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SPANISH EMPLOYMENT LEGISLATION REFORMS IN THE RECENT CRISIS – TOWARDS A NEW MODEL OF THE INDUSTRIAL RELATIONS SYSTEM

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Key words: Spanish employment legislation, flexi-security, Spanish industrial relations system after the crisis.

Abstract

The recent crisis and its consequences have induced major changes in Spanish employment legislation which may lead into what could be recognized as a new model of the industrial relations system.

Since the early 90's, and as a reaction to globalization, the need of introducing measures for promoting adaptability and flexibility have had echoes in Spanish employment legislation. However, the crisis we are experiencing nowadays is having a greater impact upon the Spanish economy, and hence on employment regulations, than any other previous crisis.

The legislature's reaction in order to reverse the situation is leading to a new model of the industrial relations system, since this is happening in the whole European Union, where the power of collective bargaining has been undermined, and with it the role of trade unions. This has had a huge impact on the essence of Spanish labour law (*derecho del trabajo*). These regulations seek to protect employees at their working places from the managerial power of the employer, but without forgetting the need of protecting the efficiency of the enterprise. In fact, after the new legislation following the political decisions of the Spanish Government, we are closer than ever to an Employment Law (*derecho al empleo*) where the protection is focused on the citizens' ability to work, protecting them in the labour market.

The aim of this paper is to give a short description of the Spanish labour market's situation showing the most relevant data; to provide an analysis of the main measures introduced into Spanish employment legislation, and to draw some conclusions about where and why some decisions are made and what consequences they have for the industrial relations system.

REFORMA HISZPAŃSKIEGO USTAWODAWSTWA PRACY W ŚWIETLE NIEDAWNEGO KRYZYSU – NOWY MODEL STOSUNKÓW PRACY

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Słowa kluczowe: hiszpańskie ustawodawstwo pracy, flexicurity (socjalny model zatrudnienia oparty na łatwym procesie zatrudniania oraz zwalniania pracowników, a także wysokich zabezpieczeniach socjalnych dla bezrobotnych), hiszpański model stosunków pracy po kryzysie.

A b s t r a k t

Niedawny kryzys i jego konsekwencje wywołały gruntowne zmiany w hiszpańskim ustawodawstwie pracy, co może doprowadzić do powstania nowego modelu stosunków pracy.

Od wczesnych lat dziewięćdziesiątych ubiegłego wieku oraz w reakcji na globalizację hiszpańskie ustawodawstwo pracy reagowało na działania sprzyjające zwiększeniu przystosowalności i elastyczności. Obecny kryzys wywiera jednak większy wpływ na hiszpańską gospodarkę, a tym samym na uregulowania prawne dotyczące zatrudnienia, niż jakikolwiek wcześniejszy. Reakcja ustawodawcy w celu odwrócenia sytuacji prowadzi do powstania nowego modelu systemu stosunków pracy, ponieważ tak się dzieje w całej Unii Europejskiej, gdzie moc układów zbiorowych została osłabiona, podobnie jak rola związków zawodowych. Miało to ogromny wpływ na istotę hiszpańskiego prawa pracy (*derecho del trabajo*). Celem regulacji jest ochrona pracowników w miejscu pracy przed władzą pracodawcy, należy jednak pamiętać o konieczności zapewnienia efektywności działania przedsiębiorstwa. Po wprowadzeniu nowego ustawodawstwa, w ślad za politycznymi decyzjami rządu, Hiszpania jest bliżej niż kiedykolwiek wprowadzenia prawa pracy (*derecho al empleo*), w którym ochrona skupia się na zdolności obywateli do pracy i ich pozycji na rynku pracy.

Celem artykułu jest krótki opis sytuacji na hiszpańskim rynku pracy i prezentacja najistotniejszych danych, analiza głównych rozwiązań wprowadzonych do hiszpańskiego ustawodawstwa pracy oraz wyciagnięcie wniosków dotyczących zakresu i powodów podejmowanych decyzji i ich konsekwencji dla systemu stosunków pracy.

Crisis and changes in Spanish Employment Legislation over the last three years (2010-2013)

Globalization of the economy has been the leitmotif for the reforms experienced in Spanish employment law over the last twenty years. In 1993 and 1994, the first reforms were adopted in Employment legislation in order to render it more flexible and adaptable to the needs of enterprises[1]. During the years 1993-1994, Spanish employment legislation started to experience pressure to implement new changes in order to draw more attention to the enterprises' needs. As the new globalization context emerged, it required better conditions to promote competition. The aim of this legislation was, therefore, that of promoting flexibility in the labour management of enterprises to stimulate their adaptation to their own economic situation as well as to the specific context of the branch of activity in which they operate[2]. However, the soul of the employment law was still present so that the reforms introduced did not change the basic character of this legislation, which was addressed mainly to introduce minimum standards of working conditions for employees in order to avoid abuses by employers.

The most recent set of new employment regulations appeared in 2010 in the context of the economic crisis and the need of recovering economic competitiveness. We can affirm that with all the new measures adopted, the

[1] *Real Decreto Ley* 18/1993 (3.12.1993) that later became *Ley* 11/1994 (19.5.1994)

[2] *Ley* 11/1994 often mentions in its preamble the words competitiveness (up to three times) and adaptability (up to eight times) when explaining why the changes adopted were required.

former employment law (and the way industrial relations were regulated by the State) has been transformed dramatically; to the point that it is becoming harder and harder to recognize the original aspects that were present in the genesis of these regulations. The increasing presence of economic factors among the criteria that influences political decisions adopted in relation to the regulation of the labour market has led to such a situation. In fact, after the new legislation, and following the political decisions of the Spanish Government, we are closer than ever to an Employment Law (*derecho al empleo*) where the protection is focused on a citizen's ability to work, protecting them in the Labour Market, changing the aim of what is called *derecho del trabajo,* a regulation seeking to protect employees at their working places from the managerial power of the employer, but without forgetting the need of protecting the efficiency of the enterprise.

Before analyzing the main aspects of employment law after the new regulations, it is important to reflect on the reasons for implementing such a dramatic change. A change that has affected the pillars of the relation between employer and employees as well as the one between the employer and the worker's representatives and their instruments of action.

Reasons for a new approach to employment legislation

The economic crisis and its consequences in the labour market in terms of unemployment[3] are the common references in all of the legislative documents that are establishing a new approach to employment law.

However, it is possible to think that the crisis has been used as a pretext to establish this new model through the assumption that no other option could be adopted.

Some time ago, a debate began concerning the role played by employment law in the new economic context that has emerged in the last decades. The most interesting aspect is that this debate has not been held at the national level but at the European level because of globalization and the continued process of building a common Europe. A clear example of this is the Green Paper *Modernising labour law to meet the challenges of the 21st century*[4], presented in November 2006, whose goal was to launch a public debate in the EU on how labour law can evolve to support the Lisbon Strategy's objective of achieving sustainable growth with more and better jobs.

[3] According to the National Institute of Statistics (INE) the unemployment rate in 2013 stood at 26.26, with 5,977,500 persons unemployed. Eurostat shows that in 2013 it was at 26.1, only surpassed by Greece (27.5) even if for some months Spain had the highest rate of unemployment in the European Union.

[4] COM(2006) 708 final.

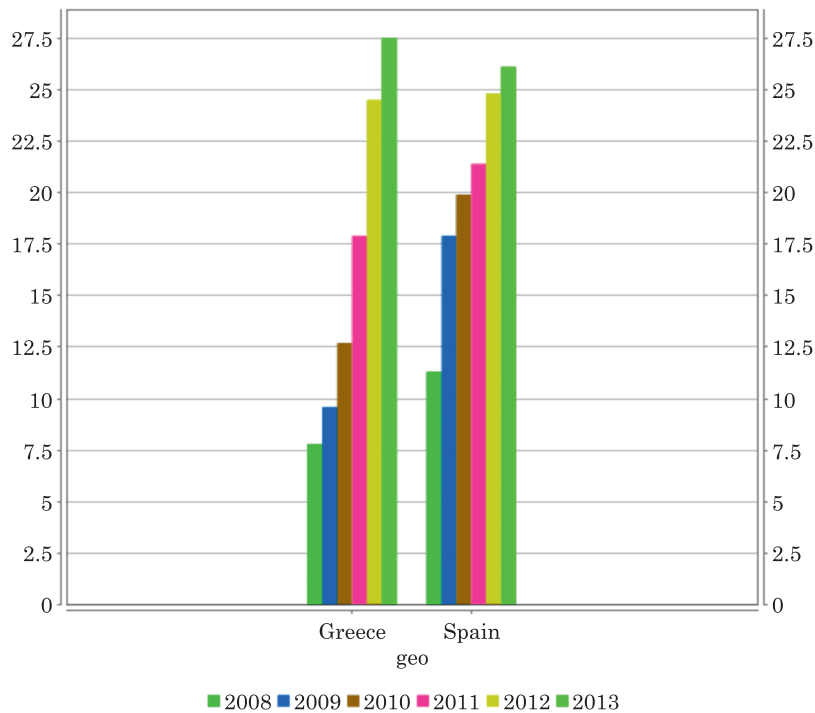

Fig. 1. Unemployment rate

Source: Eurostat

Two main aspects highlight this debate. Firstly, the connection between the economy and the labour legislation that inspires it, analyzing labour law from an economic perspective, while disregarding its social implications. Secondly, that this debate focuses on the individual labour law, disregarding collective labour law and its promotion as one of the means of increasing both flexibility and security for workers and employers[5].

How this debate has influenced Spanish employment legislation reforms can be clearly appreciated in the preamble of the legal instruments adopted in order to introduce new rules to regulate working conditions. These laws make constant reference to the need to fulfill the requirements to adapt legislation to the new context and philosophy. The fact that these requirements have been agreed upon at the European level, mainly under the *open method of coordination*[6], reinforces the political opinion of the Spanish legislature. Thus, the

[5] As it was recalled by the European Parliament resolution of 11th July 2007 on modernizing labour law to meet the challenges of the 21st century [2007/2023(INI)]

[6] The *open method of coordination* (OMC) legally adopted after the Amsterdam Treaty in force since 1999) and nowadays regulated in Title IX of the Treaty on The Functioning of the European

references to the National Reform Programme (adopted within the framework of the open method of coordination), to the Europe 2020 Strategy, to the recommendations and exigencies given at the European level in order to overcome the economic situation, are usually present in the rules implementing Spanish legal reforms in Employment legislation.

Which are the key points of the policy designed at the European level then? The central idea of this policy is about overcoming the crisis and the excessive rates of unemployment in Europe. In order to do this, European institutions have focused on the promotion of a legal framework able to foster productivity and competitiveness. In the area of employment legislation, the political options for reaching that aim have been promoting flexi-security and introducing measures to ensure costs developments in line with productivity.

a) Promoting flexi-security. Flexi-security was defined by the European Commission as an integrated strategy to enhance flexibility and security at the same time in the labour market[7]. This approach attempted to correct former policies aimed at increasing either flexibility for enterprises or security for workers and, as a result, neutralizing or contradicting each other. Flexi-security is, therefore, a balanced mixture of flexibility and security promoted to increase adaptability, employment and social cohesion, so that enterprises and workers can both benefit from flexibility[8] and from security[9].

b) Measures to ensure costs developments in line with productivity. After pointing out that progress will be assessed on the basis of wage and productivity developments and competitiveness, the Conclusions of the European Council of April 2011 declared that the reforms to foster competitiveness will give particular attention to adopt measures to ensure costs developments in line with productivity, such as:

– review the wage setting arrangements, and, where necessary, the degree of centralization in the bargaining process, and the indexation mechanisms, while maintaining the autonomy of the social partners in the collective bargaining process;

Union, was created as part of employment policy and the Luxembourg process. OMC is a key instrument of the European Employment Strategy providing a new framework for cooperation between the Member States, directing national policies towards certain common objectives.

[7] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. *Towards Common Principles of Flexicurity: More and better jobs through flexibility and security.* COM(2007) 359 final.

[8] Not limited to give more freedom for companies to recruit or dismiss or render more flexible work organizations so that they can be capable of quickly and effectively mastering new productive needs and skills. Flexibility in this context aims as well to promote the successful moves – „transitions" – during one's life course: from school to work, from one job to another, between unemployment or inactivity and work, and from work to retirement.

[9] Understood in terms of equipping people with the skills that enable them to progress in their working lives – which points out the importance of training opportunities – and helping them find new employment. It is also about adequate unemployment benefits to facilitate transitions.

– ensure that wage settlements in the public sector support the competitiveness efforts in the private sector (bearing in mind the important signalling effect of public sector wages).

The main aspects of recent Spanish reforms on employment legislation

The Spanish legislature has adopted a considerable number of labour reforms in the last three years following the political criteria adopted at the European level. These reforms attempt to implement flexi-security and introduce measures to foster competitiveness that, it is said, will lead to increased employment rates within the European Union.

It is interesting to note that not only political criteria adopted by European Institutions have been of great influence in all of these reforms. In the preamble of *Ley 3/2012* it is recognized that the reforms implemented were due to the existing pressures for adopting further reforms. Pressures carried out, in the context of an economic crisis, by World and European economic institutions, international markets restless about the Spanish labour market, and the Spanish employment reality[10].

In this context Spanish labour reforms have focused on achieving the goals proposed: implement flexi-security and link wages to productivity.

The first thing that should be pointed out in relation to Spanish policies about flexicurity (more recently renamed flexi-security) is that they have focused on flexibility rather than on security.

Recent reforms have tried to implement flexibility in all its aspects: internal and external, and in the latter, both flexibility of engagement and flexibility of dismissals.

Flexibility of engagement

The new regulations have acted on this aspect providing new temporary contracts of employment and modifying the legislation of Temporary Work Agencies.

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[10] Imbalances and Growth September 2013, prepared by staff of the International Monetary Fund (http://www.imf.org/external/np/g20/pdf/map2013/map2013.pdf) In this document further structural reforms of labour and product markets are required to support growth and make the labor market more job-friendly and inclusive. In this document the need to reduce wages is highlighted and asks for further reforms to promote bargaining arrangements more responsive to economic conditions and reduce labour market duality.

Introducing flexibility on temporary contracts was used in the early 80's of the last century as a measure for creating employment in an adverse economic environment which provoked increases in unemployment rates. This policy was repeatedly said to be wrong as it created a duality between employees under temporary contracts with low protection (often held by young people) and employees under permanent contracts with higher standards of protection. Since the 90's this duality was said to be a problem more than a solution and some measures started to be adopted in order to reduce the number of employees under temporary contracts. However, Spain has been for a long time the country in the European Union with the highest rate of temporary contracts (arriving at a rate of 34% in 2006). Most recently, since 2009 and because of the crisis[11], Poland has overtaken Spain in Figure 2.

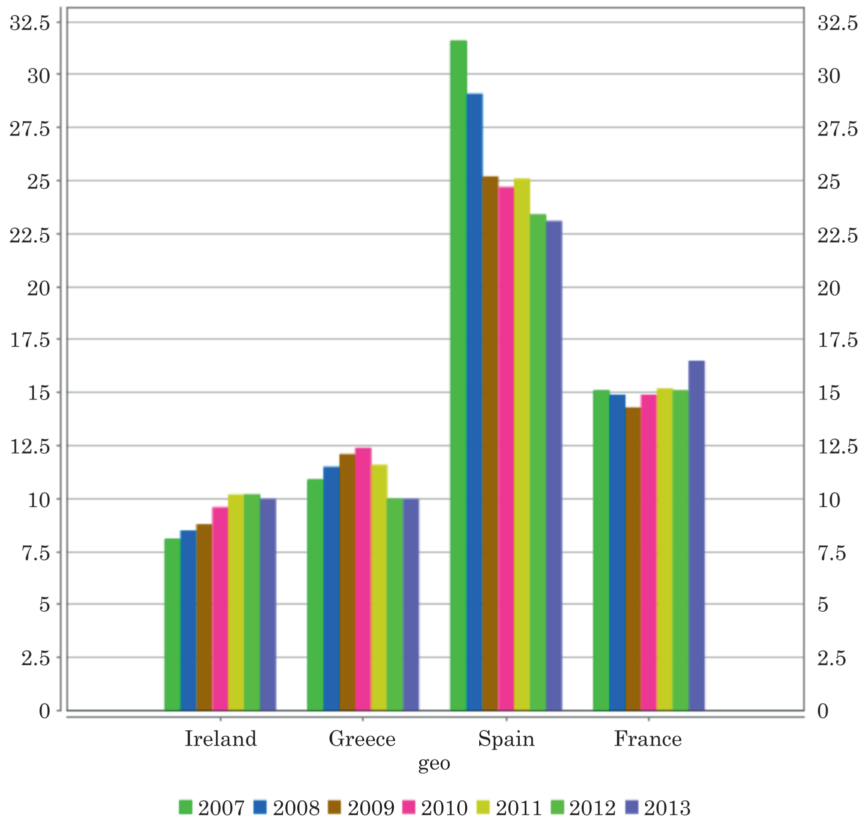

Fig. 2. Employees with s contract of limited duration (annual average)
Source: Eurostat

[11] As extinguish temporary employment contracts is the easiest and cheapest way of reducing the plaintiff and fixing it to the new necessities.

Despite the Spanish legislature's declared concern about the high rate of temporay contracts and its negative consequences, the fact is that the option of the legislature has been to increase the opportunities for enterprises to use temporary contracts as the crisis has become deeper. Hence, new temporary forms of contracts of employment have been introduced in order to foster employment, giving employers the opportunity of using fixed-term employment contracts not based on objective reasons.

In Spanish labour legislation there are three main kinds of temporary contracts:

a) Fixed-term contracts based on objective reasons, addressed to attend certain temporary organizational and productive circumstances in the enterprise. These contracts are possible just for performing temporary activities.

b) Fixed-term contracts not based on objective reasons, whose purpose is to promote employment of certain groups of people, offering the employers the possibility to hire under temporary contracts as it is the employers' desire to avoid hiring under indefinite contracts of employment. These contracts are not related to any need for temporary activities for the enterprise and can be used for covering their permanent activity.

c) Training contracts, addressed to help certain category of workers to enter into the labour market and, at the same time, to give additional training to them.

In relation to these, recent reforms have:

a) Introduced some limits to the first category in order to adapt Spanish legislation to the Council Directive 99/70/EC of 28 June 1999 concerning the framework agreement on fixed-term work. One of the purposes of this Directive is to establish a framework to prevent abuse arising from the use of successive fixed-term employment contracts or similar relationships. It establishes the obligation to member States to introduce one or more of the measures described[12] in order to prevent abuse arising from the use of successive fixed-term employment contracts or similar relationships. The Spanish legislature has decided to fix a maximum period of time for these kind of contracts[13] and has limited the number of renewals for such contracts or similar relationships[14]. Furthermore, in order to discourage the abuse of these

[12] Those possible measures consist in identifying: (a) objective reasons justifying the renewal of such contracts or relationships; (b) the maximum total duration of successive fixed-term employment contracts or relationships; (c) the number of renewals of such contracts or relationships.

[13] Maximum of three year for *contratos de obra o servicio* that can be extended up to four years by branch collective agreements.

[14] Maximum of 24 month within a period of 30 for fixed term contracts so that automatic conversion into permanent contacts would occur if the same employee stays longer under temporary contract in the enterprise or group of enterprises, even if carrying out his work throughout a Temporary Work Agency. It does not apply in some cases, as in the case of *contrato de obra* or training (apprenticeship) contracts. The rule, established in 2006, was suspended until December

kinds of contracts the indemnity to be paid in case of termination of the contract has risen from 8 days of salary per year of service up to 12 days.

b) Increased the possibilities for hiring under temporary contracts. As employers are reluctant to employ under indefinite contracts of employment, the possibility of temporary employment contracts not based on objective reasons has been used again as a tool for lowering unemployment rates, despite the many criticisms of this policy (used since 1984) in the past. Thus, a new contract for employment of this kind has appeared: *contrato primer empleo jóven* (first youth job contract). *Real Decreto-ley* 4/2013. The legislature introduced this new contract on the 22nd of February in order to stimulate a first job experience to those unemployed people under 30 that have no work experience longer than three months. If these requirements are fulfilled, this contract could be arranged with a minimum duration of three months and a maximum of six months. If branch collective agreements arise, the contracts could last up to twelve months.

c) Introduced flexibility in training contracts, so that they may by used as a tool for reducing unemployment. Taking into consideration that these contracts can be of huge interest to employers as they are temporary by their nature (their original goal was to give opportunities for initial training to those who do not have work experience related to their educational or professional background), their working conditions are better for employers because, basically, they are cheaper[15].

This can be clearly appreciated in the 2012 reforms (*Real Decreto-ley* 3/2012, 10 of February and *Ley* 3/2012, 6 of July). From this moment onwards the apprenticeship contract (*contrato para la formación y el* aprendizaje), which was initially conceived to help young people to create their professional career, is clearly being used as an instrument to foster employment. Under the above mentioned regulations, this contract can be formalized with workers under 30 years old, until the unemployment rate in Spain falls under 15%.

On the other hand, flexibility in engagement has also been the reason for modifying legislation of Temporary Work Agencies. Following the recommendations adopted at the European level about the need for action in job matching services, in 2012 the possibility for Temporary Work Agencies to

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2013 (by *Real Decreto-Ley* 10/2011, 26 of August) as a consequence of the crisis. Later, *Real Decreto-Ley* 3/2012, 12 in February and Ley 3/2012, 8 in July, reduced this suspension until December 2012 so that from the first of January 2013 it will again be in force.

[15] In the case of the apprenticeship contract (*contrato para la formación y el* aprendizaje) not less than minimum wage but proportionally to working time, what, considering that it cannot be lower than 75% during its first year nor 85% during the second, and that minimum wage in Spain is 645.30 € for 2013 and 2014, means a minimum wage of 483.97 € during the first year of the contract and 548,50 € in the second. In case of the practical training contract (*contrato en prácticas*) wages can't be less than 60 or 75% of the wage established in the collective agreement for the activity.

operate as placement agencies was regulated. As Spanish Public Employment Services have been revealed to be insufficient to activate employment in the labour market, the Spanish legislature has given more competencies to Temporary Work Agencies to energize them.

But this has not been the only reform in the legislation concerning Temporary Work Agencies. In fact, in 2013 more changes had been passed eliminating restrictions about the contracts of employment firms can arrange with workers, so that since February 2013, it has been possible for firms to sign more contracts of apprenticeship (*contrato para la formación y el aprendizaje*) and since July 2013 firms may sign a new type of contract *Primer Empleo Joven*. The inclusion of these contracts in the list of contracts available for Temporary Works Agencies has lightened the restriction affecting the cases in which it could be possible for Temporary Works Agencies to facilitate workers. Traditionally these firms suffered a limitation related to the nature of the job to be filled with agency employees. It could only be done for temporary needs of activity (so only fixed-term contracts based on objective reasons could be used). Now this is not always the case, as the new contracts Temporary Works Agencies can arrange can be both fixed-term contracts based on objective reasons and not based on objective reasons. It is possible to conclude, then, that after the new regulation the profile of Temporary Work Agencies as placement agencies has grown; including two contacts that aim to promote employment.

