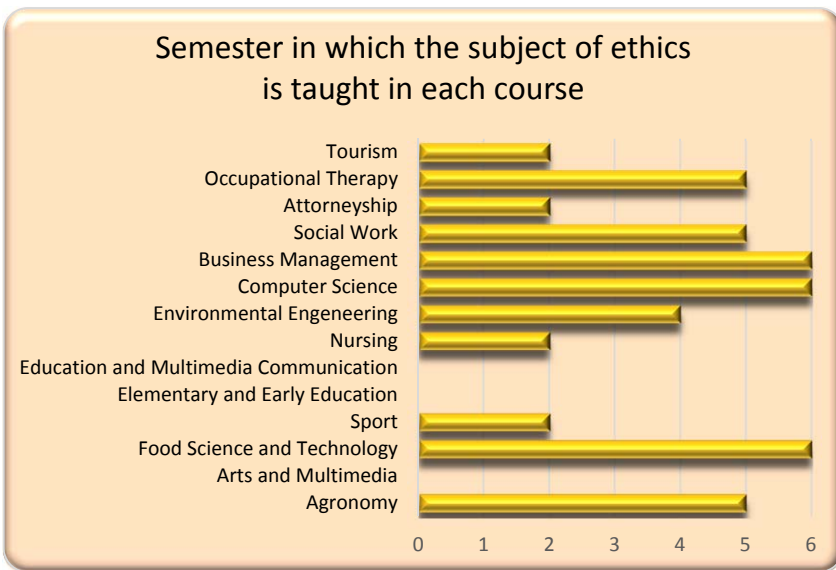


Figure 2. Semester in which the subject of ethics is taught in each course

Source: Author’s own elaboration based on the website of the Polytechnic Institute of Beja.

It is also verified, by analyzing the results of the data collected, that on average, the discipline of ethics or similar has been taught in the institution for about 8 years, approximately—see Figure 3.

It can be verified that after performing the content analysis to the disciplines taught in each course, it was possible to understand whether the discipline of ethics or similar is mainly oriented for the professional ethics area of each course or whether these disciplines teach contents about ethics, in general, or teach contents in related issues, like sustainability or corporate social responsibility, for example. Through the data presented in Table 2 it is possible to verify that the subject of ethics taught in the majority of the courses of the analyzed institution is oriented to the professional ethics area in the majority of the courses. According to this, the hypothesis drawn in the present work could be sustained.

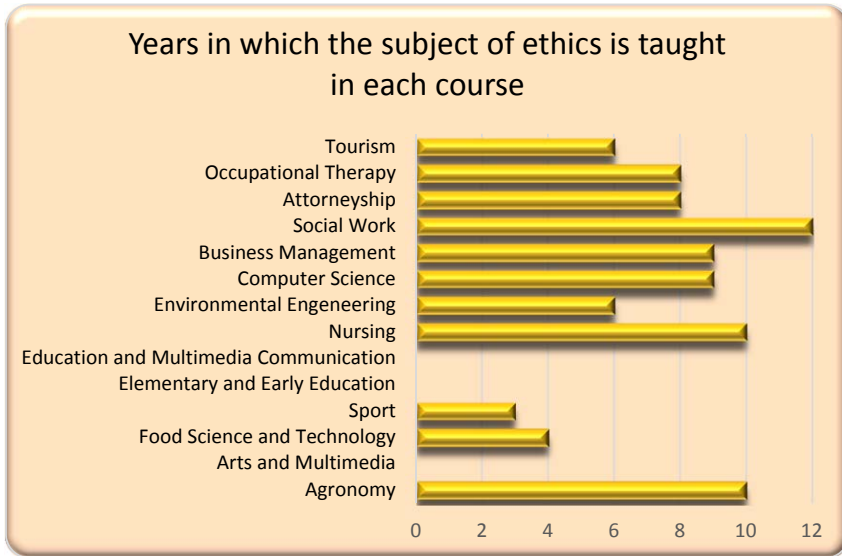


Figure 3. Years in which the subject of ethics is taught in each course

Source: Author’s own elaboration based on the website of the Polytechnic Institute of Beja.

Table 2. Subject of professional ethics or subject similar to ethics taught in each course offered in Polytechnic Institute of Beja

Courses	Subject of professional ethics	Subject similar to ethics
Agronomy	–	✓
Arts and Multimedia	–	–
Food Science and Technology	–	✓
Sport	✓	–
Elementary and Early Education	–	–
Education and Multimedia Communication	–	–
Nursing	✓	–
Environmental Engineering	–	✓
Computer Science	✓	–
Business Management	✓	–
Social Work	✓	–
Attorneyship	✓	–
Occupational Therapy	✓	–
Tourism	–	✓

Source: Author’s own elaboration based on the website of the Polytechnic Institute of Beja.

4. Discussion of results

Bennis and O'Toole (2005) refer in their study that 'before the recent scandals [TVco, Arthur Andersen, WorldCom, and Enron], business students spent '95% of their time learning how to calculate with a view to maximizing wealth. Just 5% of their time is spent developing their moral capacities' (p.104). They also refer that:

[B]usiness education ... is devoted overwhelmingly to technical training. This is ironic, because ... studies showed that executives who fail—financially as well as morally—rarely do so from a lack of expertise. Rather, they fail because they lack interpersonal skills and practical wisdom; what Aristotle called prudence.