Flexibility of management (internal flexibility)

Achieving internal flexibility is one of the main declared purposes in all the different laws reforming employment legislation. The changes have affected, among others, the following aspects (that have been pointed out as the basic foundations concerning internal flexibility): working time, functional mobility, geographical mobility[16] and wages. In all these cases the scope of legislation is to provide a means to adapt working conditions applicable to the enterprise to external and internal changes.

Working time. According to the European Economic and Social Committee[17], working time flexibility is about the distribution of normal weekly working time as established by collective agreements and/or by law over a longer time period. In the logic of the win-win situation in which flexi-

[16] That is to say, the possibility for employer to change employees' location.

[17] Opinion of the European Economic and Social Committee on „Flexicurity (Internal flexibility dimension – Collective bargaining and the role of social dialogue as instruments for regulating and reforming labour markets)". O.J.C 256/108, 27 October 2007.

security is presented, the positive effects of both parts of the employment relationship have been described. In that sense, it is said that working time flexibility can strengthen an enterprises' productivity and competitiveness, letting companies adjust to the demand for personnel fluctuations and to fully utilize capital investments, by making use of overtime, the flexible scheduling of working hours over predefined time frames, shift work, etc.

Furthermore, the European Economic and Social Committee points out that working time flexibility can have positive effects on employees, as it can also be about the distribution of working time over an individual's working life and about the work-life balance (but not about the length of the standard working week). In that way employees can enjoy possibilities to positively combine work and non-work activities, by making use of flexi-time arrangements, working time accounts, parental or educational leaves, options to switch between fulltime and part-time work, etc.

Reforms adopted in Spanish legislation since 2012 have focused on the first aspect of working time flexibility, so that the second aspect (the benefit of employees) has remained the same. The main ways in which this flexibility has been promoted are:

a) Letting the employer irregularly distribute 10% of annual working time. The only requirements are with respect to the minimum resting periods and a period of notice of five days. Before this reform, this irregular distribution could be done but only if agreed to in collective agreement or special agreement with employee;s representatives.

b) Promoting the possibility for reducing working time[18] (and wages) in case of economic or productivity difficulties for the enterprise. This should be used instead of redundancies for these causes, so that the existing need of activity could be shared between all workers, even if that means less activity and salary for all of them.

c) Increasing employers' prerogatives for modifying working time conditions applicable to the enterprise. The flexibility introduced with the reforms have affected different aspects of this power, basically:

– which conditions can be modified,
– when this managerial prerogative can be exercised,
– the procedure to follow.

Before the reform it wasn't possible to modify the duration of working time established in statutory collective agreements (regulated in *Estatuto de los Trabajadores*), whereas now it is possible in order to facilitate the adaptation of working conditions established in the agreements to the actual needs of the enterprise. After the reform, this option is completely possible and it never

[18] Non less than 10% and 70% as a maximum.

matters if working conditions are established in branch collective agreements or the collective agreement of the enterprise. They may still be modified.

About the requirements to introduce these modifications: the option has been that of introducing objective circumstances when these changes can be adopted, so that if the concrete causes remain the same as they were previously (economic, productive, technical and organizational) a more accurate definition of them has been established. This is done when the working time being modified is fixed in statutory collective agreements. In such cases, the economic cause is presumed to be the main cause when during two consecutive terms the level of ordinary incomes or revenue is lower than what was experienced in the same term of the previous year. With this rule, the legislature tries to avoid the uncertain decision of Courts when analyzing the concurrence of this cause, which is particularly problematic in cases in which economic reasons are alleged.

The procedure is now more flexible too, as the introduction of modifications can be agreed even if there are not worker's representatives to negotiate and because there is not the need to reach an agreement with them (which was previously necessary to modify conditions established in statutory collective agreements). In this case, a complex procedure of mediation and arbitration has been established.

Functional and geographical mobility. Functional mobility refers to using the worker's capacity to perform different tasks when needed. For achieving that goal, the management of employees has been increased by changing the classification system so that instead of using the criteria of a professional category, now a wider (as it can integrate different categories) concept of a professional group is adopted. The only limits to this mobility are with respect to academic and professional qualifications and the employee's dignity. In any case, some economic and professional rights for the employees are still applicable[19]. This managerial prerogative has other related limits, on the one hand, to justify a technical or organizational need and, on the other hand, the period of time this change can last (the indispensable time to attend to the technical and organizational need). The previous requirement related to the unpredictable character of the need has disappeared. No changes have been introduced related neither to the causes nor the procedure for modifying an employee's task, consisting in the latter case of notifying the decision to the worker's representatives in case of a variation that goes outside the professional group.

On the other hand, geographical mobility allows the enterprise to move employees from one undertaking to another, adapting the employee to the

[19] Like the right to be promoted in certain circumstances and the right to receive the salary related to the tasks now carried out unless this would be inferior to the previous one (with some particularities).

needs required in its premises. In this aspect the flexibility introduced has affected the procedure, contemplating how to deal with the required consultation with employees in cases where there are no worker's representatives.

Wages flexibility. Two main ideas can be found in the introduction of wage flexibility. First is that of connecting salary to productivity. The second deals with the need to adjust wages to the specific circumstances of the enterprise. The first aspect was the object of a reform in 1994, when the seniority supplement[20] was no longer obligatory. But it has also been the object of recent reforms as the indexation of salaries to the cost of living has been undermined with the new rules of collective agreements.

The technique of indexation was frequently used by branch collective agreements in order to preserve the economic capacity of salaries, allowing them to avoid losing purchasing power. As this system of fixing wages was not always suitable for enterprises included in the field of application of the collective bargaining, in 1994 was introduced a rule allowing enterprises not to apply economic conditions negotiated in the branch collective agreement. However, as the application of this rule was conditioned on the previsions of the branch collective agreements and they established strict requirements, in practice it was quite complicated to succeed in not applying such salary conditions. Hence, reforms introduced since 2010 have affected this aspect, introducing new rules affecting the relations with collective agreements of different levels. In that way, the degree of centralization of collective bargaining has been reduced. So that if before branch collective agreements at a provincial level were the most important in terms of employees affected by them, the aim is to put collective bargaining at the level of the enterprise in the core of procedures establishing working conditions (not only salary).

Different possibilities can be found nowadays in order to reassure flexibility in wages. On the one hand, the possibility exists for the employer to modify salary conditions not derived from statutory collective agreements. The recent modifications allow to modify not only the remuneration system applicable in the enterprise, but also the quantity of the different components of salary. The procedure for doing so has also been modified in order to make this possibility easier.

However, on the other hand, it may be the possibility of avoiding the application of statutory collective agreements. This can be achieved by two means. First, there is the procedure for not applying working conditions[21]

[20] A supplementary pay related to the years employed within the company.

[21] Before the recent reform, contracts were only in relation to salary but now they also regard other working conditions such as working time; daily hours, or even functions.

established in the collective agreement (branch or enterprise)[22]. Secondly, since the recent reforms, it is possible to negotiate a collective agreement at the level of the enterprise for certain matters[23] even if a branch collective agreement is on application, which supposes an extraordinary change in the regulation of articulation of collective agreements at different levels. If it was not possible previously to modify an existing collective agreement by any other collective agreement, now collective agreements negotiated at the level of the enterprise have this capability.

Flexibility of dismissal

The introduction of flexibility in dismissals is derived from two declared considerations. One consists of reducing the duality between employees with indefinite contracts of employment covered with certain standards of protection against dismissal, and those with temporary contracts of employment with less protection against dismissal. The other consideration deals with the need to implement flexibility in the management of enterprises in order to protect their productivity.

In the first aspect, several things have been done. The reduction of indemnity in case of wrongful dismissal has been justified in these terms, even if the process of how it has been done basically renders cheaper wrongful dismissals to all employees regardless of the character of their contracts (open-ended or fixed-tem). We can draw that conclusion because, with the reform introduced, Spanish legislator has eliminated the obligation to pay *salarios de tramitación*[24] in cases of wrongful dismissals when the employer option is not for reinstatement but for paying indemnity. Furthermore, the reform does not affect the way of calculating indemnities for dismissal (based on the seniority of the employee) but only the quantities to consider in order to calculate it[25]. Another reform adopted in order to reduce duality and foster open-ended contracts was to create a new contract (*contrato indefinido de apoyo a los emprendedores*) that introduces a probationary period of one year[26].

[22] There is also the new possibility of not applying working conditions negotiated in enterprise collective agreements, as before this possibility only existed for branch collective agreements.

[23] Quantity of salary; retribution of overtime and shift-work; daily work and planning of holidays; classification system among others.

[24] The *lucrum cessans* calculated since the day the employer adopted his decision to dismiss till the day in which the employee was notified for the first time the qualification of that decision being wrongful. This normally represented the highest amount of money to perceive for employees whose seniority in the enterprise was not long.

[25] From 45 days of salary per year of service with the maximum of 42 months of pay, to 33 days of salary per year of service with the maximum of 33 months of pay.

[26] This contract can only be adopted by enterprises of less than 50 employees.

In order to introduce more flexibility in the management of dismissals and redundancies, the procedure has been changed (eliminating the need of administrative authorization in case of redundancies). A modification of the effects in case of failure to comply the procedure requirements in some cases of dismissals has also taken place (as it happens in case of objective dismissals, changing the qualification from unfair dismissal to wrongful[27]). Finally, circumstances allowing dismissals and redundancies on grounds of economical reasons have been clarified[28].

Is it possible to talk about a new model of the industrial relations system in Spain?

All measures adopted over the last years are clearly aiming to strengthen the managerial employer's prerogatives, that is to say, they are all focused on flexibility, whereas little legislation for security appears in the recent reforms of the Spanish employment law. However, the increasing relevance of flexibility in employment legislation is not enough to talk about a new model of industrial relations system. It is the role reserved to collective rights and social dialogue in this context of flexibility what can determine the change of model of industrial relations in Spain. And we can affirm that this model does not respect the main ideas supporting the flexi-security policy[29].

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[27] In case of wrongful dismissal there is the option (normally the employer's option) to choose between reinstatement or extinguishing the contract and paying indemnity. In case of unfair dismissal reinstatement is compulsory.

[28] According to the law, there will exist an economic cause if during three consecutive terms the level of ordinary incomes or revenues of each term is lower than the same term of the previous year.

[29] The importance of social dialogue has been highlighted by the European institutions when talking about the approach to flexi-security. According the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Towards Common Principles of Flexicurity: More and better jobs through flexibility and security [COM(2007) 359 final], „active involvement of social partners is key to ensure that flexicurity delivers benefits for all. It is also essential that all stakeholders involved are prepared to accept and take responsibility for change. Integrated flexicurity policies are often found in countries where the dialogue – and above all the trust – between social partners, and between social partners and public authorities, has played an important role. Social partners are best placed to address the needs of employers and workers and detect synergies between them, for example in work organization or in the design and implementation of lifelong learning strategies. Social partners' support for the core objectives of the Lisbon Strategy is an important asset; translating this support into concrete policy initiatives is a responsibility of governments and social partners alike. A comprehensive flexicurity approach – as opposed to separate policy measures – is arguably the best way to ensure that social partners engage in a comprehensive debate on adaptability".

In the opinion of the European Economic and Social Committee on „Flexicurity (Internal flexibility dimension – Collective bargaining and the role of social dialogue as instruments for regulating and reforming labour markets)" [O.J.. C 256/108, 27 October 2007] this organ affirms that

Collective rights have experienced a progressive weakening in the recent reforms[30], adopted without any dialogue with social agents. This has especially happened with the right to collective bargaining as it has experienced important changes. The first important change concerns the function of collective agreements. Traditionally, this was a way of managing conflict by proportioning rules to solve it in terms of establishing working conditions and other compromises. It was also an instrument to adapt those working conditions to the enterprise and a way to avoid social dumping. The new rules regulating collective bargaining (as it is said in *Ley* 3/2012, 6 of July) wanted collective bargaining not to be an obstacle to the process of adaptation of working conditions to the situation of the enterprise. Therefore, the only scope for collective bargaining nowadays seems to be an instrument to the service of adaptability, losing the other functions they traditionally used to display. The main aspects that have lead into these new situations are:

a) During these years of changes in legislation, alternative bodies for consultation to the employees have been created al the level of undertaking. It is true that they operate in the case of an absence of statutory workers' representatives, but these new bodies can adopt decisions in order to modify agreements reached at a higher level by the latter.

b) The regime for avoiding the application of branch statutory collective agreements has changed as previously analized. Therefore; a) more matters have been introduced in the list of the questions able to be modified by agreement at the enterprise level (earlier it only concerned salary); b) the causes leading to these modifications are broader (earlier it only concerned economic reasons, but now it also concerns technical, productive or organizational reasons); c) the procedure is now more flexible and the possibility to block the employer's option of introducing variations has been removed.

c) The collective bargaining has been decentralized to the level of the enterprise, where the strength of workers' representatives is weaker due to the proximity of the employer and his managerial powers. As we have seen, in some relevant aspects relating to working conditions there is the priority of applications of collective agreements negotiated at the enterprise level.

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strengthening industrial relations systems at European and national levels is essential for any discussion on flexicurity. A strong and vital social dialogue where the social partners actively participate and are able to negotiate, influence and take responsibility for the definition and components of flexicurity and evaluation of its outcomes is a key element.

[30] We cannot forget that one of the main criticisms of the *Green Paper. Modernising labour law to meet the challenges of the 21st century* [COM(2006) 708 final] was precisely that it completely forgot about the collective rights of workers. It is also important to bear in mind that collective rights, such as collective bargaining and the right to strike have suffered strong limitations after the judgments of the Court of Justice of the European Union in the cases *Viking* (Case C-438/05) and *Laval* (Case C-341/05) and the Court of European Free Trade Association in case *STX Norway Offshore* (Case E-2/11).

d) The rule of ultra-activity of collective agreements has been dramatically changed in order to encourage the renegotiation of a collective agreement before its expiration date, seeking to avoid a „petrification" of the working conditions established in the agreement and excessive delay in its renegotiation. This rule had an important effect on workers' representatives by allowing them to negotiate without pressure, as the working conditions stipulated in the expired collective agreement were still of application until a new collective agreement could be concluded (so that in the case of no new agreement, the conditions of the previous one were still applicable). Nowadays, with the new legislation, it is recognized that there is one year of „ultra-activity" after which the collective bargaining at a superior level will be applicable. If there is no applicable agreement, the basic rules of employment law (Statutory provisions) would be applicable instead, which would imply an important loss of working conditions for employees as the minimum standards are traditionally improved by collective agreements.

It is possible to conclude, after all these considerations, that the outstanding idea of providing more and better jobs to employees, which is what flexi-security is said to be addressing, seems to be far from reality at the Spanish level with these new internal rules adopted during these years of crisis.

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SPATIAL DEVELOPMENT OF INNOVATION SYSTEMS IN RUSSIA

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K e y w o r d s: innovation systems, spatial development, regional economy, investment activity, research expenditure, innovation activity factors.

A b s t r a c t

While the development of the country's national innovation system as a whole is very important and should be prioritized, its regional aspect is even more important. The specifics of the Russian Federation's transition to an innovation-based economy is in that that, at the present time, prioritized is the need to ensure the effective development of those economy sectors that underlie the country's specialization and may provide regional and national competitive advantages. To such sectors belong the chemical industry, machine-building and power energetics.

We would like to note that initial innovation awareness indicators in the regions are comparable and do not differ greatly but the growth of activity can be observed only in some of the regions. The problem of large differentiation among the constituent entities of the Russian Federation by their level of economic development remains important and has to be dealt with.

ROZWÓJ PRZESTRZENNY SYSTEMÓW INNOWACYJNYCH W ROSJI

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S ł o w a k l u c z o w e: systemy innowacji, rozwój przestrzenny, gospodarka regionalna, innowacje, koszty badań, czynniki aktywności innowacyjnej.

A b s t r a k t

Mimo że rozwój krajowego systemu innowacji w kraju jako całości jest bardzo ważny i priorytetowy, coraz ważniejszy staje się również jego wymiar regionalny. Specyfiką transformacji Federacji Rosyjskiej do gospodarki innowacji jest to, że jej priorytetem jest zapewnienie efektywnego rozwoju tych sektorów gospodarki, które determinują specjalizację w kraju i mogą przyczynić się do podniesienia regionalnej i krajowej konkurencyjności. Do sektorów tych należą przemysł chemiczny, maszynowy i energetyczny.

Wstępne wyniki badań wskazują, że wskaźniki innowacyjności w regionach są porównywalne i różnią się tylko nieznacznie, wzrost aktywności obserwuje się jednak tylko w niektórych regionach. Problemem, którym należy się zająć, pozostaje więc silne zróżnicowanie poziomu rozwoju gospodarczego podmiotów Federacji Rosyjskiej.

Abbreviations:
RIS – Regional Innovation System;
NAIDIT – National Association of Innovations and Development of Innovation Technologies;
EIS – European Innovation Scoreboard;
GRD – Gross Regional Product;
GAZ, OJSC – Gorky Automobile Plant, an open joint stock company;
SIBUR Holding – Siberia Urals Petrochemical Company, an open joint stock company;
IT Park – a techno park specializing in information and communication technologies;
IDSEZ – an industrial/developmental special economic zone;
ISEZ – an industrial special economic zone.

Introduction

The main problem that this article raises is the need for ways to determine regional innovation activity factors which affect the economic development of the nation's economic space and also the need to look into ways to realize the innovation potential of the nation's regions. At the current stage in the development of national economies, priorities are given to the development of innovation systems as integral parts of such economics along with, for example, their financial or industrial systems. An important consideration here is that the spatial development of innovation systems defines and predetermines the competitiveness of Russia's regions, is the sources of changes in the GDR increasing its research intensity due to the growth of the proportion of high technology industries and improvementin the territorial organization of the economy.

While the development of the country's national innovation system as a whole is very important and should be prioritized, its regional aspect is even more important. This is related to the fact that the gestation and development of innovative activity is taking place on the regional level where the institutionalized infrastructure is in operation in a varying degree. On the same level a special competitive environment is formed – the environment which is based not only and not so much on available natural resources as much as on the synergy of a knowledge-based economy, competitive advantages, traditions and so on.

A significant aspect is the geographical proximity of regional economies. Thus, a diffusion of innovation processes extends to territorially close regions possessing sets of similar knowledge skills and competences. If the proximity is not close enough, integration has no stable nature and the innovative activity itself is checked. For this reason, the fundamentals of a modern spatial innovation system concept are the development of the foundations of regional innovation systems (RIS); while the main underlying principle is the development of a mechanism aimed at ensuring the flow of development in the direction from the nation center to its peripheral regions and cities. On the example of one of Russia's economic leaders / macro-regions – the Volga District, we conducted a research into the innovation activity of entities constituting said district.

Research Results

From the viewpoint of regional spatial development, innovation activity constitutes the totality of acts which activate new growth points in the existing space, add new qualities to the regional economies – a multiplication effect which makes it possible to reduce territorial misbalances.

It is known that national innovation system products and services are mainly consumed by major corporations working, as a rule, to fulfill public contracts; but on the regional level the center stage is taken by small and medium businesses which are viewed as main innovators all over the world. This explains the importance of a research into the influence of regional economies on the success of innovation activity nationwide.

The specifics of the Russian Federation's transition to an innovation-based economy is in that that, at the present time, prioritized is the need to ensure the effective development of those economy sectors that underlie the country's specialization and may provide regional and national competitive advantages. To such sectors belong the chemical industry, machine-building and power energetics.

Another specific trait of Russia's innovation system is its „fragmentation", its territorial asymmetry, concentration of research-intensive sectors in a small number of Russia's regions. However, whether these factors are negatively affecting innovation both in Russia as a whole and in its constituent regions is a moot point. Many developed nations in the world displaying high economic growth rates achieved it, as a rule, thanks to the faster-than-average growth in certain individual leading regions in such nations. These regions become centers for the nation's innovative growth and provide a new type of economic and social growth for other territories to aspire to. These territories then face the task of integrating into a new regional hierarchy forming in the global world a geo-economic space – industrial regions, go-between regions and financial center regions.

The current concept for the spatial development of the Russian Federation emphasizes the development of regions as growth points to form a framework enveloping the nation's territory. The formation of such spatial structure may ensure the achievement of a rational spatial planning and development and an innovation-based growth in the economy. Large city agglomerations should act as nodes of the so-called load bearing framework – innovation and administration centers concentrating the nation's economic activity within themselves and acting as sources of change.

Such supporting regions are relatively few in the Russian Federation. At the present time, there is only one global megalopolis in Russia – Moscow and there is in addition only one national megalopolis which is Saint Petersburg. The other 13 million-plus cities are cities with a population in the region of one and a half million to one million people. In Siberia, such cities are Omsk, Novosibirsk and Krasnoyarsk. In the Russian Far East, there is not a single million-plus city. In the past decade, all major cities in this category have exhibited a population growth.

Framework supporting regions „bind together" the Russian territories as Russia's zones of integration with the global economy and innovation concentration zones. In all federal districts of Russia, one can identify regions close to the general Russian level on most significant indices or indicators or exceeding it.

Russia's regions have different start-up conditions and different innovation developmental potentials. Nevertheless measures being taken by the government to stimulate the economy have been producing some positive trends. Thus, NAIDIT compiles a ranking of regions by their innovative activity; the purpose of such ranking is to identify regions with the best performance indicators in the area of research stimulation and innovations and also to provide an objective picture of the current state of innovation in Russia.

The idea and methodology were developed by NAIDIT based on methods used to prepare some leading world rankings (the European EIS ranking). A system of quantitative innovation indicators is used for analysis. The system is based on criteria developed as part of the EIS to evaluate levels of innovation development of European countries and adapted to take into account Russia's national specifics and to reflect availability of various statistical data (*NAIRIT podvodit itogi Rejtinga innovacionnoj...* 2013).

Based on results for 2012, it may be concluded that the number of regions with a „very high" and a „high innovation activity" has increased. The stability of regional innovation processes can also be noted. Among the highest climbers, NAIDIT identifies absolute leaders – Moscow and Saint Petersburg where there operate modern innovation enterprises. The five leading regions in this respect also include the Republic of Tatarstan, the Nizhny Novgorod Region and the Tomsk Region.

Also, an earlier trend of closing the gap between the leading regions and their closest pursuers from a high-degree innovation activity group has intensified. Thisindicatoris12% asopposedto 15% in 2012 which is also indicative of an increased competition in the leading group. 1/4 of the regions retained their positions; while about 36% increased their innovation-based activity. The aggregate investment activity indicator for 2013 is higher by 1.9% than the same indicator for the preceding period which is indicative of a positive growth trend in the investment-based activity of Russia's regions (*NAIRIT podvodit itogi Rejtinga innovacionnoj*... 2013).

Rankings of the constituent entities of the Russian Federation by various aspects of innovation activity prepared by various organizations or researches are varied and contradictory which may be explained by the kind of source indicators used as analytical indicators. Nevertheless they provide a clear picture of the peculiarities of innovation development across the territory of the country, of those regions that have enormous potential and are realizing it and of those that have so far been unable to use their competitive advantages.

Russian researchers use indicators made available by the country's statistical authorities; but such indicators differ significantly from foreign innovation activity criteria. Thus, Russia's statistics authorities use an indicator representing the specific weight of innovation products, work or services in the total amount of shipped products, completed work or services. The closest to the ongoing processes is the same indicator but in relation to the sellable, sold products. There is no such information in Russian statistic data. All the same, available data reflect those processes that are taking place in the Russian economy.

The dynamic of the change of the share of innovation-based products, work, services testifies to the fact that a major break-through is ongoing currently in the output of innovation-based products in the services sector. Another specific feature is that Russian-wide indicators are exceeded in two federal districts: in the Central Federal District (10.2% in industrial output businesses compared to 7.8% as the Russian average) and in the Volga Federal District (12.9%, respectively). In the Central Federal District, Moscow, the Yaroslavl Region and the Tula Region are leading in terms of innovation-based products. In the Volga Federal District, the leaders are: the Samara Region and the Republic of Mordovia (in industrial output).

As regards the share of innovation products made by industrial output businesses, the average Russian indicator is exceeded by the Russian Far East (24.3% as opposed to 7.8% for all of Russia); while the North-Western Federal District exceeds a similar indicator but for the services sector businesses (10.5% versus 9.6% for all of Russia). In the Russian Far East, the Sakhalin Region is in a league of its own – the share of innovation products there is about 60%. This is due to the fact that Sakhalin implements innovation projects in the power sector, in the fishing sector, in power conservation and in the ecological efficiency of power generation units. Based on open statistical data as at end of 2012 published by Russia's state statistic authority (Rosstat), MATRIX-Prime, an information and analytical agency, awarded the Sakhalin Region national innovative ranking BBBR (above average) (Development Strategies of the Sakhalin Region. 2014).

In the North-Western Federal District, the all-Russian innovative products output indicator is exceeded by service sector businesses (10.5% as opposed to 9.6% for all of Russia). This leadership is ensured by the Leningrad Region and the city of Saint Petersburg.

One of the main objectives in improving the innovation activity of the Russian economy is ensuring that small businesses take part in such activity. However, at the present time, what is required is not just participation but a break-through. In four out of the five leading regions, the specific weight of small businesses implementing technological innovations in the total number of small businesses inspected exceeds the same indicator for all of Russia (5.1% in Russia; 6.5% in Moscow; 8.4% in Saint Petersburg; 4.1% in the Moscow Region; 5.5% in the Republic of Karelia; 6.3% in the Republic of Mordovia) (Regions of Russia. Socio-Economic Indicators. 2013).

Innovation activity across Russia's federal districts and regions differs greatly. During the period from 2000 to 2012, the most innovation activity was characteristic of businesses and institutions of the Volga Federal District (11.9%). The difference with the average Russian indicators was 1.1% in 2005 and up to 2.8% in 2010. Among the least innovative federal districts, the situation is different on a case by case basis. Thus, in the North-Caucasian District, the specific weight of innovative entities was 6.4%. Leading position is held by the Kabardino-Balkar Republic where the growth of innovative activity by businesses or institutions increased from 3.5% in 2000 to 9.4% in 2012. This indicator is a little higher in the South District (7.4%) where only the Republic of Adygea and the Krasnodar Krai stand out (Regions of Russia. Socio-Economic Indicators. 2013).

We are going now to give a more detailed attention to the evaluation of innovation activity in the constituent entities of the Volga Federal District as one of the leaders in the Russian Federation whose only direct competitor is the Central Federal District.

It should be noted that certain constituent entities of the district, such as the Republic of Tatarstan or the Nizhny Novgorod Region, are among the most innovatively active regions in the Russian Federation. On the other hand, for example, two other republic – Mariy El and Udmurtia – hold lowly positions on the all-Russia rankings. A strong differentiation of regions by the level of innovation activity is also characteristic of a number of other federal districts and of Russia as a whole.

This research is based on a methodology providing for ranking innovation development of regions as per basic indicators:

– gross regional product (thousand Rubles);
– year-average number of those employed (thousand persons);
– fixed assets value (thousand Rubles);
– amount of emissions of pollutants into the atmosphere by stationary facilities (thousand tons);
– internal expenditure on research and development (thousand rubles);
– internal expenditure on technological innovations (thousand rubles);
– output of innovation-based products, work, services (thousand rubles);
– population (thousand persons).

Innovation awareness factors were calculated for each of the constituent entities of the district for 2012. Among the universally accepted indicators are labor productivity, return on assets and ecological compatibility of industrial activity. Naturally, a degree of conventionality is accepted in the calculation of such indicators which is related to certain limits on available official statistic information. Many rankings by foreign and Russian researchers specify that there is no openness in such calculations. So we selected and analyzed those indicators, on which there are openly accessible statistical data.

Labor productivity is an indicator, on which the Russian Federation is significantly behind world leaders. It is reasonably sensitive to market transformations in the economy; and, taking into account the interests of society's social development, has a first-degree importance as labor productivity impacts on the labor market conditions. Nevertheless, it is hard to overestimate its contribution to the innovativeness of the country's economy. Out of the 14 constituent entities making up the Volga Federal District under review, the absolute leaders by labor productivity are the Republic of Tatarstan, the Perm Krai, the Republic of Bashkortostan, the Samara and Orenburg Regions. Given that, it should be noted that in the half of the regions this indicator is lower by a factor of two than in the leading constituent entity.

The return on assets indicator reflects the level of use, or the effectiveness, of the region's fixed capital. The leading entities on this indicator are the Republic of Bashkortostan, the Penza Region, the Republic of Tatarstan and the Ulianovsk Region. The other regions have no significant discrepancies by this indicator and are well behind the leaders.

As regards ecological compatibility of industrial activity, the unquestionable leader is the Penza Region, second and third places are held by the Ulianovsk Region and the Chuvash Republic, respectively. It is thought to be due to the fact that a low level of polluting emissions was observed in these

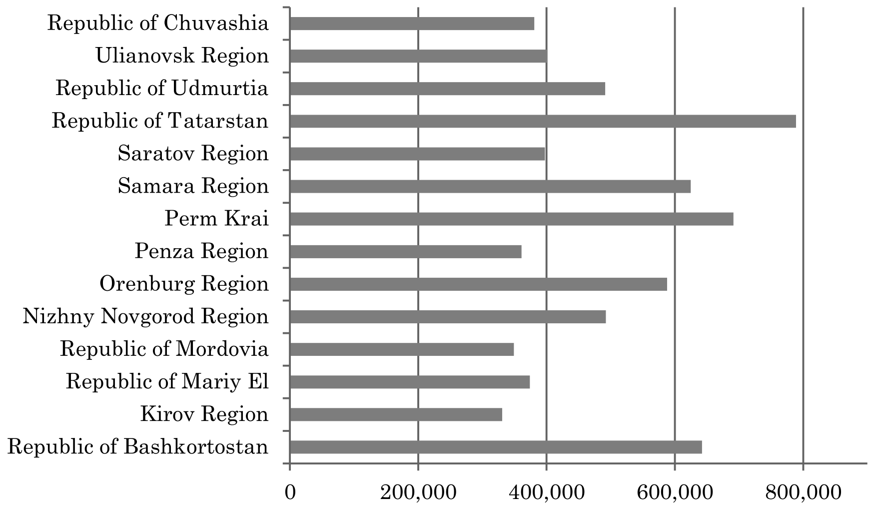

Fig. 1. Labor productivity (GRP/employeed population)
Source: Regions of Russia. Socio-Economic Indicators (2013).

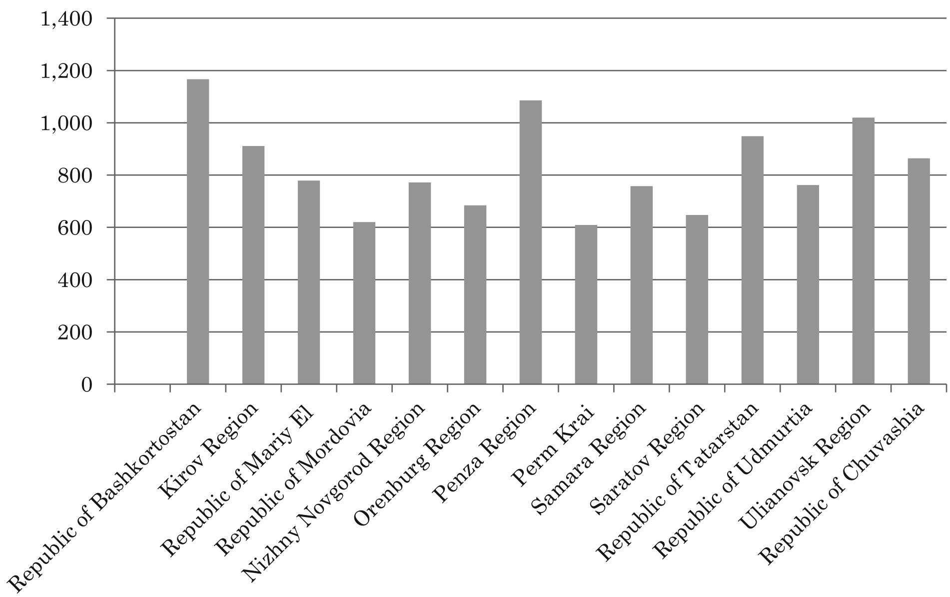

Fig. 2. Return on assets (GRP/cost of assets)
Source: Regions of Russia. Socio-Economic Indicators (2013).

regions in 2012. But the GRP in these constituent entities was also low (at the level of RUB 215 million – RUB 245 million). While the GRP of, say, Tatarstan over the same period was RUB 1 trillion 437 million. These data suggest that the constituent entities of the Volga Federal District are greatly differentiated as regards their economic development.

In evaluating the level of innovativeness of regions, also important are such regional innovation activity factors as research and development expenditure – per 1 employed person; volume of innovation products on a per capita basis.

During the past 15 years, internal research and development growth rates exceeded on the whole the GDP growth rates. The share of internal research and development expenditure in the GDP was 1.12% in 2011 and remains below the maximum value achieved in 2003 (1.29%). In terms of international comparisons, Russia is on the same level as Brazil (1.19% in 2010) and Hungary (1.16% in 2010) falling significantly behind innovation leaders (Germany and Japan, with 2.82% and 3.26%, respectively, in 2010), and also to China (1.7% of the GDP) (State Program „Economic Development" 2013).

Figures 3, 4, 5 represent schematically the results obtained which showed significant disproportions in the innovation activity of the regions.

With regard to research and development expenditure, the clear and obvious leader is the Nizhny Novgorod Region with RUB 26,141 per each employed person. This is mainly preconditioned by reasonably well developed

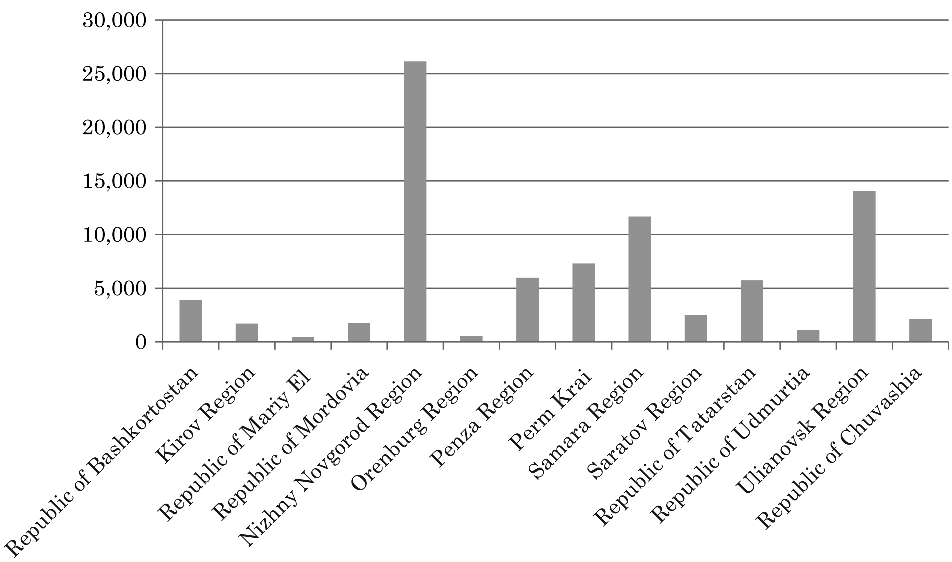

Fig. 3. Research and development expenditure (thousand RUB)
Source: Regions of Russia. Socio-Economic Indicators (2013).

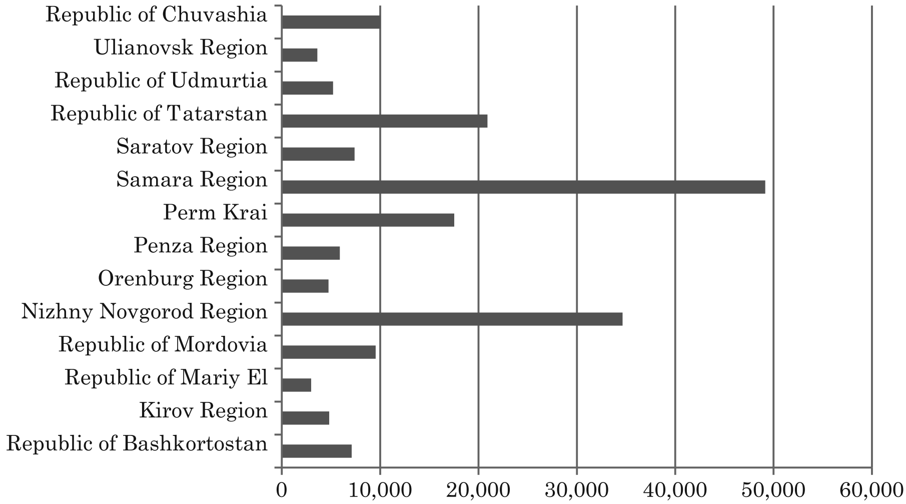

Fig. 4. Technological innovation expenditure (thousand RUB)
Source: Regions of Russia. Socio-Economic Indicators (2013).

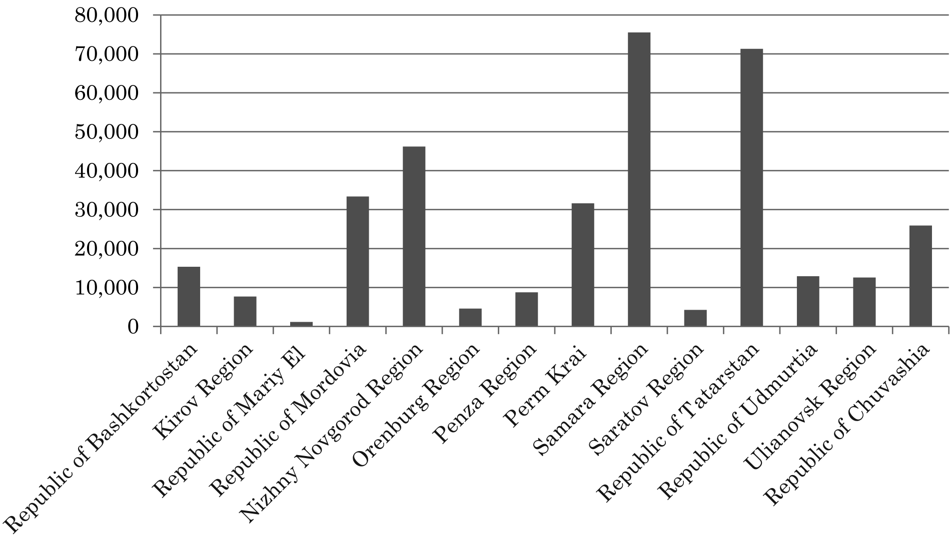

Fig. 5. Innovation products output (thousand RUB)
Source: Regions of Russia. Socio-Economic Indicators (2013).

machine-building and metal processing in the region and also by the military-industrial complex present there. In order to use the economic potential of the region and to raise the competitiveness of products made by their businesses, considerable funding is now being invested in the innovation activity in the region.

It is followed, albeit with a considerable lag-behind, by the Ulianovsk and the Samara Regions, the Perm Krai. Very little expenditure is made in the following constituent entities of the district: the Republic of Mariy El, the Orenburg Region and the Republic of Udmurtia.

As regards technological innovation expenditure, the Nizhny Novgorod Region is only second while the Samara Region holds first place. The Samara Region has particularly well developed clusters, such as the car building-, the aerospace- and also the defense and industrial clusters. It is follows by the Republic of Tatarstan and the Perm Krai. Against the backdrop of the four leaders, expenditure made by the other entities seems insignificant and insufficient.

The largest output of innovation based products by volume is characteristic of the Samara Region, its direct competitor is the Republic of Tatarstan where the industry output comprises machine-building-, oil- and petrochemical products and also extraction of mineral deposits. In terms of output of innovative products, the Nizhny Novgorod Region holds third place.

Thereafter we conducted mathematical transformations using two groups of indicators. As a result, ranking values were calculated for each of the regions.

A – Regional innovation activity ranking evaluations

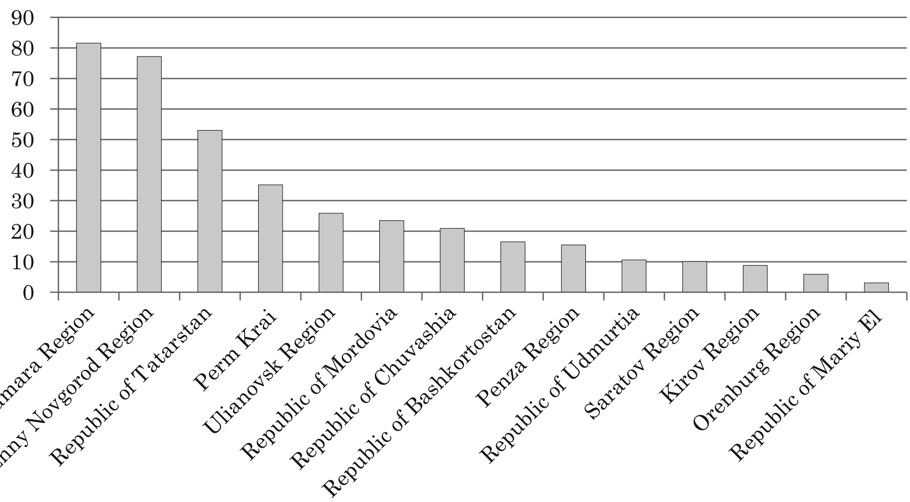

Fig. 6. Innovation activity ranking

The results of the transformations are quite whatwas expected – the three leaders are: the Samara Region, the Nizhny Novgorod Region and the Republic of Tatarstan. The rest of the regions lag behind them considerably and are at a low or an insignificant level of innovation activity.

V – Regional innovation awareness ranking evaluations

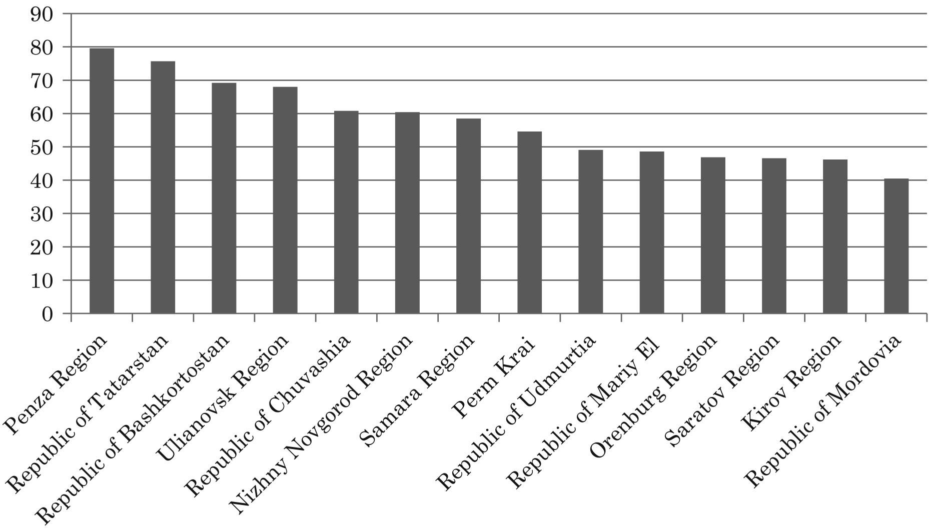

Fig. 7. Innovation awareness ranking

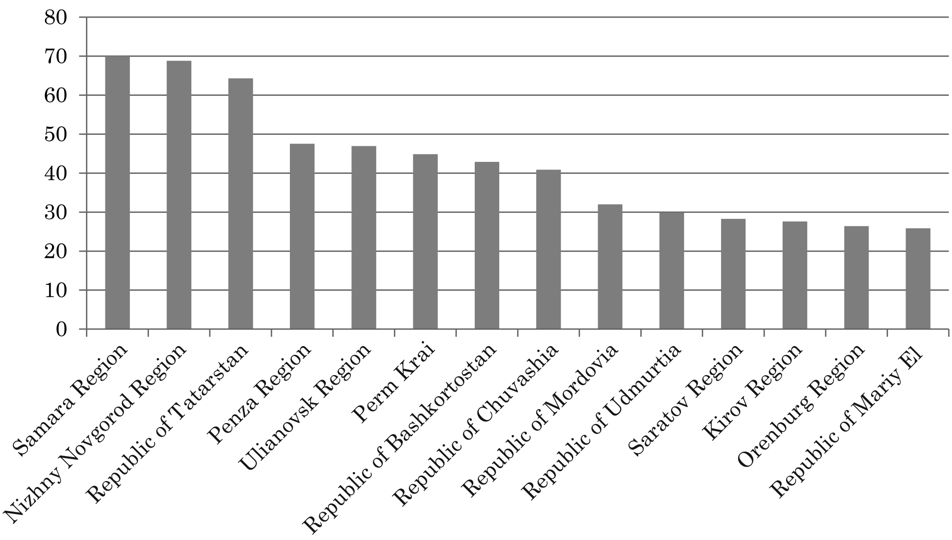

Fig. 8. Innovation development rankings

The values obtained for innovation awareness in the regions do not differ as greatly as the above activity values. 12 of the constituent entities (regions) are at a medium level of development; while 2 are at a high level. Among the leaders are the Penza Region and the Republic of Tatarstan. Good positions are held by the Nizhny Novgorod Region, the Samara Region and the Ulianovsk Region and also by the Republic of Bashkortostan. As regards innovation awareness, virtually all constituent entities of the Volga Federal District show rather high results. However, such possibilities do not lead to a significant innovation activity in all of the regions. Only some of the regions are able to make use of their potential.

Upon calculating the arithmetic mean of the two sub-indicators, A and V, we obtain VA – an overall indicator of a region's innovative development. The positions of the Volga Federal District's constituent entities are presented in the following diagram where the rankings of each region may be clearly seen.