Aristotle taught that genuine leadership consisted in the ability to identify and serve the common good. To do so requires much more than technical training. It requires an education in moral reasoning, which must include history, philosophy, literature, theology, and logic (p. 104).

According to the results obtained in the present work, they are not so far from the reality described by Bennis and O'Toole that represents the reality of academies in Europe and also in America. In the institution where the present work was developed, it is notorious that the curriculum of the teaching of ethics and similar is not expressive, according to the comparison that was made of the number of hours that are dedicated to the teaching of other units.

More worrying is the reality inherent to the Business Management course, where the expressiveness of teaching ethics is the lowest in all the courses taught at the institution targeted of this study.

This will affect the decision-making of future managers. As Vogel (1992) referred, it is necessary to assist the next generation of managers in avoiding the pitfalls of their predecessors.

Citing Rakesh Khurana, an associate professor of Harvard Business School, Bennis and O'Toole (2005) pointed out that professions have at least four key elements: an accepted body of knowledge, a system for certifying that individuals have mastered that body of knowledge before they were allowed to practice, a commitment to the public good, and an enforceable code of ethics. Professions thus are oriented towards practice and focused on client needs and above all, professions integrate knowledge and practice. Our results are consistent with this statement, since they reveal that in the institution where the study took place there is a concern to prepare the students of different courses with a subject oriented to teaching contents in the area of professional ethics of a specific course.

It could be also interesting to try to understand why more than a half of the subjects about ethics are taught in the last year of the course. Probably because the students have a higher maturity to understand complex questions, like it is the case of themes that are discussed in the scope of the subject of ethics.

According to the literature review, the emergence of ethics in the European curricula begins in the end of the 1980s and beginning of the 1990s. In the present study, the references to the introduction of the subject of ethics in the curricula appeared twelve and ten years ago (in the year of 2004 and 2006). This could be a good indicator of the concern of higher education

institutions for facing young people with values that will orient them in the decision-making they will need to take over their professional path.

5. Conclusions

This research identified the presence of the teaching of ethics or similar in the curriculum of the courses of an institution of higher education. On the one hand, the study found that this subject is present in the majority of the courses, however the expressiveness of this discipline in the analyzed courses is lower in comparison to the expressiveness of other disciplines that have clearly a higher attribution of hours in the teaching of their contents. On the other hand, it was verified that in more than a half of the courses where the subject of ethics is taught the teaching is oriented for the professional ethical area, sustaining our hypothesis. Also, more than a half of the disciplines, in the area of ethics or similar, were taught in the last year of the course. And it was verified, yet, that the subject was introduced in the courses about 8 years ago, on average.

This work was a contribution to understand the ‘state of art’ of the teaching of ethics and related contents in the institution where the study was conducted.

While it is impossible to generalize the results of this study because of the small sample, a larger study, using the framework tested in this research, could be undertaken in order to further explain the presence and expressiveness of the teaching of ethics or similar in the curriculum of the courses.

A longitudinal study could shed much more light on the issue. For future research it could be studied whether there is some kind of change in the number of hours attributed to the teaching of ethics or similar contents.

In a world where success for business is measured almost exclusively by rankings, the ability to show that ethical behaviour can boost results of business might provide the impetus for real change in many organizations.

This current work is centred in one higher education institution, in Portugal. The future investigation could rather look at the state of ethical education at an international level.

Extending the analysis performed to other higher education institutions in order to characterize the expressiveness of ethics teaching in the study plans of the courses taught in Portuguese higher education institutions could be a good proposal for future research work. In the same way, expanding this analysis to an international level, in order to verify similarities and differences between countries, will be a contribution for future research. It will also be ambitious to make a comparison between the indicators obtained in the present and future research applied at international level, compared to already existing indicators of ethical practices adopted by the country.

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Nauczanie etyki w szkołach wyższych. Realia instytucji portugalskiej

Abstrakt: W ostatnich latach jesteśmy świadkami sekwencji zdarzeń wynikających z nieprawidłowego postępowania rozmaitych decydentów. Świadomość ta doprowadziła do tego, że szkoły uwzględniły w swoich programach nauczania przedmioty zawierające treści z zakresu etyki i jej podobne. W niniejszym badaniu podjęto próbę weryfikacji, czy nauczanie etyki jako dyscypliny obecne jest na kursach prowadzonych w instytucjach szkolnictwa wyższego. Jednocześnie ma ono na celu weryfikację wyrazistości dyscypliny, jaką jest

etyka, w programach nauczania kursów w porównaniu z innymi dyscyplinami nauczonymi w trakcie tych kursów. Niniejsza praca skoncentrowała się na portugalskiej instytucji szkolnictwa wyższego, gromadzenie zaś danych zostało przeprowadzone z użyciem zasobów do analizy treści. Wyniki pozwalają wnioskować, że wyrazistość nauczania etyki jest ograniczona, będąc nauczaniem dyscypliny zorientowanym w ramach każdego kursu na obszar etyki zawodowej.

Słowa kluczowe: etyka, nauczanie etyki, szkolnictwo wyższe

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