In accordance with accepted rules we convert indicator values by region to a letter-based code and, based on the results of such conversion, rank the regions by their level of innovation-based development.

ZoneA – High Level (from 70 to 100):

- Samara Region

ZoneW – Average Level (from 40 to 70):

- Nizhny Novgorod Region
- Republic of Tatarstan
- Penza Region
- Ulianovsk Region
- Perm Krai
- Republic of Bashkortostan
- Republic of Chuvashia.

ZoneC – Low Level (from 10 to 40):

- Republic of Mordovia
- Republic of Udmurtia
- Saratov Region
- Kirov Region
- Orenburg Region
- Republic of Mariy El.

On the one hand, the results of our research draw attention to large disproportions among regions confirming prevalent territorial asymmetry while, on the other hand, these results seem quite reasonable and close to the real situation with the regions' economy. Also noteworthy is a huge unrealized potential that some territories have even within a single federal district. In this connection, a question arises: what can explain such low rankings of 6 out of the 14 regions constituting the federal district?

The leading position of the Samara Region and the Nizhny Novgorod Region as well as of the Republic of Tatarstan is quite characteristic as it is these regions that received the most support from the government by way of the creation of special economic zones, or techno parks. It is clear that such a way of a government-private partnership does stimulate businesses to innovate. One of the methods of providing support to the development of the economy of the Nizhny Novgorod Region is public contracts which ensure constant demand for innovation-based products. Also known is a policy aimed at creating and supporting „growth points" within the economy which are the locomotives of the Russian economy. But an indisputable fact is that such regions must also contribute to the growth of the economy in the territories currently lagging behind but having potential competitive advantages which they don't know how to make use of at the present time for a number of reasons.

The Samara Region is among the most developed industrial regions of the Russian Federation with a diversified economy and a powerful research-and-innovation potential. The region's economic development is based on high-technology processing industries with a high added value – car building, the aerospace complex, high processing depth industries in the raw materials sectors, chemistry, metallurgy. The implementation of innovation-based technologies is a main condition for their continued development, modernization on the basis of technological re-equipment, the use of innovative methods in management.

Their leading positions in the area of developing necessary conditions for the building of an innovation-based economy are confirmed by the high rankings awarded by independent experts, such as Expert RA, Institute for Infrastructure Innovations and Investments and the Public Opinion foundation, the National Association for Innovations and Development of Information Technologies.

A system has been created comprising infrastructure organizations for the support and advancement of innovation development: the Samara Region Innovation-Investment Foundation, the Regional Center for the Transfer of Technologies, the Regional Venture Foundation, a techno park, five business incubators, the Center for Innovation Development and Cluster Initiatives, the Guarantee Foundation, an information and consulting agency, micro-finance and other entities. Regional target programs in innovation development are being implemented; Zhigulevskaya Dolina, a techno park specializing in high technologies is about to be set up as is a special industrial/developmental special economic zone. The so-called „innovation lift" mechanism was implemented and is now operating which provides ways to support and fund innovation projects at all stages of their development (Samara Region. Innovation-Based Development. 2014).

In the Nizhny Novgorod Region, the powerful centers for innovation implementation are the Sarov Nuclear Cluster, GAZ, OJSC; and SIBUR Holding. The Nizhny Novgorod Business incubator, the Regional Center for

New Information Technologies; the Nizhny Novgorod Nano-Industry Regional Center, a non-commercial partnership; the Nizhny Novgorod Investment Center for Energy Efficiency; the Technological/Implementation Open Park in the Satis village, Diveevsky district, Nizhny Novgorod Region; and the Ankudinovka IT Park are all successfully operating now.

Tatarstan has a wide and varied infrastructure designed for stimulating and encouraging investment activity. It includes the Alabuga Type Industrial / Developmental Special Economic Zone, the Khimgrad technology based city project, Innopollis (specializing in information and communication technologies), 4 industrial parks, 9 techno parks, 7 business incubators and also 6 investment and venture foundations (*Razvitie innovacij v Respublike Tatarstan...* 2010).

Special economic zones operate as one of the most important instruments of stimulating innovation activity in another two constituent entities of the Volga Federal District – the Togliatti industrial special economic zone in the Samara Region and the Ulianovsk industrial special economic zone.

In conclusion, we would like to note that initial innovation awareness indicators in the regions are comparable and do not differ greatly but the growth of activity can be observed only in some of the regions. All of this suggests that the governmentis advised to develop new instruments for stimulating and supporting innovation development in the nation's regions. It is also necessary to continue working in the existing directions of activity. The problem of large differentiation among the constituent entities of the Russian Federation by their level of economic development remains important and has to be dealt with.

In order to conduct an effective government policy in building an innovation-based economy, it is necessary to make integrated evaluations of the current state of development and effectiveness of state governance. For this purpose, it is necessary to continue to further develop relevant analysis methods, to conduct research into the condition of innovation, to use data obtained with a view to developing an effective strategy for regional development for each of the constituent entities.

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STRATIFICATION APPROACH TO RESEARCH BORDER ECONOMY

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K e y w o r d s: stratification, territorially-oriented branch structure of economy, the region's potential, regional resource, stratification indicators, methods of stratification, models of stratification, infrastructure elements of the border economy.

A b s t r a c t

Stratification of the border economy has important scientific value. It is the question of division of the border economy into striations. The stratification of potential and resources of the border region is used in the article. Eight levels of striations are identified: the natural and economic conditions of the border region; the integrity of reproduction base of the border region; the level of development and territorially-oriented branch organization of productive forces; the degree of completeness of production and power cycles; the production and economic specialization of the border region; the level of infrastructure provisions in the border region; the trade and commercial potential of the border region and development of new management forms in the border region.

The indicators and a set of possible methods of the assessment of each of the eight levels of striations are suggested by means of the econometric instruments.

PODEJŚCIE STRATYFIKACYJNE DO BADAŃ NAD EKONOMIĄ PRZYGRANICZNĄ

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S ł o w a k l u c z o w e: stratyfikacja, terytorialno-branżowa struktura gospodarki, potencjał regionu, zasoby regionu, czynniki stratyfikacji, metody stratyfikacji, modele stratyfikacji, elementy infrastruktury gospodarki przygranicznej.

A b s t r a k t

Ważne znaczenie naukowe ma stratyfikacja gospodarki przygranicznej – podział gospodarki przygranicznej na warstwy. W artykule wykorzystuje się stratyfikację potencjału i zasobów regionu przygranicznego. Wyodrębnia się osiem warstw: naturalne i ekonomiczne warunki regionu przygranicznego, kompleksowość bazy reprodukcyjnej regionu przygranicznego, poziom rozwoju i organizacja terytorialno-branżowa sił produkcyjnych, stopień ukończenia cyklów produkcyjno-energetycznych, produkcyjno-gospodarcza specjalizacja regionu przygranicznego, poziom zabezpieczenia infrastrukturalnego w regionie przygranicznym, handlowo-komercyjny potencjał regionu przygranicznego i wysoki poziom rozwoju nowych form gospodarowania w regionie przygranicznym. Jako aparat ekonometryczny zaproponowano wskaźniki i metody oceny każdej z ośmiu warstw.

Introduction

The representatives of „positive" integration considered a number of problems which are connected with the practical calculations of the border processes. Up to date, there have not been any specific methods in scientific literature, which would allow to carry out specific calculations with respect to the border economy from the point of view of neighboring regions' interests. We offer the stratification approach, which allows to single out a number of indicators described by the complex indicators during the research process of a border situation. The striations are the division of the border market space into the eight integrated blocks or parts. This technique is also important to further carry out stratification of the regional characteristics, which allows a researcher to identify the layers according to the stratification criteria that are exclusively necessary for the research, with the subsequent formation therefrom of further integration indicators.

The most important criteria distinguished in the stratification description of the border situation are the following: the natural and economic conditions; the integrity of reproduction base; the level of development as well as territorial and branch (structural) organization of production forces; the degree of completeness of production and power cycles; the production and economic specialization; the level of infrastructure provisions; the trade and commercial potential; the development of new management forms.

Methodology of stratification of economic space of territories

While carrying out research into the regional socio-economic system of border territories, it is important to develop the indicators which have to become the criteria of stratification. It should be taken into account that the detailed stratification will provide the most flexible result concerning further stages of research. On the other hand, too detailed partitioning of the resources and potential of the border territories will result in insignificant indicators, and they, as a matter of principle, contain little information.

Research into natural and economic conditions of the border region

This research has the introductory and descriptive features of the border analysis. A set of qualitative research data is indicated herein as a matter of principle, including: a geographical position – with the indication of the nearest border regions; in addition – in case of the description of the border region – the neighboring states, the relations between these states.

The geological structure, a variety of vegetation (the latter indicator is arguable – for some kinds of activity specific or absolute indicators of certain types of vegetation are of crucial importance) is of qualitative nature.

Some part of indicators under consideration belongs to the category of nature-climatic conditions. Thus, for example, the average annual air temperature in the tcp region is an important indicator for determination of agricultural potential, interests of the tourist industry (in some cases the average temperature could be presented according to season or month in the form of a graph). Apart from the temperature factor, it is possible to distinguish the following:

– average annual norm of precipitation lcp (a similar geographical representation is possible);

– natural energy potential (of wind power, tides, rivers);

– average quantity of sunny days per year:

$$K_{\text{sun average}} = \frac{Q_{\text{suuny days}}}{365}$$

The graphic data on the total solar energy and total solar radiation could be additionally presented.

The resource characteristic of the region (which often contains the above-mentioned indicators of climatic resources) is another quantitative set of resource layers:

– mineral and raw;
– flora;
– fauna.
– land;
– water;

Mineral and raw resources are the source of a raw component of the regional production, and therefore require a more detailed study.

It is necessary to stratify the mineral and raw potential of the border region on each type of the developed and potential raw materials ready for development and to submit data in the following manner.

The general stocks of resources are represented by way of an absolute expression in units of measurement.

A degree of the developed fields of raw materials is calculated using the following formula:

$$R_{ddi} = \frac{R_{di}}{R_{pi}},$$

where:
R_{di} – quantity of raw materials in the source developed for production,
R_{pi} – potential quantity of raw materials of this type in the border region.

Share of a regional resource on a state/global level:

$$R_{ddi} = \frac{R_{pi}}{R_{gi}} \cdot 100\%,$$

where:
R_{gi} – potential quantity of raw materials of this type in the state (a similar indicator is adequate from the point of view of the world security with a resource).

The resource share on the state and global level is adequate in terms of competitiveness of sources of a resource on the state/global arena. Degree of lands of i appointment in the total quantity of land resources:

$$S_{di} = \frac{S_i}{S_{\text{region}}},$$

where:
S_i – area of the land of i appointment in the border region,
S_{region} – total area of land grounds of the region.

The ratio of usage of lands to destination:

$$S_{\text{extend of target use } i} = \frac{S_{\text{use } i}}{S_i},$$

where:
$S_{\text{use } i}$ – area of the earth which is really used by i appointment of geographical settlements within borders of land grounds, intended for using i.

The extent of idle time or inappropriate use of land resources is defined as:

$$S_{\text{idle time}} = 1 - S_{\text{extend of target use } i}.$$

For the description of vegetable resources, each specific type of a resource is considered in nominal terms. The fauna description is given in a similar manner. The security level in the border region is considered in terms of water resources according to the following formula:

$$S_{\text{extend of water}} = \frac{S_{\text{water}}}{S_{\text{region}}},$$

where:
S_{water} – total area of all water resources in the border region.

The security of the border region by the type of water resources – in nominal and relative expression is similarly considered.

Index of regional consumption of a resource:

$$ri_i = \frac{Q_{\text{use } i}}{Q_{\text{potental } i}},$$

where:
$Q_{\text{use } i}$ – volume of use of a resource in the region's borders (intermediate + final consumption) i resource in a year,
$Q_{\text{potential } i}$ – volume of production of i resource in a year.

Integrity of reproduction base of the border region

The main objective of the research of integrity of reproduction base of the border region is the definition of the region's ability to develop at its own expense. The development happens at the expense of internal resources, domestic markets and within the region's own territory.

In reality, the level of reproduction base of the border region is characterized by the degree of development of the regional markets, i.e.:
- consumer goods market;
- means of production market;
- financial resources market;
- human resources market.

The consumer goods market is characterized by a set of the stratified indicators. The inflation ratio to consumer goods and services as well as regional consumer basket $Q_{\text{consumer basket}}$ is expressed in nominal values. A degree of availability of a consumer basket is defined in the following manner:

$$Q_{\text{individual consumer basket}} = \frac{Q_{\text{consumer basket}}}{Q_{\text{standard consumer basket}}},$$

$Q_{\text{standard consumer basket}}$ – size of a standard consumer basket.

The ratio of volume of household expenses and the wage amount (minus taxes)

$$Q_{\text{individual household expenses}} = \frac{Q_{\text{household}} \cdot k}{q_{\text{populace}} \cdot \Sigma_k W_k},$$

where:

k – corresponds to branch average (k – number of branches),
W_k – average on branch k a wage (minus taxes),
Q_{populace} – volume of the populace of the region,
$Q_{\text{household}}$ – gross volume of household expenses of the population of the region.

The average level of production is characterized by the following ratio with respect to each branch k – index of the average rate of production:

$$Q_{\text{index of the market of means of production}} = \frac{\Sigma_i Q_{\text{residual profit } i\ k}}{Q_{\text{gross means of production } k}},$$

where:

$Q_{\text{residual profit } i\ k}$ – residual profit of the enterprise i involved in k of the branch,
$Q_{\text{gross means of production } k}$ – gross limit of average level of production for branch k of the organizations in the region.

The financial resources market is characterized by number of institutes and establishments in the financial and credit sphere. The contribution of integrity of reproduction base of the region to value is made by the following ratio:

$$N = \frac{n_b}{n_a},$$

where:

n_b – average percent of depository investment of funds in a bank,
n_a – average volume of dividends per share of the organization in the region.

The human resources market is expressed in nominal units according to average wages with stratification on all branches of the region.

One of the main parts of the research into the labor market is natural unemployment rate, which can be presented as the sum of indexes of frictional and structural unemployment:

$$L_{\text{unemployment}} = \frac{L_{\text{frictional unemployment}} + L_{\text{structural unemployment}}}{Q_{\text{employed workers}}},$$

where:

$L_{\text{frictional unemployment}}$ – number of the frictional unemployed in the region,
$L_{\text{structural unemployment}}$ – number of the structural unemployed in the region,
$Q_{\text{employed workers}}$ – total amount of labor in the region.

It is necessary to perform branch stratification of requirements of the regional production for the structural description of the labor market.

Level of development and territorial and branch (structural) organization of productive forces

While researching the regional socio-economic system using this criterion, it is necessary to perform stratification of leading branches in the border region with the following parameters.

The labor productivity is recognized as:

$$P_{lp} = \frac{Q_{pr}}{Q_{ipp}},$$

where:

Q_{pr} – volume of output and realization of branch production,
Q_{ipp} – number of industrial production personnel involved in the industry.

Capital productivity in branch:

$$F_o = \frac{Q_{pr}}{\Sigma_i F_i},$$

where:

F_i – average annual cost of the fixed business assets of the enterprise i.

Retirement rate of the equipment in the branch:

$$K_{rr} = \frac{\Sigma_i \; Q_{\text{leaving } i}}{\Sigma_i \; Q_{\text{beginning } i}},$$

where:

$Q_{\text{leaving}\, i}$ – quantity of the equipment left by the enterprise i in the branch for the measured period,

$Q_{\text{beginning } i}$ – quantity of the equipment of the enterprise i at the beginning of the measured period.

Coefficient of renewal of the equipment in the branch:

$$K_{\text{renewal}} = \frac{\Sigma_i \; Q_{\text{entered}}}{\Sigma_i \; Q_{\text{period end } i}},$$

where:

Q_{entered} – quantity of the equipment introduced by the enterprise i in the branch for the measured period,

$Q_{\text{period end } i}$ – quantity of the equipment of the enterprise i at the end of the measured period.

Thus, it is possible to define increment rate of the equipment in the branch:

$$K_{inn} \frac{\Sigma_i \; Q_{period\ end\ i} - \Sigma_i \; Q_{\text{beginning } i}}{\Sigma_i \; Q_{\text{beginning } i}}.$$

Apart from the share characteristics of the border region, the analysis of the production structure of the region is also important.

The coefficient of innovation of the border regional industry is defined as:

$$K_{inn} = \frac{\Sigma_i \; Q_{\text{sep } i}}{\text{GRP}},$$

where:

$Q_{\text{scp } i}$ – volume production in the border region of the science-consuming production of the enterprise i (i – all of the innovative enterprises in the region).

Production coefficient of the average rate of production:

$$K_{pmp} = \frac{\Sigma_i \, Q_{\mathrm{pr}}}{\mathrm{GRP}},$$

where:

Q_{pr} – production volume of the enterprise i in the border region achieving the average rate of production.

Degree of completeness of production and power cycles

The branch stratification of the regional industrial organizations is made and a number of coefficients are defined. The coefficient of completeness of the regional production determines the volume of production passable within the limits of the region's full production and energy cycle as well as satisfying the final internal and external demands.

$$K_{\mathrm{pec}} = \frac{\Sigma_i \, Q_{\mathrm{end\ pec}\ i}}{\mathrm{GRP}}$$

where:

$Q_{\mathrm{end\ pec}\ i}$ – volume of the complete production and energy cycle of the enterprise in the branch i (or in the whole region).

The share of the enterprises in complete production and energy cycle is defined as:

$$K_{\mathrm{enterprise\ compl.\ pec}} = \frac{Q_{\mathrm{enterprise\ compl.\ pec}}}{Q_{\mathrm{enterprise}}} \cdot 100\%,$$

where:

$Q_{\mathrm{enterprise\ compl.\ pec}}$ – number of the regional enterprises with the complete production and energy cycle,

$Q_{\mathrm{enterprise}}$ – number of the industrial enterprises in the border region.

It is possible to stratify the share of the enterprises in the complete production and energy cycle on the leading regional production branches.

$$K_{\text{enterprise compl. pec } i} = \frac{Q_{\text{enterprise compl. pec } i}}{Q_{\text{enterprise } i}} \cdot 100\%,$$

where:
i – branch index.

Coefficient of the region's own energy:

$$K_{\text{own energy}} = \frac{Q_{\text{own energy}}}{Q_{\text{energy consumption}}},$$

where:
$Q_{\text{own energy}}$ – volume of energy resources produced in the region,
$Q_{\text{energy consumption}}$ – total amount of energy consumed in the region.

$$Q_{\text{energy consumption}} = Q_{\text{produce energy}} + Q_{\text{imp energy}}.$$

where:
$Q_{\text{imp energy}}$ – volume of energy resources imported to the region.

The coefficient of energy resources imported to the border region is defined by the following ratio:

$$\gamma_{\text{energy}} = \frac{Q_{\text{imp energy}}}{Q_{\text{produce energy}} - Q_{\text{exp energy}} + Q_{\text{imp energy}}},$$

where:
$Q_{\text{exp energy}}$ – volume of energy resources exported from the region.

Industrial and economic specialization of the border region

For drawing up a branch portfolio of the border region, it is necessary to investigate the extent of influence on the economic situation of the leading production branches of the region. The share of the branch i in structure of gross domestic product of the border region is defined by the following ratio:

$$Q_{I \text{ branch}}{}^{i} = \frac{Q_{\text{branch } i}}{\sum_i Q_{\text{branch } k}} \cdot 100\%,$$

where:
$Q_{\text{branch } i}$– total volume of output of the branch i.

The coefficient of export of production or coefficient of marketability of the regional production for the branch i is defined as:

$$\gamma_{v.i} = \frac{v_i}{\Sigma_k \, Q_{\text{branch } i.k}}.$$

Index of export of a regional resource:

$$re_i = \frac{Q_{\text{exp. } i}}{Q_{\text{potential } i}},$$

where:
re_i – index of export of a regional resource,
$Q_{\text{exp. } i}$ – volume of export of a resource outside the limits of the border region.

Import coefficient (an import share of the general consumption of production in the border region):

$$\gamma_{w.i} = \frac{w_i}{\Sigma_k \, Q_{\text{branch } i.k} - w_i + v_i},$$

where:
v_i – volume of export of production of the branch i,
w_i – volume of import of production of the branch i.

Then, the coefficient of import can be defined as:

$$\gamma_{v+w.i} = \frac{v_i + w_i}{\Sigma_k \, Q_{\text{branch } i.k}}.$$

In case of failing to supplement the import (that is production import which is produced in the border region isn't developed), the coefficient of import will assume an air:

$$\gamma_{w.i} = 1 \text{ on branch}$$

It is possible to add balance between export and import with a share of the enterprises which are guided by release of export production:

$$K_{Iv} = \frac{K_v}{K_{\text{enrerprise}}} \cdot 100\%,$$

where:
$K_{\text{enterprise}}$ – number of the industrial enterprises in the border region,
K_v – enterprises in the branch which are guided by release of export production.

In order to assess the potential of the border and the regional export of production in the branch within the state, it is worth estimating localization coefficients or production specializations. The coefficient of localization of production in the branch i of the border region can be defined as:

$$K_{\text{loc}.i} = \frac{Q_{\text{branch } i}}{\Sigma_i \, Q_{\text{branch } i}} + \frac{Q_{\text{state branches } i}}{\Sigma_i \, Q_{\text{state branches } i}} = \frac{Q_{\text{ind branches}} \cdot \Sigma_i \, Q_{\text{state branches } i}}{100 \cdot Q_{\text{state branches } i}},$$

where:

$Q_{\text{state branches } i}$ – gross limit of the branch i in the state.

Level of infrastructure provided in the border region

The main characteristics – the existence of the infrastructure subsystems counted in 1000 organizations in the branch presents Figure 1.

Infrastructure subsystem in the border region	– investment companies – sanitary and quarantine points – developer organizations – existence of frontier transitions and customs posts – trade and customs areas – consulting and audit – advertising and information services – recruiting and headhunting – auction organizations – consumer committees and societies – associations and unions of industrialists, businessmen – insurance companies – credit organizations – pension funds

Fig. 1. The main characteristics of the infrastructure elements are adequate in 1000 organizations

For each of the directions:

$$K_{\text{regulatory infrastructure}} = \frac{K_{\text{infrastructure}}}{K_{\text{enterprise}}},$$

where:

$K_{\text{infrastructure}}$ – number of organizations in the border region of the i subsystem infrastructure.

The standards of infrastructure provided in the border region are the absolute amounts of expenses of regional authorities as well as industrial and commercial structures and development of objects of infrastructure.

Then, the share of expenses of regional administration (or market structures of the region) is defined by ensuring the proper level of infrastructure of i of the branch based on the following ratio:

$$K_{\text{infrastructures of expenses of } i} = \frac{K_{\text{expenses of infrastructures of } i}}{K_{\text{expenses of authorities}}},$$

where:

$K_{\text{infrastructures of expense of } i}$ – expenses of regional authorities (or market structures of the border region) on infrastructure of i of the branch,

$K_{\text{expenses of authorities } i}$ – general expenses of authorities (or market structures of the border region) on the branch i.

Trade and commercial capacity of the border region

The indicators of trade and commercial capacity of the border region show the possibility of market development of the regional economy. The potential depends on the extent of development of institutes and establishments of market infrastructure in the border region.

The branch stratification of indicators of trade and commercial potential allows to allocate a number of regional characteristics. The growth (decrease) within the domestic market is defined by the growth coefficient:

$$K_{\text{growth}} = \frac{Q1_{\text{internal } i}}{Q2_{\text{internal } i}},$$

where:

$Q^{1}{}_{\text{internal}}{}^{i}$ – volume of the domestic regional market of the branch i at the end of the studied period,

$Q2_{\text{internal } i}$ – volume of the domestic regional market of the branch i at the beginning of the studied period.

In case when $K_{\text{growth } i} < 1$, it indicates the development and growth of the branch i.

A specific weight of the industrial products in the general commodity weight is defined by the following ratio:

$$Q_{\text{industrial products}} = \frac{Q_{\text{industrial products}}}{Q_{\text{goods}}},$$

where:
$Q_{\text{industrial products}}$ – volume of industrial products in the region,
Q_{goods} – total amount of the goods made in the region.

The possibilities of trade and commercial potential which can be put into action are appropriate to group of ratios – as a branch (TCP_i) and as regional ($\mathrm{TCP}_{\text{region}}$) characteristic.

$$\mathrm{TCP}_i = \mathrm{P}_{\text{industry}} - x_i,$$

where:
P_{industry} – gross capacity of the branch i in the regional industry,
x_i – gross consumption in the region, including intermediate consumption and final consumption of the branch i of y_i:

$$x_i = \sum_j x_{ij} + y_i,$$

where:
x_{ij} – volume of production expenses in the branch i for the needs of the branch j.

Failure to supplement import of production:

$$\mathrm{TCP}_{\text{region}} = \sum_{i=1}^{N} \mathrm{TCP}_i - \sum_{j=N+1}^{M} Q_j - A,$$

where:
i – branch of production in the region,
j – branches not supplementing import, where production is imported into the border region,
z – goods imported to the region in large numbers owing to favorable economic conditions, $z_1(1...N) = i$, $z_2(N+1...M) = j$,
Q_j – volume of goods of the branch j,
A – volume of the regional reserve and insurance funds.

In case of the supplemented import:

$$TCP_{region} = \sum_{i=1}^{N} \mathrm{TCP}_i - \sum_{j=N+1}^{M} Q_j + \sum_{i=1}^{N} (Q_z - Q_{z1}) + \sum_{j=N+1}^{M} (Q_z - Q_{z1}) - A.$$

Development of new forms of management in the border region

It is one of the most important criteria in the analysis of the regional economic situation. The indicator displays development trends of the regional production such as differentiation and diversification.

The main indicators are connected with the results and efficiency. The result of introducing a new form of management (branch) is the following:

$$E_i = x_i - Ex_i,$$

where:
Ex_i – general expenses of introduction of the new form of management.

The gains on credit and financial resources connected with the new elements are defined in the following ratio:

$$K_{\text{turn } i} = \frac{Q1_{\text{turn}}}{Q2_{\text{turn}}},$$

where:
$Q1_{\text{turn}}$ – gains on credit and financial resources in the beginning of the studied period;
$Q2_{\text{turn}}$ – gains on credit and financial resources in the end of the studied period.

The new leading forms of the border cooperation are unique and stratification research needs to be done into all of the new elements. The research has to include the cost of capitalization of the joint companies, growth rates of dividends as the ratio of growth rates of inflation and stocks of the joint company.

Conclusion

Stratification is a rather new instrument of research of the border situation. The application of its techniques will allow to divide the indicators of the studied border region into striations (layers). It will also provide an opportunity to use a stratification set of regional border characteristics for further research. This technique sets as the purpose the detailed description of the border region. The indicator striations (layers) that are further allocated should be used to define the integrated characteristics of development of the border economy as well as to create the integrated model of the social and economic situation of the border region.

The ultimate and main objective is to create the strategy of the border region with the aforementioned set of values at a level which will allow to maximize the constructed functional values of efficiency of the border economy.

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THE EUROPEAN UNION TRANSPORT POLICY AND THEIR CONSEQUENCES FOR THE INFRASTRUCTURE DEVELOPMENT IN POLAND IN 2014–2020. PART I

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Key words: transport infrastructure, EU Common Transport Policy.

Abstract

The paper discusses the origins and future determinants of regional development, as conditioned by the present state of transport infrastructure considered as a key endogenic factor of the development of economic regions. Increased Cohesion Policy spending, at the level of EUR 82.3 billion, in the newly opened EU multiannual financial framework for 2014–2020 aims at reducing development disparities between various EU regions and, thus, enhancing the cohesion of the EUROPEAN ECONOMIC AREA. The paper outlines the evolution of the objectives of the COMMON TRANSPORT POLICY over the last 20 years, which have a significant impact on the level of spatial cohesion and contribute to better competitiveness, reliability of transport services, their safety and environmental friendliness.

POLITYKA TRANSPORTOWA UNII EUROPEJSKIEJ I JEJ KONSEKWENCJE W ROZWOJU INFRASTRUKTURY W POLSCE W LATACH 2014–2020. CZĘŚĆ I

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Słowa kluczowe: infrastruktura transportowa, wspólna polityka transportowa UE.

Abstrakt

W artykule omówiono genezę oraz uwarunkowania rozwoju regionalnego na podstawie aktualnego stanu infrastruktury transportowej stanowiącej główny czynnik endogeniczny rozwoju regionów gospodarczych. Wzrost wydatków na politykę spójności w wysokości 82,3 mld euro w budżecie Unii Europejskiej na lata 2014–2020 ma na celu zmniejszenie zróżnicowania rozwoju między poszczególnymi regionami Unii Europejskiej i spowodowanie podwyższenia spójności europejskiej przestrzeni gospodarczej. Przedstawiono ewolucję celów wspólnej polityki transportowej, mających istotny wpływ na poziom spójności przestrzennej w ostatnich dwudziestu latach, a przez to przyczyniających się do wzrostu konkurencyjności i niezawodności usług transportowych oraz ich bezpieczeństwa i przyjazności dla środowiska naturalnego.

Introduction, research objectives and methodology

The paper presents the origins and the future determinants of regional development, as conditioned by the present state of transport infrastructure – one of the key endogenic factors of the development of economic regions. Expenditure on the Cohesion Policy in the newly opened EU multiannual financial framework for 2014–2020 has increased by EUR 82.3 billion with the aim of reducing development disparities between various regions of the European Union, which as such, has undergone important changes over the last 20 years. The paper will discuss 3 options for policy outcomes, for the period until 2020 and further, and their possibly divergent implications. Part I will detail the diagnosis of disparities in regional development levels and will present changes in transport policy priorities occurred until this date. Part II will cover the presentation and assessment of future transport policy options.

Both parts will be based on the following methodologies:

– Methodology used to study investment attractiveness of regions-voivodships, as suggested by the Institute for Market Economic (Instytut Badań nad Gospodarką Rynkową – IBGR), based on the comparative analysis of national official documents from 2006–2010 (GAWLIKOWSKA-HUECKEL 2000, p. 13, *Atrakcyjność inwestycyjna województw i podregionów Polski* 2006, 2007, 2008, 2009, 2010);

– External factors cover also European Transport Policy; the changes of its priorities over the last 20 years and the scenarios of its development in 2014–2020 perspective will be discussed in the second part of the paper. They will be presented through the comparison of documents elaborated by international and national institutions.

Notion of infrastructure

Infrastructure, its diversification, as well as cohesion, seen as a product of the influence of external policies, and transport policy among them, are basic notions to be used univocally throughout the paper.

Infrastructure refers to the combination of „infra”, meaning „under”, and „structure”, understood as an orderly system used as a basis for other facilities. One may distinguish the „superstructure" which comprises manufacturing, mining and agriculture, and „infrastructure" defined as the total of tangible public capital. The superstructure is defined as the total of intangible public capital. In the mid – 1960, reference literature differentiated between economic and social infrastructure. Economic infrastructure ensures direct support for human manufacturing activities and covers roads, motorways, ports, sewage systems, as well as water and energy supply networks, while social infrastructure is meant to include: education system, public security, public housing, waste treatment plants, hospitals, sport and leisure facilities.

Hence, infrastructure is made of systems which have been permanently localized and organized and which provide services for public and private institutions and for the society as a whole.

In today's reference literature, M. Ratajczak defines infrastructure as „a set of equipment items and institutions which provide services vital for the functioning or development of a given system or its part, (RATAJCZAK 1999, p. 11). Infrastructure bears the following basic features (WOJEWÓDZKA-KRÓL 2010, p. 18, BRZOZOWSKA 2002, pp. 127–140):

– technical, economic and spatial indivisibility, entailing the need for long-term planning and the involvement of State and international (EU) institutions in its financing; this is also in itself a tool for preventing economic slowdown (ROLBIECKI 2011);

– a long period of construction and use, resulting in its capital and asset-intensiveness and, in consequence, a prolonged period of freeze of investment expenditure and substantially delayed investment returns;

– immobility which exposes the contradiction between infrastructure localized in a specific place and the development of new markets and emerging transport needs linked to evolving economic integration tendencies. They result in discrepancies in spatial competitiveness.

Notions of infrastructure and cohesion in the context of regional development

The notions of infrastructure and spatial cohesion refer to relations between urbanization centers and remote areas, hard to access by means of transport, called peripheries. Peripherality is deemed to be determined by such basis factors as: insufficient access to transport systems with a local, national and international reach and the lack of connections with political and economic centers at national and EU level. Due to such location the access to Community markets is hampered, which slows down economic development and reduces regional competitiveness. Too big discrepancies between regions are prejudicial to both peripherial regions (due to drainage of active resources) and wealthy regions (due to cohesion-congestion phenomena), and, in consequence, to the integration grouping as a whole. That's why measures taken in the EU within the framework of the regional development policy and the cohesion policy aim at improving social cohesion across the Community. Cohesion may be understood in territorial, social and economic terms.

Territorial cohesion (*Green Paper...* 2008) means a network of mutual connections among several aspects of modern space of life, including: economic, transport, environmental, developmental and social ones. It translates into reduced spatial conflicts, more balanced development potentials between regions and less negative development outcomes which may stem from individual regional features and the specificity of global markets. Cohesion may be understood in territorial, social and economic terms.

Social cohesion aims at reducing disparities between regions in the use of human resources, and is measured with employment or unemployment rates.

Economic cohesion consists in reducing development disparities between wealthier and poorer regions, and is measured with Gross Domestic Product per capita, considering the purchasing price parity.

Spatial cohesion consists in eliminating barriers in access to peripheral regions through their improved connectivity with central regions, and is measured with the average travel time to a given area, by air or by road.

Thus, in the context of spatial analysis, infrastructure may fulfill the following roles:

– related to economy, i.e. economic and technical infrastructures. In general, economic infrastructure covers services which facilitate manufacturing and selling processes, i.e. warehousing processes, as well as economic organizations, financial institutions, technical and sanitary advisory services, trade and restaurants and tourism. Technical infrastructure is made of basic facilities, equipment and installations. i.e. roads, bridges, energy grids, telecommunication networks and water and sewage networks, with a service function vital for the proper functioning of rural communities[1]; and

[1] Logistical infrastructure covers transport infrastructure which, in turn, comprises road networks and transport routes, transport, stay and transshipment points for goods and people, and auxiliary equipment used to operate such roads and transport points. See also: CIESIELSKI, SZUDROWICZ (2001). Apart from transport infrastructure, logistical infrastructure covers information circulating between users of transport networks and points. The *Logistics Terminology Glossary* defines logistical infrastructure as the system of land, water and airways, air, maritime, as well as rail ports and telecommunication networks located in a given area. According to the systemic approach to logistics, logistical infrastructure has three components: lines, points and communication-information infrastructure.

– social, understood as all civilization structures and institutions as well as factors and conditions of social life, in most cases of intangible nature, covering upbringing and education, sport and leisure, culture, healthcare services, sport-related activities, public and local administration and public security.

Infrastructure may fulfill, among all, the following functions:

– transfer function, ensuring that goods, energy, financial flows and information can travel across and services are provided to beneficiaries;

– location function which allows for reaching an appropriate access to: transport, energy, water and sewage, gas and telecommunication networks or to manufacturing, servicing and administration sites;

– acceleration function, where the level and the dynamics of changes may become the accelerating factor for the development of specific regions;

– integration function, closely connected with an area serviced by a given factor.

All the above mentioned functions may either accentuate spatial economic and social disparities or reduce them and foster economic, social and spatial regional cohesion, depending on prevailing strengths or weaknesses of infrastructure[2].

Conditions favorable for an improved spatial, economic and social cohesion in the EU and for equal competitive chances in terms of free flow of goods, people and information are to be achieved through transport policy, with investments in infrastructure performed across the European Union as its basic tool, and based on a comprehensive approach and integrated measures at the community, national, regional and local level, involving private sector and citizens. The Common Transport Policy is one of the three oldest common policies, and has been in existence since the Treaty of Rome, signed in 1957. On the onset, its aim was to stimulate the development of transport sector understood in quantitative terms. However, changes in the operation of EU mechanisms induced the need to define new objectives of the EU policy and the instruments of its implementation. Those evolutions brought about changes in the Common Transport Policy whose implementation in the upcoming 2014–2020 financial framework will be conditioned by the level of financial inputs and by priorities which set diverse paces for the emergence of the Common European Economic Area. Therefore, technical and social infrastructure, and more broadly land management and planning, will play an increasingly important role in regional development. Underdeveloped infrastructure in a given geographic area may be harmful to natural environment, living conditions of its inhabitants, and, most of all, to social and economic develop-

[2] Among weaknesses of transport infrastructure one may list: usage and disintegration of land, permanent integration with land planning scheme, possible breach of hydrographic conditions due to noise and gas emissions, water, air and soil pollution.

ment of regions. Technical and social infrastructures are then key supporting factors to fuel regional development, together with human capital, knowledge, innovation and employment (RAKOWSKA, WOJEWÓDZKA-WIEWIÓRSKA 2010).

The diversification of the regional development policy toolbox will depend on the specific nature of each of its components and on the impact power of mega-tendencies, as discussed above, on a global scale, on the EU market, on national, regional or local markets. Moreover, it will be determined by the following measures:

– general measures, i.e. measures which may be, without no change in form, used effectively in different conditions of operation of regional markets, for the benefit of a diversified group of beneficiaries. Such measures may include investments in technical, economic and social infrastructure;

– flexible measures which require adaptation, depending on the conditions of operation, targeting a diversified group of beneficiaries, e.g. payment schemes for the use of infrastructure;

– specialized measures which should address the needs of a defined group of beneficiaries, e.g. payments for maintaining landscape or architecture values.

At the same time, technical, economic and social infrastructure, as one of endogenic factors, will become the foundation of development at a regional and local scale, provided that competent authorities lay down adequate conditions for its use. And such use will also require prospecting new sources of financing.

EU common transport policy and stages of its implementation

The aim of the Common Transport Policy, subject to modifications at present, will be to ensure competitive, reliable, safe and environment friendly modalities of transportation for people and goods. The transport system under construction should comply with the principle of sustainable transport development, i.e. transport development which responds to changes in demand, in harmony with the needs of society in terms of freight and movement of persons inside the EU and outside its borders, using natural resources in a sound manner[3]. This will lead to a better economic efficiency, a higher satisfaction

[3] The sustainable transport system development aims at ensuring for present and future generation:

– the access to destinations, in a safe manner, not harmful to environment or health;

– the fuelling of economic and regional development;

– the choice of the means of transport;

– the reduction of emissions and of waste, considering natural environment absorption capacities;

– the use of non-renewable resources in quantities which may be rebuilt or replaced by renewable sources;

with a better quality of transport services, and the reasonable use of natural resources (especially non-renewables). The Common Transport Policy should meet the following conditions:

1. Satisfy future transport needs in terms of transfer in space and in time of shipments and people, while ensuring the cohesion of connections;
2. Implement the said tasks by defining development priorities for each transport subsector, considering their present share in the fulfillment of such needs; and
3. Shape the heritage of the past without encroaching on existing architectural solutions and material culture, and by protecting wildlife against microclimate changes. Thus, infrastructure, with its long lifespan, would have a durable impact on land planning and management. Therefore, in the context of emerging sustainable transport system and the transport services market liberalization, the objectives of the transport policy should be implemented through the adoption of new solutions: technical (quality standards), organizational and legal ones, considering economic, social and spatial threats related to natural environment protection.

The Common Transport Policy was implemented in 3 sub-periods, each time with different objectives and implementation tools, defined in 3 separate documents[4].

Beginnings of the European Transport Policy in 1992–2000

The First White Paper was drafted in 1992 (COM (92) 494 final) to define the future of the transport sector in the EU and its integration into the EU structures. It was based on 10 future transport corridors. In the said period the main objective regarding the comprehensive approach to the construction of the transport system in the European Union and its integration within the European single market was to put in place, in 1994, of the TEN-T Program (Trans-European Networks-Transport). In the Treaty of Maastricht, Trans-European Transport Networks were covered by community financing from

– the reduction to minimum of technology-intensiveness and noise emissions.
„Defining an Environmentally Sustainable Transport System”. Commission Expert Group on Transport and Environment Working Group, September 2000.

[4] The First White Paper: *The future development of the common transport Policy. A global approach to the construction of the Community framework for sustainable mobility*, COM (92) 494 final, Brussels, December 1992, Bulletin of the European Communities, Supplement 3/93; The Second White Paper: *European Transport Policy for 2010, time to decide*, COM (2001) 370 final, Brussels, September 2001. Guidelines for the Third White Paper were formulated in the Draft CTP Program until 2020: *A sustainable future for transport: Towards an integrated, technology-led and user-friendly system*, COM (2009), 279/4.

the EU budget with the view of creating a single and harmonized system, based on multimodal infrastructure.

Since 1995, Poland has been involved in the TINA Program (Transport Infrastructure Needs Assessment). The fundamental purpose of this network is to build ten Pan-European Transport Corridors to span over Central and Southern European counties of which four will cross Poland. These are:

Corridor I: from Warsaw, via Białystok–Suwałki, to Polish–Lithuanian border in Budzisko/Trakiszki, with the ramification to the Polish- Russian border in Gronowo/Grzechotki and to Elbląg and Gdańsk;

Corridor II: Świecko/Kunowice at the Polish–German border, via Poznań–Warsaw to Terespol, at the border with Belarus;

Corridor III: Zgorzelec/Olszyna, via Krzyżowa–Wrocław–Opole–Katowice––Cracow–Rzeszów, to the Polish–Ukrainian border in Medyka/Korczowa;

Corridor IV: Gdańsk/Gdynia, via Warsaw–Katowice to the Polish––Slovakian border in Zwardoń, with the ramification towards Grudziądz––Poznań–Katowice, to the Czech border in Zebrzydowice.

In the said period a number of programs were defined[5]; however their outcomes depended mainly on the level of actual investment, and were of limited reach for Poland.

Enhanced role of infrastructure in regional development in 2001–2010

The Second White Paper, of 2001, amended under the mid-term review process in 2006, included the program for laying down the foundations of the common EU transport area, based on the sustainable mobility principle. The Second White Paper was to implement the basic aim: the one of building the coherent economic area, using all transport modes in a competitive manner. The White Paper of 2001, in its 2006 reviewed version, stated that the development of car transport had been incommensurably slower than rail and other modes, resulting in congestion, i.e. crowding of transport networks. This led to the introduction of the notion of co-modality which refers to the effective use of various means of transport either independently or jointly in order to achieve the optimal and sustainable exploitation of resources.

[5] Among the examples of such programs one may quote: Polish Transport Policy, Ministry of Transport and Maritime Economy, Warsaw, 1994; Transport Infrastructure Development Plan until 2015, Ministry of Transport and Maritime Economy, Warsaw, 1997; State Transport Policy for 2000–2015 for Sustainable Development, Warsaw, 2000; Program for the Adaptation of the Polish Road Network to the European Union standards, Warsaw, 2001; Amended Motorway Construction Program, Ministry of Infrastructure, Warsaw 2002; Program of the Construction of Motorways and other National Roads 2002-2005, Ministry of Infrastructure, Warsaw, 2002.

In 2006, the new edition of the White Paper included amended priorities of the common transport policy: programs which streamlined the use of natural resources were limited and the focus was shifted to legislation which would foster a more fair competition, which, in turn, should ensure better cohesion, better competitiveness across the Community and a better quality of life for EU citizens. New priorities covered, among all (WOJEWÓDZKA-KRÓL 2010):

Firstly, the elimination of bottlenecks and missing links in the Trans-European Transport Network by building logistic centers in order to ensure the use of a more environmentally friendly technologies of intermodal transportation, i.e. the use of the same container transported with various means of transport.

Secondly, the support, through investment measures, of specific, environmentally friendly infrastructure, such as alternative networks, e.g. high-speed railways or the maintenance and extension of inland waterways etc.

Thirdly, the use of structural investment design methods with less impact on natural environment.

Implementation of the transport policy in 2007–2013

This period saw the transformation of the transport development concept towards a more sustainable one with the aim of reducing as much as possible the negative impact of new transport infrastructures on the environment. In Poland, it should mean more focus on the development of environmentally friendly infrastructure, sectors and technologies, in particular inland waterways, high-speed railway, logistic centers and Intelligent Transport Systems. In fact, funds committed to its realization in the European Operational Program „Infrastructure and Environment" are testimonial to the role of transport infrastructure in the construction of technologically, spatially, economically, socially and environmentally sustainable transport system in Poland. Those commitments, together with national co-financing, amounted to EUR 28 billion, while direct EU funding dedicated to the development of the Polish transport infrastructure totaled EUR 19.4 billion, including EUR 11.1 billion for road transport, EUR 4.8 billion for railway transport and EUR 2 billion for urban transport[6].

However, the economic crisis of 2009–2010, with all its negative consequences for the economy (decrease in the level of transport services, especially by rail) revealed new opportunities for the development of logistical infrastruc-

[6] Road infrastructure expenditure reached its peak in 2011, amounting to PLN 26.4 billion, and fell in 2013 to PLN 8 billion. Inversely, railway infrastructure expenditure totaled PLN 3.7 billion in 2010, and increased in 2013 to PLN 5,2 billion. In: *Logistyka w Polsce, Raport 2011* (2012).

ture. New possibilities emerged thanks to the decrease in prices of construction materials and of labor costs and the shortening of investment cycles as construction companies were left with extra free production capacities.

Conclusions

The paper discusses mega-tendencies and spatial conditions for regional development in 2020-2030, and even until 2050. The European Transport Policy should create conditions of change in order to ensure the adaptation to new circumstances imposed by sustainable development requirements. The policy can be implemented via further construction of the network transport system, based on co-modality and the use of new technologies and energy sources at the voivodship and sub-region levels. Transport and technical infrastructure are key determinants of the present and future evolutions of the economic, social and environmental space. And their role will increase in the next ten years, considering unprecedented (and discussed herein) EU-wide spending on the construction of modernized and cohesion-driven European Economic Area. In the first four years of 2007–2013 planning perspective, the use of infrastructure spending was insufficient, which may now lead to the realization of policy option I, as suggested by the World Bank.

That is why more in-depth studies are needed to probe into factors which stimulate the demand in equipment and institutions which determine the smooth operation of functionally differentiated rural areas and of their business environment, as they may become hurdles to their sustainable development in future.

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IMAGE BUILDING STRATEGY ON THE EXAMPLE OF SELECTED POLISH REGIONS

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K e y w o r d s: image, identity, image building strategy, region, regional development.

A b s t r a c t

The objective of this study was to identify and evaluate image building strategies in selected Polish regions. A mail questionnaire survey was carried out in 2013 in the regions of Pomorze (Pomerania), Pomorze Zachodnie (West Pomerania), Małopolska (Lesser Poland), Podkarpacie (Subcarpathia), Warmia and Mazury (Warmia and Masuria), and Podlasie. The importance of image building strategies is widely recognized by the local authorities, but most strategies are implemented on a short-term or medium-term basis. Image building strategies are often regarded as auxiliary measures that contribute to the achievement of strategic development goals. In the analyzed regions, image building is often reduced to strictly promotional measures. The relevant strategies focus on too many landmarks of regional identity, which detracts from their effectiveness. An absence of regular market surveys and evaluations also contributes to the weakness of regional image building strategies.

STRATEGIA KSZTAŁTOWANIA WIZERUNKU REGIONU NA PRZYKŁADZIE WYBRANYCH REGIONÓW POLSKI

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S ł o w a k l u c z o w e: wizerunek, tożsamość, strategia kształtowania wizerunku, region, rozwój regionalny.

A b s t r a k t

Celem opracowania było zidentyfikowanie i ocena strategii tożsamości realizowanych w wybranych regionach Polski. Ankietę pocztową przeprowadzono w 2013 roku w województwach: pomorskim, zachodniopomorskim, małopolskim, podkarpackim, warmińsko-mazurskim oraz podlaskim.

Zauważono, że problem budowania pożądanego wizerunku regionu jest ważny w opinii przedstawicieli władz regionu, najczęściej jednak ma charakter krótko- lub średniookresowy. Strategia tożsamości często jest określana jako strategia pomocnicza w stosunku do innych strategicznych celów sformułowanych w strategii rozwoju. Zaobserwowano, że kształtowanie wizerunku regionu często sprowadza się do jego promocji. Problemem jest też to, że strategia kształtowania wizerunku koncentruje się na zbyt wielu wyróżnikach tożsamości regionu. Brak systematyczności w badaniu i ocenie rynku także nie sprzyja skuteczności strategii tożsamości realizowanych w regionach.

Introduction

Recent years have witnessed growing awareness among businesses that their development is determined not only by material factors. Businesses are increasingly likely to recognize the importance of knowledge, potential, brand strength and image in their evolution. Similarly to businesses, local authorities are faced with the need to build their competitive advantage at the municipal, urban and regional level. This study analyzes image building strategies implemented at the regional level. It makes the assumption that a positive image is an intangible asset that can contribute to a region's development and competitive strength. Regional development is defined as a process of positive changes that increase production, employment, volume of investments, equity participation, incomes, consumption and other economic indicators. Regional growth also promotes social progress and the accompanying qualitative changes, including technical and technological progress, optimization of domestic and international ties, improvement in labor force qualifications, changes in economic structure that contribute to modernization, improvement in microeconomic and macroeconomic flexibility, emergence of new products and improvement in the quality of currently manufactured products (HADYŃSKI 2011, p. 9). Regions with a greater competitive advantage attract more investors, residents and tourists, which stimulates the domestic market, the service sector and infrastructure investments, thus contributing to the region's social and economic development. The benefits that follow from a strong competitive advantage are increasingly often recognized by local authorities who make conscious efforts to build a positive image of the region. An image is a cognitive concept that encompasses the recipient's subjective impressions, knowledge, opinions, judgments and emotions associated with a given object, such as a region (FLOREK 2013, p. 94). An image is composed of cognitive (knowledge about the region), emotional (feelings and impressions associated with the region) and behavioral components (propensity to engage in specific types of behavior towards the region). Regional identity is a set of characteristic features that contribute to a region's uniqueness and are manifested by various measures that are initiated locally to impart distinctive qualities to a region (ŁUCZAK 2000, p. 48). Identity is the desired perception of a territorial unit, which is shaped through attitudes, behaviors and visual elements, whereas an image is the actual expression of identity as perceived by the recipients (SZWAJCA 2009, p. 30). In literature, image building strategies are often referred to as identity management strategies. A strategy is a set of assumptions and measures that contribute to the development, reinforcement and modification of a city's identity and market perception (ALTKORN 2002, p. 35).

Materials and Methods

In this study, a mail questionnaire survey was carried out to identify and evaluate identity management strategies in selected Polish regions. A questionnaire survey was selected as the most effective way of collecting qualitative data. The deployed survey method has other advantages, including:

– the questionnaire can address a variety of issues,

– complex and badly phrased responses can be analyzed at a later date,

– questionnaire surveys are an inexpensive and fast method of gathering data (in comparison with in-depth interviews that had been initially planned in this study).

Questionnaires also have several disadvantages, the major ones being the subjective character of responses and difficulties with unambiguous and correct quantification of the evaluated parameters. The subjective nature of responses cannot be completely eliminated, but attempts were made to improve their reliability by mailing questionnaires to competent employees of regional marshal's offices and encouraging them during telephone communication to express their opinions in an honest and objective manner.

The aim of the survey was to evaluate regional image building strategies. Questionnaires were mailed to selected (most competent) employees of marshal's offices in all Polish regions (structured questionnaires were mailed to 16 marshal's office employees). Completed questionnaires were returned by the regions of Pomorze (Pomerania), Pomorze Zachodnie (West Pomerania), Małopolska (Lesser Poland), Podkarpacie (Subcarpathia), Warmia and Mazury (Warmia and Masuria), and Podlasie. The response rate was only 37.5%, therefore, the results were not generalized, and the six regions that responded to the survey were regarded as representative of the entire population. The survey was expanded to include an analysis of secondary data and observations. Data posted on the websites of the offices were analyzed. The survey was carried out in 2013. Its results will pave the way for further analyses and more in-depth surveys in the future.

Identity management strategies in the analyzed regions

In the first question, the respondents were asked whether their respective regions implement identity management strategies and develop plans for building a positive image of the region. Four of the analyzed regions had implemented such strategies (Podkarpacie, Małopolska, Warmia and Mazury, and Podlasie). Those strategies have a clearly defined goal, which is to build a positive image of the region, select landmarks of identity, and plan instruments and measures that contribute to the achievement of those objectives. Two regions (Pomorze and Pomorze Zachodnie) implement measures that are oriented towards image building, but according to the respondents, those activities do not constitute a coherent strategies. The importance of image building is recognized in all regions, and none of the respondents chose the answer that image building measures had never been initiated in their region.

The second question addressed the planning period. In most of the analyzed cases, image building strategies were implemented on a short-term or medium-term basis. Long-term image-building campaigns were initiated only by the Region of Warmia and Mazury and the Region of Małopolska. An identity management strategy should be accompanied by a long planning period because an image is an intangible asset that cannot be developed within a short period of time. A region's image is linked with its historical heritage that has been shaped throughout the centuries, and it cannot be transformed in the short term. In view of the slow process of cultural evolution, the recommended 10-year planning period also seems to be insufficient. Image building is a goal that can requires long-term planning. Short-term, provisional measures may be adopted at the operational level (and they often obscure the significance of the problem), but if a strategy is understood is as plan for building a positive image of a region, it has to be a long-term process.

The successive question explored the significance of identity management in the surveyed regions' development strategies.

Every entity implements a single global strategy, which is sometimes referred to as the basic strategy (*Rozwój przedsiębiorstw...* 2002, p. 212). Substrategies addressing various areas of activity as well as functional, operational and instrumental strategies can be formulated as part of the global strategy. Strategies differ in their reach, tasks, resource allocation, sources of competitive advantage and decision-making areas (OBRĘBALSKI 1998, p. 20).

The aim of the global (general, dominant, basic) strategy is to find the most effective means of achieving the goals indicated in the mission statement. Above all, a global strategy involves:

– selection of activity areas, and

– acquisition of resources and resource allocation to various types of activities.

At the highest level, strategic problems are solved by the authorities, and they are referred to as issues in development policy. Second-level strategies communicate directions for action to different organizational units, such as departments, branches, agencies and institutes. Business area strategies are developed for various types of business activity, and they propose operating standards for different market segments or market areas.

Functional strategies:

– determine the manner in which a given function will contribute to the achievement of competitive advantage (by defining the principles on which the function will be implemented),

– integrate and coordinate a given function with other functions.

Operational strategies describe the detailed goals of departments and other organizational units and set the directions for action for units performing partial strategies. Instrumental strategies occupy the lowest level in the hierarchy. They relate to specific instruments that are used in the process of implementing operational strategies[1]. The discussed sub-strategies are an integral part of the development strategy. For this reason, all sub-strategies should be fully cohesive.

A region's identity management strategy is a functional strategy, and its role in the development strategy is differently defined in the literature. Identity management can be a regional function or a concept deployed by the authorities in the process of managing a region (*Strategie marketingwe.* 2004, p. 38). In line with the above definition, those strategies differ in the character and scope of identity management instruments and the manner of resource allocation at different levels of regional management. In the first approach, an identity management strategy belongs to the category of functional strategies, which also include marketing, financial, investment and human resource strategies. This approach is most often cited in the literature. In this study, regional identity management and image building were regarded not only as functions (methods of achieving specific goals in a given market segment), but management concepts that are deployed by regional authorities. An identity management strategy entails both operational and strategic components. It should not be governed by a predefined regional development strategy, instead, it should set the tone of the global strategy. In regions that are keen on

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[1] Various approaches are adopted in the literature. Several authors have proposed an additional level that accounts for the process of adaptation to strategy requirements (BANASZYK et al. 1997, p. 43). Some authors reduce the number of hierarchy levels to the basic strategy, business area strategy and functional strategies (PENC-PIETRZAK 1998, p. 140, STABRYŁA 2000, p. 54, PIERŚCIONEK 1998, p. 78, *Rozwój przedsiębiorstw. Modele, czynniki, strategie.* 2002, p. 212), whereas others disregard functional strategies (STEINMANN, SCHREYOGG 1995, p. 82).

actively building a positive image, image building will be a priority goal of their development strategies. In line with this approach, identity management and image building should be prioritized at every level of strategic planning in a region. The services responsible for identity management should participate in the process of formulating strategic goals and the final development strategy. This is a strategic consideration in managing regional identity, and in the literature, the emphasis is generally placed on operational and instrumental aspects of the process. If identity management were to be classified as a function, it would not relate to the entire process of regional development, but only its fragments. Image building activities should be incorporated in all regional activities, therefore, the resulting identity management strategy should also address the region as a whole. The main goal of building a positive image of a region should be taken into account in the regional development strategy (mission, strategic goals). All business area strategies should strive to achieve that goal. Functional strategies should propose methods for attaining that goal and indicate instruments and tools that facilitate identity management in every area of activity (various instrumental strategies).

An analysis of correlations between identity management and the regional development strategy reveals the presence of feedback between strategy, regional identity and image. The development strategy is a carrier of regional identity, and it shapes a region's image. Regional identity should also determine the choice of a development strategy and strategic directions. Strategies that run counter to a region's identity and desired image undermine the reliability of those assets, whereas conforming strategies reinforce local identity and positive image.

The attitudes towards the discussed problem in the six analyzed Polish regions are presented in Table 1.

Table 1

The role of an image building strategy in a region's development strategy

Responses	Regions
A positive image drives the entire regional development strategy	Podlasie, Warmia and Mazury (Warmia and Masuria)
Identity management strategies are auxiliary measures that contribute to the achievement of goals formulated in the development strategy	Podkarpacie (Subcarpathia), Pomorze (Pomerania), Małopolska (Lesser Poland), Pomorze Zachodnie (West Pomerania)
Image building is often reduced to strictly promotional measures	Małopolska (Lesser Poland)
Image building is not a part of the region's development strategy and the relevant measures are implemented separately	–

Source: own elaboration based on survey results.

In the majority of the evaluated regions, identity management strategies are often regarded as auxiliary measures that contribute to the achievement of strategic goals (66,67% of the respondents). An identity management strategy is of functional significance – it promotes the achievement of the main goal, which is to build a positive image of a region. In the Region of Podlasie and the Region of Warmia and Mazury, the attainment of the above goal has a strategic dimension, which seems to be the most effective approach.

An effective identity management strategy (*Rozwój miast i zarządzanie...* 2004, p. 486):

– should be developed in a collaborative process involving the key local actors,

– should be cohesive and coherent,

– should meet the present and future needs of the local community,

– should be adequate to the available resources,

– should deliver a satisfactory level of risk management, which is determined by key resources and determines the success of the implemented strategy,

– should be far-reaching,

– should be realistic.

The above issues should be addressed by the competent staff members (units, departments, agencies) (Table 2).

Table 2

Organizational units responsible for image building in marshal's offices

Region	Organizational unit in marshal's office
Podlasie	Department of Foreign Cooperation and Promotion
Podkarpacie (Subcarpathia)	Department of Promotion and Tourism
Pomorze (Pomerania)	Department of Regional Promotion
Małopolska (Lesser Poland)	Department of Tourism, Sports and Promotion
Warmia and Mazury (Warmia and Masuria)	Promotion Coordinating Department
Pomorze Zachodnie (West Pomerania)	Department of Tourism, Economy and Promotion

Source: own elaboration based on survey results.

In every marshal's office, the image building function is assigned to a department responsible for regional promotion, which seems to suggest that image building is reduced to promotional measures in practice. In an ideal scenario, identity management should not constitute the responsibility of a single organizational unit because positive image building should be a priority at every level of regional management and in every area of activity.

The respondents were asked to describe and evaluate the respective regions' strategic goals (Table 3).

Table 3

Strategic goals in the analyzed regions

Goals	Average score
To increase the region's competitive advantage	4.0
To improve the regional transport network	3.4
To improve the regional transport network	3.2
To improve living standards in the region	3.2
To give support to less developed areas	2.8
To foster regional cooperation and participation in the EU's regional policy	1.8

Source: own elaboration based on survey results.
Goals were evaluated on a scale of 1 to 5, where: 1 – insignificant goal, 5 – the most important goal

The surveyed subjects evaluated the identified goals subjectively with reference to the relevant provisions of regional development strategies. The achievement of competitive advantage was the highest rated goal. The respondents declared that regional authorities assist local businesses in strengthening their competitive advantage, actively search for investors, promote local goods and services and provide business-support services. The second most important goal was to improve the regional transport network. The following priority was to raise the local standards of living, which, in the respondents' opinion, requires improvements in:

– education,
– availability of health care services,
– availability of housing,
– public security and welfare,
– culture and entertainment products.

Positive image building in various market segments scored an average of 3.2 points, which indicates that image building is an important goal in regional strategies. Image building was regarded as a strategic goal only in the Region of Małopolska. The respondents underlined the significance of:

– visual identification systems that are being developed in all regions. Most regions have unique logos and other visual elements that emphasize their distinctive features,
– effectiveness of communication,
– measures that promote positive attitudes towards regional development,
– improved regional identity and social cohesion.

Other goals that were identified, but not evaluated, included tourism promotion, job market improvement, energy security, higher level of civic engagement, improved quantity and quality of network connections, higher level of innovation and management effectiveness, improved spatial competitiveness and nature conservation.

According to the respondents, various image building strategies should be addressed to different market segments. Image building strategies promoting a highly complex product – a region – should be based on market segmentation, which requires research in various market areas (Table 4).

Table 4

Consumer needs assessments in the analyzed regions

Responses	Region
Assessments are performed regularly	Małopolska (Lesser Poland), Warmia and Mazury (Warmia and Masuria), Pomorze Zachodnie (West Pomerania)
Assessments are performed sporadically	Podlasie, Podkarpacie (Subcarpathia), Pomorze (Pomerania)
Assessments are not performed	–

Source: own elaboration based on survey results.

Market segment research is conducted by all of the analyzed regions, but in some regions, the relevant measures are carried out sporadically. The market is a dynamic structure, and consumer needs change rapidly, therefore, measures that are based on a past diagnosis of consumer expectations will not necessarily deliver the anticipated outcomes in the future. In the analyzed regions, consumer needs assessments involve mostly local residents and tourists. They are not addressed to businesses, prospective investors, students or other social groups.

The effectiveness of an image building strategy is largely influenced by the choice of landmarks of regional identity. The respondents were asked to indicate the attributes that are most emphasized in image building strategies (Table 5).

The listed landmarks of regional identity generally lack originality and weakly accentuate a region's unique character. Most respondents cited much overused slogans that did not impart distinctive qualities to their regions. The observed lack of originality could lower the effectiveness of identity management strategies. An excessive number of distinguishing features of regional identity also poses a problem. Podkarpacie was the only region where the discussed strategy is based on a single landmark of identity. In the remaining regions, the strategy is developed in view of several, most important features. In the Region of Pomorze Zachodnie, the general trend is to incorporate the highest possible number of attributes in the image building strategy to emphasize all of the region's strengths. The respondents did not recognize

Table 5

Landmarks of regional identity

Region	Landmarks of identity
Podlasie	Cultural heritage, investment opportunities
Podkarpacie (Subcarpathia)	A well-developed network of tourist facilities, investment opportunities, high standards of living
Pomorze (Pomerania)	Cultural heritage, attractive location, investment opportunities
Małopolska (Lesser Poland)	Cultural heritage, attractive location, a well-developed network of tourist facilities, investment opportunities
Warmia and Mazury (Warmia and Masuria)	Investment opportunities, high standards of living, attractive location
Pomorze Zachodnie (West Pomerania)	A well-developed network of tourist facilities, investment opportunities, attractive location

Source: own elaboration based on survey results.

the importance of attributes that testify to their regions' uniqueness. Their strategies lack originality and individuality, the undertaken measures are similar and fail to bring out the region's unique qualities. They are also easy to emulate, which further obliterates the differences in the perception of various regions. A well-planned identity management strategy should underline and reinforce the unique character of a region. The above problems decrease the effectiveness of image building strategies at the regional level. The vision statement of the Region of Małopolska says: „We want the Region of Małopolska to be an attractive place to live, work and enjoy life, a European region of knowledge and activity with strong universal values, regional identity and aspirations, a region that draws upon its heritage and resources and creates multiple opportunities for human and economic development" (Development Strategy of the Region of Małopolska 2011–2020). Similar strategic goals have been formulated, albeit in different words, by other regions, and none of them were able to identify distinguishing features that would increase the effectiveness of image building strategies.

Conclusions

The objective of this study was to identify and evaluate image building strategies in selected Polish regions. A questionnaire survey was carried out in the regions of Pomorze, Pomorze Zachodnie, Małopolska, Podkarpacie, Warmia and Mazury, and Podlasie. The results indicate that:

1. The importance of building a positive image of a region is widely recognized, but not all of the analyzed regions consider it a strategic goal.

2. In most regions, identity management strategies are implemented on a short-term or medium-term basis. Only long-term strategies can contribute to positive perceptions of a region.

3. In the majority of the evaluated regions, identity management strategies are regarded as auxiliary measures that contribute to the achievement of strategic goals (functional significance). In two regions, the attainment of the above goal has a strategic dimension, which seems to be the most effective approach.

4. In the analyzed regions, image building is often reduced to strictly promotional measures. The image building function is assigned to departments responsible for regional promotion.

5. The achievement of competitive advantage was the highest rated goal. Building a positive image of a region in various market segment was regarded as an important goal in regional development strategies.

6. Market segmentation and regular consumer needs assessments are important elements of an image building strategy. Market segment research is conducted in all of the analyzed regions, but only sporadically, which could lower the effectiveness of image building strategies due to rapidly changing consumer expectations.

7. In the analyzed regions, image building strategies focus on several, most important landmarks of identity. The selected features lack originality, and the resulting strategies fail to bring out the region's unique qualities, thus reducing the effectiveness of regional image building strategies.

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KEY DRIVERS BEHIND THE GROWTH OF THE POLISH PACKAGING MARKET IN 2005–2012 – MACROECONOMIC APPROACH

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K e y w o r d s: packaging market, socioeconomic situation, production of packaged goods, sales revenue of the packaging industry, international trade in goods, demographic and market factors.

A b s t r a c t

The Polish packaging industry has been developing dynamically in recent years, and it is the largest packaging market in Europe with estimated value of EUR 6 billion, i.e. 2% of Poland's GDP. The key macroeconomic factors responsible for the growth of the Polish packaging market are: socioeconomic situation, international trade in goods, production of packaged goods, demographic and market factors. An analysis of the above factors points to the high potential and prospects of the Polish packaging market.

CZYNNIKI KSZTAŁTUJĄCE ROZWÓJ KRAJOWEGO RYNKU OPAKOWAŃ W LATACH 2005–2012 – UJĘCIE MAKROEKONOMICZNE

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S ł o w a k l u c z o w e: rynek opakowań, sytuacja społeczno-gospodarcza, produkcja pakowanych towarów, produkcja sprzedana przemysłu opakowaniowego, międzynarodowa wymiana towarowa, czynniki demograficzne i rynkowe.

A b s t r a k t

W ostatnich latach krajowy rynek opakowań rozwija się bardzo dynamicznie. Jego wartość szacowana jest na ok. 6 mld euro, co stanowi 2% PKB. Jest on największym rynkiem opakowaniowym w Europie. Najważniejszymi czynnikami makroekonomicznymi kształtującymi rozwój krajowego rynku opakowań są: sytuacja społeczno-gospodarcza, międzynarodowa wymiana towarowa, rozwój produkcji pakowanych towarów oraz czynniki demograficzne i rynkowe. Analiza wymienionych czynników wykazała wysoki potencjał krajowego rynku opakowań, a także wskazała korzystne perspektywy jego dalszego rozwoju.

Introduction

The Polish packaging market has been developing dynamically in recent years, and it is the largest packaging market in Europe with estimated value of EUR 6 billion, i.e. 2% of Poland's GDP. The annual output of the packaging industry is estimated at 4 million tons. There are approximately 7,000 producers and distributors of packaging, packaging materials, packaging machines and equipment and waste management companies in Poland. The packaging industry employs around 200,000 people (*Rynek opakowań...* 2013). Packaging manufacturers rely on modern means of production and production technologies, and their products are highly competitive on foreign markets.

The rapid growth of the domestic packaging market can be attributed mainly to the technological progress made in the packaging industry as well as foreign investments in technologies that support the production of new types of packaging. Many strategic investors representing global corporations have moved their industrial operations to Poland due to low labor costs and the proximity of West European markets. The potential of the domestic packaging market has also been reinforced by the dynamic growth of retail and higher demand for new types of packaging.

The Polish packaging market is characterized by a relatively high degree of consolidation where 13% of manufacturers cater to 70% of domestic demand. The structure of the domestic packaging market is similar to sales organization structure. Nearly half of the key market players manufacture plastic packaging, 38% – paper and cardboard packaging, and 12% – metal, glass and wooden packaging. The vast majority of their output is sold on the domestic market. Approximately 20–30% of the output is exported, whereas the main imports are packaging machines and equipment (*Analiza MPC...* 2013).

The Polish packaging market shows highly promising prospects for the nearest future. If the market continues to expand at the present rate, its value will increase by 100% by 2020 (*ECOR...* 2013), and the Polish packaging industry will maintain its position of the European leader.

Materials and Methods

This article evaluates the Polish packaging market in 2005–2012 in view of macroeconomic drivers of growth.

In the literature, the domestic packaging market is assessed based on a wide range of indicators, which are classified into different thematic groups subject to research needs. One of such groups comprises economic indicators, which support the identification of macroeconomic factors that play a key role in the growth of the domestic packaging market (TKACZYK 2008, pp. 6–9):

1) socioeconomic situation in Poland,
2) international trade in goods,
3) domestic production of packaged goods,
4) demographic and market factors.

The above factors were analyzed based on information supplied by secondary sources, mainly the Ministry of Economy, Ministry of Foreign Affairs, Polish Information and Foreign Investment Agency, Packaging Research Institute and Central Statistical Office, as well as selected data published on the stat.gov.pl website. The analysis was performed based on indicators of sales structure and sales growth rate.

The analysis of macroeconomic factors influencing the packaging market supported an evaluation of market performance, which is a source of valuable information for market actors. The results of the analysis were used to determine the prospects for the development of the Polish packaging industry.

Results

Socioeconomic situation

The performance of the packaging market is largely determined by the *business cycle*. Selected data describing the socioeconomic situation of Poland in 2005–2012 is presented in Table 1.

Table 1

Selected data describing Poland's socioeconomic situation in 2005–2012

Indicator	2005	2006	2007	2008	2009	2010	2011	2012
Inflation [%]	103.4	101.0	102.5	104.2	103.5	102.6	104.3	103.7
Unemployment [%]	17.6	14.9	11.4	9.5	11.9	12.3	12.5	13.4
GDP growth rate(previous year = 100)	103.4	105.8	106.5	105.1	101.8	103.9	104.3	102.0
Total increase in consumption [%] (previous year = 100)	102.6	104.9	104.2	106.1	102.0	103.5	102.7	100.4
Increase in private consumption [%] previous year = 100)	101.8	105.2	105.2	105.7	102.1	103.2	103.1	100.5
Growth rate of domestic demand	102.5	107.3	108.7	105.6	98.9	104.6	103.4	100.1

Source: own elaboration based on *Rocznik Statystyczny RP* (2006–2013), raport Ministerstwa Gospodarki: *Dynamika realna PKB w latach 2005–2007* (2008) and *Analiza sytuacji gospodarczej Polski w 2012 r.* (2014).

In 2005–2007, Poland's socioeconomic situation stimulated the growth of the packaging industry. Poland's accession to the European Union in 2004 created new growth incentives. Economic activity peaked in 2007 when the annual GDP growth rate reached 6.5%. The upward movement of GDP levels resulted from rapidly growing domestic demand stimulated by the increase in employment. In 2008–2009, Poland's economic situation was affected by the global crisis.

The global financial crisis of 2007 slowed down Poland's economic performance in 2008–2009 (in 2009, GDP decreased by 3.3% relative to the previous year) and weakened the domestic packaging industry. The economic downturn decreased various industries' demand for packaging, and as the result, packaging manufacturers had to reduce their output (WASIAK 2013). The greatest drop of 15–25% was noted in the segment of packaging solutions for motor and construction industries, whereas the manufacturers of packaging for food processing, cosmetics and pharmaceutical industries were least affected by the crisis (decrease of 3–5%).

Despite the general slowdown in economic activity, Poland was one of the few European countries to remain on the path to economic growth (*Gospodarka...* 2012). The Polish economy was gradually rebuilt in 2010–2011. Poland's reported highly satisfactory results in comparison with other EU Member States, and it joined the group of European growth leaders[1]. Poland's high economic performance also accelerated the process of catching up with the EU average in terms of economic and social development. In comparison with 2007, Poland's GDP in 2012 exceeded the EU average by 18.2% and was the highest in the European Union (*Społeczno-gospodarcze...* 2014). The Polish economy was relatively unscathed by the global crisis and continued to report highly satisfactory results in comparison with other European countries, which minimized long-term threats for the domestic packaging industry. The crisis-induced loss of productive capacity and markets by European packaging manufacturers could create new opportunities for Polish packaging businesses in the near future.

The demand for packaging is directly proportional to GDP, and it is determined by domestic income levels. Packaging consumption in highly industrialized nations is much higher than in developing countries. The world's largest consumer of packaging is the United States, followed by Japan and Western Europe.

Western European countries are the natural reference point in analyses of the Polish packaging industry. In 2010, the value of consumed packaging per capita was estimated at EUR 320 in Western Europe and EUR 157 in Poland (WASIAK 2013). The gap between per capita packaging consumption in Poland

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[1] According to Eurostat data, Poland ranked third in 2010 and fourth in 2011 in Europe with regard to its GDP growth rate.

and Western Europe decreased visibly in recent years[2]. Despite the noted progress, Poland will need another 20 years to catch up with Western markets, provided that the domestic packaging industry continues to grow at 7–8% per year. For the above growth to be attained, GDP has to increase at the annual rate of 4–6% (WASIAK 2013). Satisfactory levels of economic growth in the analyzed period suggest that the above goals could be realistically achieved in the coming years and that the Polish packaging market shows great promise.

International trade in goods

International trade in goods significantly influences the performance of the packaging market. Poland's foreign trade turnover in 2005–2012 is presented in Table 2.

Table 2

Poland's foreign trade turnover in 2005–2012 (in million EUR)

Year	Export	Import	Balance	Growth rate in % Previous year = 100		Foreign trade coverage ratio
				export	import	
2005	71,424	81,170	-9,746	119.6	113.8	-0.14
2006	87,926	100,784	-12,858	123.1	124.2	-0.15
2007	101,143	118,771	-17,628	115.0	117.8	-0.17
2008	116,243	142,447	-26,204	114.9	119.9	-0.22
2009	98,218	107,528	-9,310	84.5	75.5	-0.09
2010	120,373	134,188	-13,815	122.6	124.8	-0.11
2011	125,294	138,220	-12,926	104.1	103.0	-0.10
2012	131,433	139,481	-8,047	104.9	100.9	-0.06

Source: own elaboration based on the foreign *Rocznik Statystyczny Handlu Zagranicznego* (2007–2012), *Ocena handlu zagranicznego Polski w 2013 r.* (2013).

In 2005–2012, Poland's foreign trade balance was significantly influenced by the global crisis of 2007. The financial crisis led to major economic instability in many countries, including the EU – Poland's key trading partner[3], which lowered Poland's foreign trade coverage ratio.

[2] According to The Future of Global Packaging, per capita packaging consumption in 2005 reached EUR 102 in Poland and EUR 300 in Western Europe.

[3] Polish exports to the EU were the cornerstone of Poland's economy in the analyzed period. In 2012, 75.8% of Polish exports were sold to the EU (*Rocznik Statystyczny Handlu Zagranicznego RP*. 2006–2013).

The deterioration in Poland's balance of payments in 2008, when the trade deficit reached a record high of EUR 26.2 billion, resulted mainly from a collapse of exports that persisted until the end of 2009. In 2009, exports decreased by 15.5%, and imports – by 24.5% from the previous year. Polish exports gradually rebounded in the following years, and a record high increase of 22.6% was noted in 2010 relative to the previous year. The rapid return to pre-crisis export levels was achieved with a significant reduction of imports, which were nearly EUR 8.3 billion lower in 2010 in comparison with 2008. The lowest trade deficit in excess of EUR 8 billion was reported in 2012, and it was 69.3% lower than in 2008. The foreign trade coverage ratio improved from -0.22 to -0.06.

The Polish balance of payments should improve in the coming years, mainly due to the revival of highly-developed West European markets, in particular EU markets which are gradually recovering from the global crisis[4]. According to experts, Polish exports increase by 3–4% with every 1% increase in the GDP of other EU countries. If the GDP growth of the EU Member States is restored to the average pre-recession level of 3%, Poland's deficit in trade with those countries will decrease in the coming years.

Production of packaged goods

The production of packaged goods should be closely correlated with the demand for packaging, which is generally expressed by the sales revenue of the packaging industry (Table 3).

Table 3

Sales revenue of the Polish packaging industry in 2005–2010*, in various market segments (current prices in million PLN)

Type of packaging	Year					
	2005	2006	2007	2008	2009	2010
Plastic packaging	4,918.9	5,403.1	6,314.2	6,929.4	7,772.9	8,433.0
Paper and cardboard packaging	4,682.5	5,275.2	6,172.4	6,657.1	6,388.6	7,473.7
Metal packaging	2,193.7	2,519.0	2,568.3	2,538.0	3,209.4	3,156.6
Glass packaging	1,178.9	1,197.8	1,247.5	1,168.9	1,147.6	1,237.5
Sales growth rate [%] (Previous year =100)	106.2	111.7	115.4	109.5	102.9	110.0

* Packaging industry sales data is not available for 2011–2012.
Source: own elaboration based on the *Rynek opakowań w Polsce* (on line, 2011).

[4] According to the European Commission, the European Union's GDP increased by 1.2% in 2012, and is expected to grow by 1.4% in 2013 and 1.7% in 2014 (*Analia MPC...* 2013).

The sales revenues of the Polish packaging industry increased by 9.2% during the period of economic prosperity in 2005–2007. The performance of the packaging market was slowed down in the following two years of economic downswing. In 2008, sales revenues decreased by 5.9% from 2007, and in 2009, revenues declined by 6.6% in comparison with 2008. The relatively rapid return to pre-crisis sales levels (7.1% increase in 2010 relative to 2009) indicates that the Polish packaging industry has high growth potential.

In the analyzed period, the increase in the sales revenue of the packaging industry was not evenly distributed across different segments of that market. Plastic, paper and cardboard packaging was in highest demand, and it was followed by metal and glass packaging. Plastic, paper and cardboard packaging segments are also expected to increase in the nearest future (*ECMA*... 2013). The increase in demand for plastic packaging will be driven mainly by economic factors (relatively low production costs), whereas the rise in the popularity of paper and cardboard packaging will be determined by environmental considerations (recycling options). The demand for metal packaging will gradually decline as metal packaging is replaced by cheaper plastic options (KRAWCZAK 2013, pp. 20–24). The trends on the market of glass packaging are difficult to forecast. The demand for glass packaging could decrease due to high glass production costs, then again, the interest in glass packaging could be revived on account of its low environmental impact (NOWAKOWSKI et al. 2013, pp. 74–78) and growing consumer demand for high-quality products (*Szkło*... 2013).

Demographic and market factors

Demographic and market factors also exert a major influence on the domestic packaging industry. They affect consumers' purchasing power and indirectly influence the performance of the packaging market. Selected demographic factors responsible for changes in the Polish population in 2005–2012 are presented in Table 4.

Population increase is highly correlated with economic growth. If the economic growth rate exceeds the increase in population, GDP per capita will grow. A comparison of the rate of population increase and the rate of economic growth in Poland (Table 1) points to a visible improvement in standards of living in 2005–2012. The above improvement stimulated the growth of the packaging market.

The rate of natural increase is the main driver of population change. Poland had a negative rate of natural increase in 2005, and the discussed indicator was close to zero in 2012. Countries with a low rate of natural

Table 4

Selected demographic factors in Poland in 2005–2012

Factor	2005	2006	2007	2008	2009	2010	2011	2012
Population in ’000	38,157	38,122	38,125	38,136	38,167	38,200	38,530	38,542
Population in age groups [%]:								
– pre-working age group (0–17)	20.6	20.1	19.6	19.3	19.0	18.8	18.5	18.3
– working age group (18–59/64)	64.0	64.2	64.4	64.5	64.5	64.4	64.2	63.8
– post-working age group (60/65+)	15.4	15.7	16.0	16.2	16.5	16.8	17.3	17.8
Birth rate per 1,000 population [%]	- 0.1	0.1	0.3	0.9	0.9	0.9	0.3	0.0
Average life expectancy (in years):								
– women	79.4	79.6	79.7	80.0	80.1	80.6	80.9	81.0
– men	70.8	70.9	71.0	71.3	71.5	72.1	72.4	72.7

Source: own elaboration based on the *Rocznik Statystyczny GUS* (2010–2012), *Informacja o sytuacji społeczno-gospodarczej kraju. Rok 2012* (2013), *Sytuacja społeczno-gospodarcza Polski w 2012 r.* (2013).

increase have ageing populations. A clear decrease in the size of the pre-working age population and an increase in the percentage of the post-working age population are observed in Poland. In 2012, the size of the post-working age group increased by 2.4% in comparison with 2005, and senior citizens accounted for 17.8% of the Polish population. Growing life expectancy is a positive demographic phenomena, but significant differences in life expectancy are noted between the sexes. In 2012, Polish women lived 8.3 years longer on average than men in comparison with 2005.

The observed changes in Poland’s demographic profile and the ageing of the Polish society will lead to changes in the structure of domestic demand for packaging in the near future. Based on the hierarchy of needs of elderly citizens, the highest increase in demand will probably be noted on the market of packaging for food and pharmaceutical products.

Market factors that exert the greatest influence on the packaging industry include globalization, progress in information technology and civilian logistics, development of self-service solutions in retail and the introduction of modern sales channels.

Globalization promotes development and progress, and it has highly positive implications for the packaging industry. Its impacts are often evaluated based on the benefits that follow from the transfer of IT systems and advanced technological solutions. The dynamic development of IT and civilian logistics is of particular importance for global market integration (WARCZYŃSKI 2009, pp. 23–26).

The introduction of automatic identification and data capture (AIDC) systems has revolutionized the market. Radio-frequency identification (RFID) is one of the most popular AICD solutions that caters to the growing demands of a modern market. RFID tags are used to monitor products and protect them against theft or forgery. Packaging is labeled with integrated circuits that communicate with monitoring devices via radio waves. Those solutions contribute to product identification and control, they increase product availability on the market, reduce costs, improve and speed up customer service.

The development of civilian logistics is largely dependent on the progress made in the IT sector. Advanced technologies increase the efficiency of goods flow and data communication. On European and global markets, the movement of goods throughout the world or within the supply chain is controlled by IT systems. The flow of goods is coordinated by members of the supply chain who enter into partnership agreements. The collaborating partners cater to market needs, deliver high service standards and strive to generate maximum profits for all members of the supply chain.

Globalization contributes to the development of self-service solutions in retail. The contemporary packaging industry has to cater to the needs of an increasingly globalized economy and self-service retail outlets that have a growing share of the market. The growth of selected types of retail stores in 2005–2012 is presented in Figure 1.

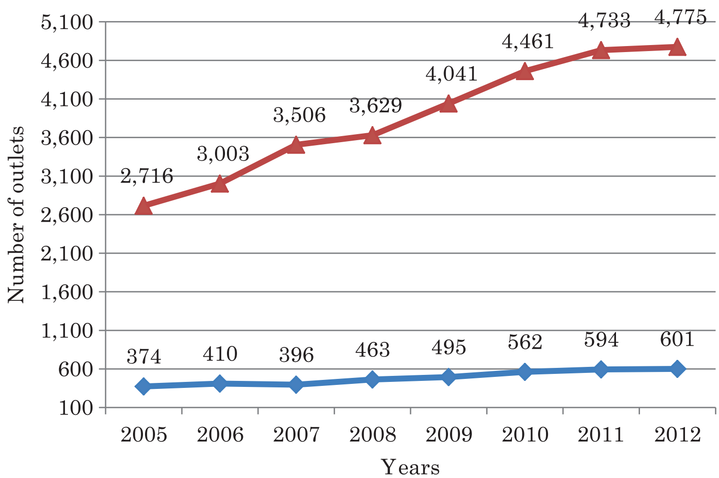

Fig. 1. Number of hypermarket and supermarket outlets in Poland in 2005–2012
Source: own elaboration based on: *Rynek wewnętrzny* (2006–2013) and *Rocznik Statystyczny* (2013).

In 2005–2015, the highest number of new outlets were opened by supermarkets (75.85% increase) and hypermarkets (60.75% increase). Discount chains are also expanding steadily in Poland[5]. Distributors are searching for

[5] The number of discount stores in Poland increased by 54.4% in 2005–2010 (Roland Berger Strategy Consultant. 2012, Retailer of the Year 2011).

modern sales channels that cater to the growing needs of contemporary consumers. E-commerce is one of such sectors, although e-commerce sales in Poland are merely a fraction of retail sales[6]. E-commerce is expanding rapidly due to the steady increase in the number of Internet users in Poland (Figure 2).

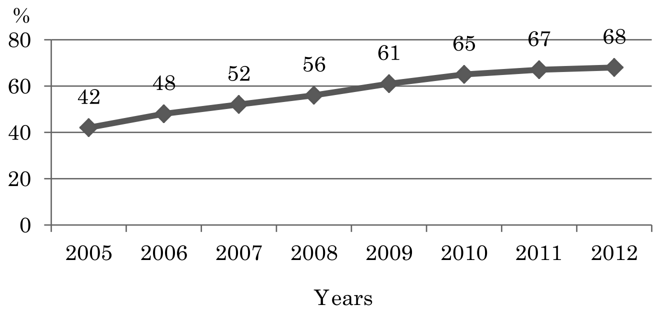

Fig. 2. Percentage of Internet users in Poland in 2005–2012
Source: own elaboration based on Statistics in Focus (on line).

The main barriers to e-commerce growth in Poland are the high cost of software for integrated IT systems and an absence of clear laws and regulations relating to e-commerce. Despite those obstacles, e-commerce is a highly promising sector, and Polish packaging manufacturers will develop dedicated packaging and distribution solutions for products traded over electronic systems.

Conclusions

1. In 2005–2007, Poland's socioeconomic situation stimulated the growth of the packaging industry. The global crisis of 2007 weakened the Polish packaging market. Packaging industry sales decreased in 2007–2009. The potential of the domestic packaging market was quickly restored with an improvement in Poland's economic performance. Sales revenues in the packaging industry rose at an astoundingly high rate of 7% per annum.

2. The global crisis of 2007 influenced Poland's balance of payments in 2005–2012. A high trade deficit in 2008 resulted from the crisis-induced collapse of exports. In the following years, Polish exports were quickly reinstated to pre-crisis levels, which led to a marked improvement in Poland's foreign trade coverage ratio.

[6] According to the Ministry of Economy, sales revenues on the e-commerce market accounted for only 3% of retail sales in Poland in 2011 (Comparative Analysis of the Center for Retail Research).

3. Sales revenues of the packaging industry increased in the analyzed period. Plastic, paper and cardboard packaging was in highest demand, and it was followed by metal and glass packaging. Similar trends in market demand are expected in the coming years.

4. The observed changes in Poland's demographic profile and the ageing of the Polish society will lead to changes in the structure of domestic demand for packaging in the near future. The highest increase in demand will probably be noted on the market of packaging for food and pharmaceutical products.

5. The performance of the Polish packaging market is significantly influenced by globalization, progress in information technology and civilian logistics, and the rapid development of e-commerce. In the coming years, Polish packaging manufacturers will develop innovative packaging and distribution solutions for products traded over electronic systems.

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MARKET OF EQUITY RELEASE SERVICES IN POLAND

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K e y w o r d s: equity release, reverse mortgage, home reversion.

A b s t r a c t

The aim of the article is to outline the situation on the market of equity release in Poland. It focuses on solutions used by special institutions in a sales model, called mortgage funds, the basic activity of which assumes signing release plan contracts in exchange for life income, and points to the dangers connected with their functioning. It also focuses on projected solutions in a loan model of equity release. This issue is particularly important as the ageing process of our society and lowering level of pension benefits provided by the State are among the main factors determining the development of this market, which undoubtedly will take place in Poland, as in other countries.

RYNEK USŁUG *EQUITY RELEASE* W POLSCE

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Słowa kluczowe: *equity release*, odwrócona hipoteka, renty dożywotnie.

Abstrakt

Celem artykułu jest przedstawienie sytuacji na rynku *equity release* w Polsce. Omówiono rozwiązania w modelu sprzedażowym stosowane przez specjalne instytucje, zwane funduszami hipotecznymi, ze wskazaniem na zagrożenia wynikające z ich funkcjonowania, a także projektowane rozwiązania w modelu pożyczkowym odwróconej hipoteki. Podstawowa działalność funduszy hipotecznych polega na zawieraniu z klientami umowy świadczeń dożywotnich. Tematyka ta jest szczególnie istotna, ponieważ proces starzenia się społeczeństwa i obniżający się poziom świadczeń emerytalnych zapewnianych przez państwo jest jednym z głównych czynników determinujących rozwój tego rynku w Polsce, podobnie jak w wielu innych krajach.

Introduction

In Poland, the debate regarding releasing equity allocated in an estate has been in progress for many years. In general, on the financial market, there are a few forms of releasing equity from the owned estate. They include mortgage, rental, sale and purchase of a smaller estate, yet these solutions are not part of the specialized branch of services, the so-called *equity release* (ERS). According to the definition of the European Committee, a service which is to be qualified as *equity release* needs to fulfil several conditions: it must have a financial character, the service recipient must be provided with a long-term source of financial liquidity and must be guaranteed the right of residence in a given property for life, and payment of benefits with additional costs is based exclusively on the estimated property value (REIFNER et al. 2009a, p. I).

The services of conversion of the capital invested in an estate, the so-called *equity release*, assume transformation of the invested capital into a stream of income paid out in the pension period with a simultaneous guarantee of the life residence of the recipient in the estate which is the subject of the release plan. These services can take on the form of a loan model (i.e. *reverse mortgage*) or sales model (i.e. *home reversion*). The basic difference between them is the moment of the conveyance of an estate and the manner of securing the interests of the recipient's devisee. In the loan model, the conveyance of an estate is performed on the financing institution at the very moment of the due date of the agreement, whereas in the sales model, the conveyance is executed when the agreement is signed, which for the devisees of the recipient means a total loss of ownership title to the estate (*Uzasadnienie do projektu ustawy o odwróconym kredycie...* 2013, p. 25). Both types of agreement have a long-term character, a guaranteed life residence, and, if the mortgage value exceeds the estate value, the rate of repayment is predetermined and limited to the estate value (*Reverse mortgage...* 2011, p. 4). In Polish law, the possibility of passing the estate for life income is currently performed only within the sales model, which is regulated by the Civil Code of 23 April 1964 (Journal of Laws No. item 121). Despite a long debate, there are no legally binding regulations for reverse mortgage in the loan model[1].

The aim of the article is to outline the situation on the market of equity release in Poland. It focuses on solutions used by special institutions in a sales model, called mortgage funds, the basic activity of which assumes signing release plan contracts in exchange for life income, and points to the dangers connected with their functioning. It also focuses on projected solutions in a loan model. In relation to the purpose of the article, the applied research

[1] As of the end of June 2014.

methods include studies of literature, legal acts on the subject of equity release and analysis of functioning mortgage funds in Poland. Therefore, it will be possible to describe currently available options of sales and loan model on reverse mortgage[2] in Poland, the size of the market and the further manner of its development.

Demographic determinants of the development of equity release services in Poland

According to the estimations of the Central Statistical Office and Government Population Council regarding the demographic situation in Poland, the market of clients interested in reverse mortgage has good perspectives of development (PAWLĘGA 2010, p. 68). This results from a few factors: increasing number of people of retirement age, longer life expectancy, migration of Polish citizens to other EU countries, as well as decreasing level of pension benefits granted within the base system of social security (REIFNER et al. 2009b, p. 138). Taking into consideration demographic forecasts, one can observe that while in 2010–2035 the population index of Poland will decrease by 5.5%, the number of people of retirement age will increase by 9.9%.

All research and analyses concerning the ageing process of society focus on such parameters as life expectancy and birth rate. On the basis of the forecasts for the Polish market, one may conclude that along with longer life expectancy, the population of women of reproductive age is decreasing, which in turn results in a low birth rate. Although this rate in the analysed years will insignificantly increase due to births from the so-called generation boom from the years 1970–1985, starting from 2035, this boom effect will decline. Therefore, in the longer perspective, there will occur a new risk of financing the system of social security, i.e. a growing age dependency ratio (estimated as the number of people aged over 65 or more per 100 people aged 15–64).

Currently, this coefficient is lower in Poland than the average rate for EU countries; however, according to the forecasts, from 2050, the situation will be different.

Taking into consideration the conception of the transformed pension scheme in Poland, which assumes transformation from the pay-as-you-go scheme to a funded pension scheme where the pension rate is strongly dependent on the amount of collected contributions, prolonging the average life expectancy will significantly impact the rate of pension benefits in the

[2] In Poland, the term „reverse mortgage" is sometimes used for its sales and loan model. See e.g. MAJ-WIŚNIOWSKA, CYCOŃ (2011), MAĆKOWSKA (2009).

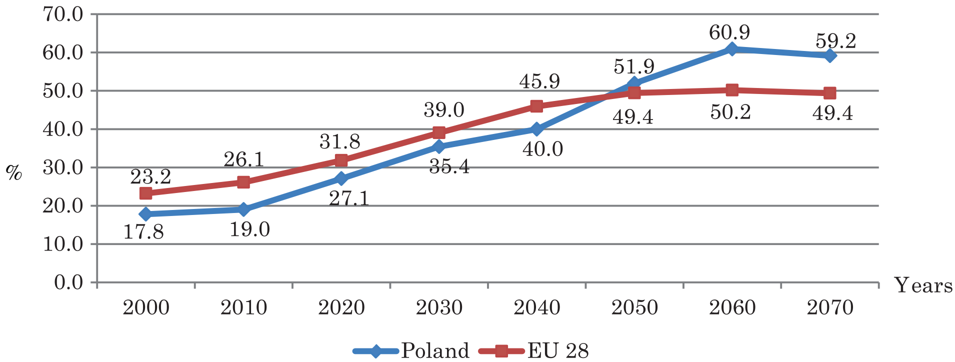

Fig. 1. Average old-age dependency ratio in the years 2010–2070
Source: own elaboration on the basis of Eurostat data: http://epp.eurostat.ec.europa.eu/ (access: 10.9.2014).

future (*Założenia do projektu ustawy o odwróconym*... 2012, p. 2). It ought to be observed that according to Eurostat data, the rate of poverty risk among people aged 65 is currently lower in Poland (14.7% in 2011) than the average rate for EU countries (15.9% in 2011); however, in 2005–2011, it doubled (by 101.4%), whereas in all EU 27 countries, it decreased by 15.9% (Fig. 2).

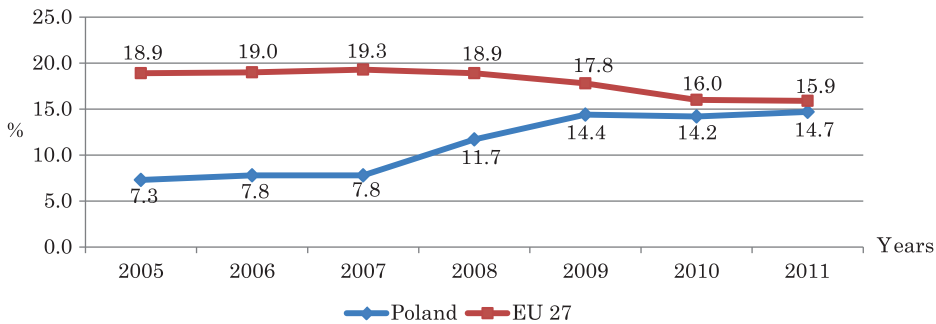

Fig. 2. Rate of poverty risk in Poland and the EU among people aged over 65 (in %)
Source: own elaboration on the basis of ŻUKOWSKI (2013, p. 6).

According to the aforementioned tendencies, in the face of growing public expenditures on pension schemes and lowering replacement rates, Blundell-Wignall A., Hu Yu-Wei and Yermo J. (BLUNDELL-WIGNALL et al. 2008, p. 5) claim that every government should be interested in products on the financial market that could improve the situation of elderly pensioners. Bhuyan V.B. also thinks that with the uncertainty in the reliability of a government-run social safety net, many Europeans must rely on themselves to generate sufficient supplemental income to maintain their standard of living in retirement (BHUYAN 2011, p. 188). As the interest of the Polish society in the third pillar of pension schemes, i.e. Individual Retirement Accounts, Individual Pension Security Accounts and Employee Pension Schemes, is low, an ageing society will look for other ways of securing a proper standard of life after finishing professional activity.

Taking into account the structure of premises ownership in Poland, there are good perspectives for the development of the equity release market (PAWLĘGA 2010, p. 68). According to the data of the Central Statistical Office, flats owned by natural persons in 2011 constituted almost 70% of all living premises in Poland (Tab. 1).

Table 1

Inhabited dwellings by type of ownership (as of March 2011)

Specification	Number (in thousands)	In %
Total	12,533	100
of which ownership of:		
– Housing cooperatives	2,290	18.3
– Gminas	1,090	8.7
– Companies	204	1.6
– State Treasury	197	1.6
– Public building societies	84	0.7
– Natural persons	8,625	68.8
– Other entities	43	0.3

Source: own elaboration based on *Mały Rocznik Statystyczny Polski* (2013, p. 234).

Solutions in the equity release service in Poland

An instrument which has been present on the global market for many years and which facilitates gaining additional financial resources after finishing professional activity is a financial service called equity release. The most developed markets in this field are the USA, UK, Spain and Ireland, but this product is also offered in many other countries around the world. These countries, in the light of a growing problem of providing a proper level of pension benefits to the growing number of pensioners, shift the responsibility for assuring a proper standard of life on pension to citizens supporting private initiatives, including those of equity release from an estate (Założenia do projektu ustawy o odwróconym kredycie hipotecznym, 2012).

Currently, in Poland, there are no binding regulations which would precisely regulate the market of equity release.

In the present legal framework, the conveyance of an estate on third parties with simultaneous life residence guarantee for the recipient is partially regulated in the Act of 23 April 1964 of the Civil Code. This is the so-called sales model of equity release service, which is available in a few variants in Poland. Entrepreneurs implement various solutions, using the regulations concerning annuity agreement (Art. 908–916 of the Civil Code), pension agreement (Art. 903–907 of the Civil Code), insurance agreement (Art. 805–834 of the Civil Code) and loan agreement (Art. 720–724).

It needs to be stressed that the market of life benefits in Poland is a new branch, which began functioning in 2008. Benefits offered in exchange for a conveyance of an estate are offered by private companies which function in the form of commercial companies and are not subject to any specific legal regulations. Till the end of April 2013, in accordance with the Report of the Office of Fair Trading, there were seven commercial companies active on this market, which signed 381 agreements with clients (*Raport z kontroli przedsiębiorców zawierających...* 2013, p. 2).

Below is the characteristic of the equity release market in Poland, which is based on data collected from mortgage funds that are members of the Conference of Financial Companies in Poland (pl. KPF), i.e. Mortgage Fund Dom S.A. and Mortgage Fund Familia S.A.

Table 2

Basic data regarding KPF members of the equity release market in Poland

Specification	According to state at the end of the year		
	2011	2012	2013
Number of active agreements	96	200	283
Average age of the client	75.8	75.7	75.2
Average metric area of a flat	42.33	46.09	46.23
Average value of one property (thousand PLN)	251.3	251.8	238.8
Value of manager properties (in million PLN)	24.13	50.36	67.59
Total paid life benefit (in million PLN)	1.25	2.66	5.15

Source: own elaboration based on *Rynek odwróconej hipoteki w modelu sprzedażowym* (2014, pp. 5–10).

From the presented data, one may clearly observe that the equity release market in Poland is in its preliminary phase of development, though in 2011–2013, the number of active agreements that were administered by the mortgage funds almost tripled. Among the available variants of the sales model in Poland, the most commonly used is the annuity agreement and pension agreement.

In the case of an annuity agreement, the purchasing party, in exchange for conveyance of an estate, provides a guaranteed payment to the annuitant. This includes mainly financial benefit (valorized every quarter or annually by inflation rate), paid out monthly, decreased by the rate of rent costs. Also, the lifelongpersonal servitude of the flat is established. In the agreement, the purchasing company reserves that without the company's permission, the annuitant cannot register third parties or make changes in the flat that are inconsistent with the agreement (e.g. alteration of the flat). Moreover, the annuitant is obliged to make any current repairs and incur necessary outlays connected with regular usage of the flat. There are also more detailed solutions, such as in the case of Mortgage Fund Omnes LLC, where the client is offered at least two hours weekly of cost-free maintenance repairs and cleaning, help in everyday matters like shopping or going to the post office and carrying out daily duties, like doctor's appointment, etc. (*Raport z kontroli przedsiębiorców zawierających...* 2013, pp. 26–30). It needs to be stressed that regulations in the Civil Code which state that in the case of lack of a separate agreement, the purchasing party is obliged to provide the client with food, clothes, electricity, fuel, nursing during illness and funeral service in accordance with local custom are not used.

As stated in the Civil Code, a pension agreement binds one of the parties to provide a guaranteed periodic payment in cash or material items specified as to their kind (Art. 903 of the Civil Code) to the annuitant. As for conversion of capital invested in estate, the service recipient performs a conveyance of an estate to the mortgage fund in exchange for a guaranteed life pension and life residence and personal servitude of the flat. Annuitants are obliged to incur the costs of flat usage, such as utility bills, rental costs, etc. There is also a solution where the rent is deducted from the pension and paid directly by the mortgage fund (e.g. Mortgage Fund „Familia" S.A. in Warsaw). Mortgage funds incur the costs of property tax, costs of perpetual lease and costs of property insurance against fortuitous events (e.g. Mortgage Fund „Gwarancja" LLC in Gorzów Wielkopolski) (*Raport z kontroli przedsiębiorców zawierających...* 2013, pp. 30–34).

Due to the relevance of the discussed issue, numerous renowned financial institutions are conducting market research in this field. According to the research of the Research Institute IPC[3], one may conclude that without binding legal regulations regarding reverse mortgage and insufficient education concerning the regulations and conditions of conveyance of an estate in exchange for a life pension, a great part of Polish society does not understand the concept pension for flat' in the Polish legal framework. Only 26% of respondents aptly claim that it is a contract between a financial institution

[3] Report from CATI research „*Renta za mieszkanie*", Research Institute IPC: www.instytut-ipc.pl (accessed 15.09.2014). Surveys were conducted in 2013 with 1 200 subjects from the Dolnośląskie province. All subjects were aged over 50.

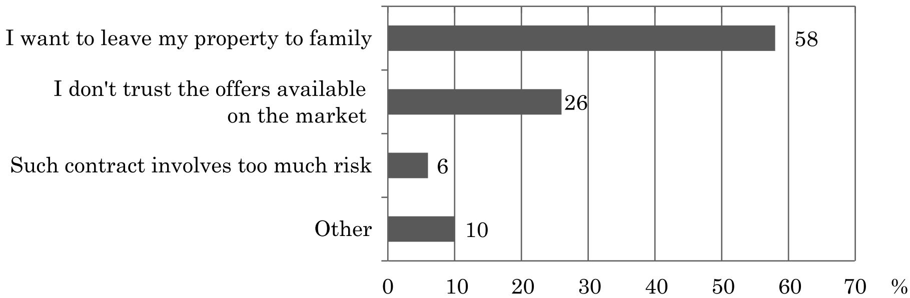

Fig 3. Reasons against conveyance of an estate for life pension
Source: own elaboration based on the research of the Research Institute IPC (*Renta za mieszkanie* 2013, p. 9).

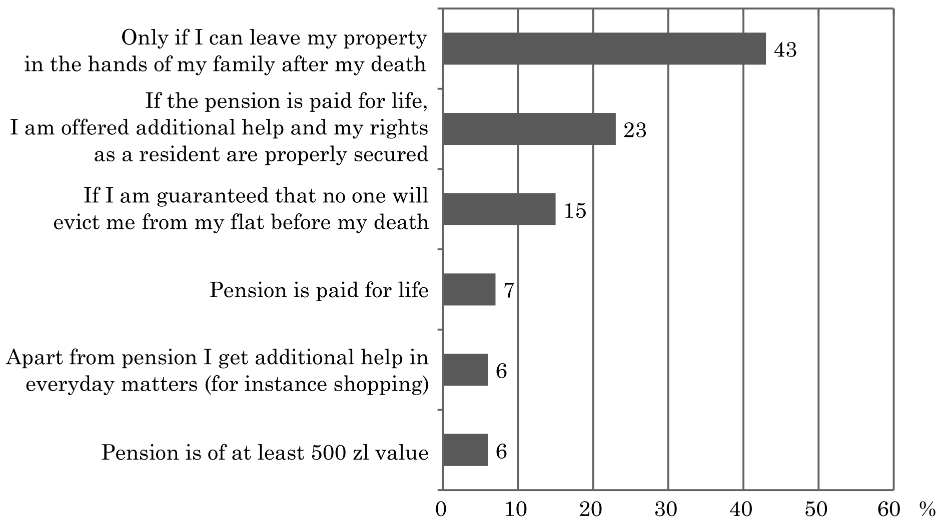

Fig. 4. Conditions facilitating conveyance of an estate for life pension
Source: own elaboration based on the research of the Research Institute IPC (*Renta za mieszkanie* 2013, p. 10).

and an owner of an estate which assumes conveyance of an estate in exchange for life pension, and the act of conveyance of the estate is binding after signing the agreement. As the results show, 40% of respondents were not able to define the notion of reverse mortgage, and 33% claimed that the conveyance of the estate takes place after the owner's death (*Renta za mieszkanie* 2013, p. 6). It is of key importance to observe that in Poland, an estate is still perceived as the fruit of a lifetime of hard work which is passed down and ought to be passed down to future generations. Pensioners who decide to grant their estate to a financial institution in exchange for fair conditions of living may face negative reactions from the society and family. Such an attitude is the basic condition which, in a longer perspective, will discourage clients from an equity release service and means that the main clients of this market will be lonely elderly people (ŚLIPERSKI 2008). What is more, a vast majority of respondents (86%) do not consider the conveyance of an estate for life pension, and the main reason among them (58%) is that they want to leave their flat to their families (Fig. 3).

Among subjects who would potentially consider conveyance of an estate for life pension, among the basic conditions that were stressed, the will to leave the estate to family is the most strongly stressed factor (Fig. 4).

Risks connected with the functioning of equity release

Growing interest of clients in life benefits in exchange for conveyance of an estate to mortgage funds requires proper securing of the interests of parties who conclude such contracts. Current legal regulations of the Civil Code do not guarantee full protection. Legal regulations do not oblige mortgage funds to fully inform their clients, so there is a great risk regarding lack of proper knowledge and the consequences of concluding such a contract, which is particularly important as the target client of this market is a person aged over 70. Another problem is a lack of requirements concerning capital equipment of mortgage funds. In the case of their bankruptcy, they disappear from the market, and their clients are not secured by the state as it is in the case of, for example, banks. Moreover, mortgage funds are not in the supervision system monitored by the Polish Financial Supervision Authority; they are not obliged to perform valuation of property in accordance with its market value, which by possible under-pricing will in turn result in lower pension (DURŁAK, CIESEK 2013, pp. 292, 293). An issue of key importance is, therefore, quick regulation of the equity release market with proper legal framework. In the project of the Ministry of Economy of 3 October 2013 entitled „Proposal of regulating life pension in exchange for conveyance of an estate (i.e. life pension)" (*Propozycja uregulowania instytucji dożywotniego świadczenia pieniężnego w zamian za przeniesienie własności nieruchomości, tzw. renta dożywotnia*), it is strongly highlighted that in the current legal framework, the annuity agreement regulated by the Civil Code ought to be applied only to family relations, whereas all agreements concluded within business activity should be subject to new legal regulation (*Proposal of regulating life pension in exchange for conveyance...* 2013, p. 2).

In the proposed solutions, there is a need to introduce a multistage procedure of concluding the agreement. The first stage (pre-contract) assumes that the future purchasing party will pass full information regarding the concept of life pension and conditions of the agreement in written form; in the second stage, the client will receive a draft of the agreement, including the estimated rate of future pension. After the client makes a declaration, in the third stage, the purchasing party can initiate the procedure of concluding the agreement. Due to the socially sensitive nature of the offered service, running business activity offering life pension will require obtaining a permit from the Polish Financial Supervision Authority, and obtaining it will be possible after meeting specific capital and subject requirements. In accordance with the proposed project, an initial capital of value not lower than 2 million euro will need to be fully covered in paid up cash which does not come from a loan, credit or other undocumented sources. The equity capital of entities offering annuities (in the form of a joint stock company) should be maintained on the same level at any time, and when they stop meeting the requirements specified in the permit for business activity, the Polish Financial Supervision Authority can withdraw the permit. Should such a situation occur, a debt portfolio of liabilities on account of life pensions should be passed to other business entities operating on the basis of the same permit (*Proposal of regulating life pension in exchange for conveyance...* 2013, p. 2).

As previously mentioned, apart from the sales model, there is also the loan model of equity release, which is not used in Poland and which, due to its complex nature, requires detailed preparation. Moreover, the discussion and works on the act of reverse mortgage were initiated by the functioning contracts of life benefits which appeared in 2008. The draft of the act on reverse mortgage from 2013, which is currently under debate in the Sejm (Sejm paper no, 1442), regulates in detail the rules of functioning of such contracts. It is proposed that contrary to an annuity agreement, conveyance of ownership of an estate is performed by the lending institution upon the client's death. The devisees can then decide whether to pay the debt and retain estate ownership rights or perform conveyance of an estate to the lending institution, which can be a bank, local branch of a foreign bank, branch of a lending institution or a lending institution with cross-border business activity. Property or the particular right to property is then mortgaged in favour of the lending institution. Taking into consideration the form of benefits paid out, financial resources on account of reverse mortgage would be available periodically, as stated in the agreement or in the form of a one-time benefit. Justification to the project indicates that the aim of the act is to implement mechanisms of effective pursuing claims, protection of service recipients by providing a sufficient amount of information before conclusion and, in the very agreement, facilitating withdrawal from the agreement within 30 days from its conclusion, assuring rescission of the contract within 30 days from its conclusion, assuring the right to make an early repayment of the mortgage and limiting the possibility to terminate the contract by the lending institution in strictly specified cases. Also, the draft of the act provides that the Polish Financial Supervision Authority, having protection of beneficiaries of reverse mortgage in mind, will specify, by way of a resolution, binding legal regulations for risk management of lending institutions connected with running business activity in this field.

As the act on reverse mortgage comes into force, both models of equity release, i.e. sales model (based on life pension) and loan model (in the form of reverse mortgage), will function parallel to each other, which will offer a choice to potential clients, who can chose the most optimal solution.

Concluding remarks

Pension benefits at a lower level than the salary obtained during professional activity cause that a growing number of pensioners look for additional sources of income in old age. Conversion of estate capital, which assumes its release with time, has been functioning on the global markets for many years. In Poland, it is perceived as an innovation of a certain kind, which is still in draft phase. Though the functioning of the sales model on the Polish market is regulated by the Civil Code, current solutions are not sufficient with respect to systemic and client security. During works on the draft of the act on reverse mortgage, the Minister of Economy pointed to the need for complex regulation of this problem in both equity release models. Also, it needs to be considered whether equity release service stands the chance of becoming a common product on the financial market. „Irreversibility" of reverse mortgage, complication of the service, attachment to owned estate and strongly rooted tradition of passing down an estate to the next generation in the case of death are sources of concern and discourage society from concluding such contracts. The results of research conducted by the Polish Insurance Association show that a general decrease in affluence of members of a household, resulting from the low replacement rate obtained in a pension scheme, as well as lack of sufficient financial resources for incurring long-term care over pensioners, will more than likely dominate when considering releasing equity invested in an estate in the case of Polish pensioners. In this scope, regular life benefits characteristic for insurance products will be predominant (*Reverse mortgage...* 2011, p. 35–37).

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GUIDELINES FOR TEXT PREPARATION FOR THE "OLSZTYN ECONOMIC JOURNAL"

The "Olsztyn Economic Journal" (ISSN 1897–2721) is a scientific magazine published in English at the Faculty of Economic Sciences of the University of Warmia and Mazury in Olsztyn. During the years 2007–2012 the magazine was published semi-annually and as of 2013 it was transformed into a quarterly. It publishes scientific papers of methodical, review and empirical nature in economic sciences. The Olsztyn Economic Journal is published by the University of Warmia and Mazury in Olsztyn Publishing House. The printed format is the primary form of the magazine. Additionally, all numbers of the magazine are available also in the electronic format on the website: http://www.uwm.edu.pl/wne/oej.php, http://wydawnictwo.uwm.edu.pl (subpage Czytelnia).

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a. direct personal relations (kinship, legal relations, conflict),
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Karpacki M., Sawicki H. 1980. *Ekonomika i organizacja gospodarstw wiejskich*. PWN, Warszawa.

Kos C. 1997. *Marketing produktów żywnościowych*. PWRiL, Warszawa.

Collective papers: Dbajmy o właściwe suszarnictwo ziarna. Red. K. Lewin 1982. T. 1. PWN, Warszawa.

When use is made of a particular **part or chapter only**:Lenartowicz M. 1963. Opis bibliograficzny. W: Metodyka bibliograficzna. SBP, Warszawa, s. 6–16.

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Tomczyk Z. 1996. *Wynalazczość i racjonalizacja źródłem postępu technicznego*. Gosp. Narod., 6: 21–25.

Unpublished papers: Malicki K. 1990. *Ubój świń. Instytut Żywienia Zwierząt ART*, Olsztyn (typewritten text).

Kowalski H. 1992. *Wychów cieląt. Katedra Hodowli Bydła ART*, Olsztyn (doctoral dissertation).

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