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The Future of Rural Poland: the Main Trends and Possible Scenarios.

Abstract

The objective of the report is to attempt the identification of the most significant factors that will shape Polish countryside until the year 2050 and to outline the feasible scenarios of changes in rural areas. The study is based primarily on qualitative analysis and on the knowledge of experts specialising in rural subject matter in its different thematic domains.

Six groups of factors were distinguished (economic, technological, legal and administrative, political, socio-demographic, natural) and for each of these groups the most important conditions were analysed. The image of the Polish countryside in the perspective of the decades to come will most probably not undergo radical shifts. However, we can make the proposition that this countryside will be more diversified, more socially and economically active, and more attractive as the place of residence and of work.

Key words: Poland, countryside, scenario, rural development, rural future, trends

1. Introduction

Things that will happen in a couple of years, or in some decades from now, remain unknown to us. Based on our experience and knowledge we tend to

undertake more-or-less successful attempts at describing future events, since they are of paramount importance for planning of our actions. As rightly noted by I. Wilson (2006: 45) “... *all knowledge is about the past; and all our decisions are about the future*”. Uncertainty as to the future gives rise to our curiosity, stimulating deep insight and motivating imagination. Forecasting the future is an interesting but also very difficult scientific endeavour, in which one should account for a broad spectrum of variable factors shaping the future. We must always be prepared for the new and unpredicted phenomena, which will change the image of events that we have assumed.

The domain of the future developments is a popular subject of rural studies. Studies of this kind concentrate most often on the analysis of the variability of the future socio-economic phenomena and on the assessment of the potential development directions and trends in the countryside, in different sectors of economy and on different spatial scales (see e.g. Hogan & Young 2013; Shucksmith 2013; Paul 2013, Elands & Praestholm 2008).

Social themes dominate in studies of this kind and investigations first concern the directions of changes in the social and demographic structures, as well as challenges for and expectations from the rural inhabitants with respect to the coming years (Goux-Baudiment et al. 2011; Marsden 1999; Kiura 2010; Kupiszewski & Bijak 2007; Scott et al. 2009). The future of the countryside is also the subject of numerous projects and expert analyses, which are expected to serve directly some practical purpose (Rural Futures... 2005; Rural Finland 2015... 2006; Our rural future... 2011; Our countryside... 2000; Hedström & Littke 2011; U.S. Congress 1991). Such reports identify the most important conditions of development of rural areas, along with trends that can be expected to prevail in the coming years.

The scientific identification of the social and economic phenomena is due to take place in the coming years, while the assessment of their dynamics and directions constitute the foundation for programming and taking strategic decisions in various domains of social and economic life. One of the potential elements of the research procedure consists in the design of events, with respect to which we can propose several alternative realisation options (“scenarios”), which are more-or-less probable (Gierszewska & Romanowska 2009).

Scenarios are hypothetical sequences of events, constructed for the purpose of turning attention towards definite processes and key decisions (Kahn & Wiener 1967). Scenarios are not equivalent to the images of the

future; by no means do they constitute a forecast, but are rather a form of design for the future (Rotmans et al. 2000). A somewhat different approach is represented by the authors of climatic scenarios, who emphasise that a scenario is an internally consistent description of the potential states of the future reality (IPCC 1994).

Scenarios may be constructed according to a wide variety of principles and there are four broadly conceived approaches to their construction (Kuhlman et al. 2006). The first of those consists in the extrapolation of the contemporary trends; the second in the use of expert knowledge; the third in the integrative approach to the description of the future reality; and the fourth one in the use of the composite methodology, based on the three preceding approaches. Modern theory and the methodology of scenario studies is the subject of a separate knowledge, being developed mainly by the representatives of economic sciences (van Notten et al. 2003; Gausemeir, Fink & Schlane 1998; Postma & Loebel 2005).

During more than sixty years of history, scenario analysis was made use of by the scientists and practitioners representing highly differing professions (Ringland 1998). Until the beginning of the 1990s, the development of scenario studies was dominated by economists, engineers and planners. Yet in the domain of social sciences such studies were a rarity (Jungermann 1985). During the 1950s, military scenarios were being built in the United States, but from the 1960s, scenarios were used in the construction of policies of development of towns and regions in France, while in the subsequent decade these studies became popular in the corporate world (Dammers 2010). The most known examples of application of the scenario analyses concern large corporations, such as Royal Dutch Shell (Coates 2000), British Airways (Moyer 1996), or international organisations (World Business Council for Sustainable Development 1998; IPCC 2000; Nakićenovič et al. 2000). Nowadays, these scenarios are a popular tool in futures studies and are commonly used in large projects and research programmes, financed by the European Union (Volkery et al. 2008; Gough 1999; Scenarios 2014; Abildtrup et al. 2006).

Scenarios have also been used in the studies of rural areas. First of all, they appear as the effect of the research programmes (ESPON, SCENAR2020, Eururalis, SENSOR, PRELUDE, etc.), carried out by the international research teams. Comparative studies of the results of investigations performed in these projects made K. Jansson and I. Terluin (2009) distinguish six EU rural

futures, resulting from the intervention policies (baseline, competitiveness, cohesion) or from the disruptive events (clustered networks, big crisis).

One of the amplest reports, making use of the scenario methodology, is provided by the SCENAR 2020 studies, performed by the international team of researchers upon the commission from the European Commission Directorate-General Agriculture and Rural Development (Nowicki et al. 2006). This report identifies the trends and mechanisms that will shape the European agriculture and rural economy from the perspective of the coming year 2020. This purpose is served by three alternative scenarios: baseline, regionalisation and liberalisation. The first stage of these studies consists in the construction of the reference (baseline) scenario, which was developed from trends taken from the years 1990-2005, to be then – by analogy – forecast up until the year 2020. In the two remaining scenarios, alternative political conditioning was accounted for. In the case of the regionalisation scenario, this alternative conditioning was lack of constructive agreement at the Doha summit and increased emphasis on the support for the internal markets.

In the liberalisation scenario, the opening-up of the international markets is marked by decreasing support for the farming sector. In effect, owing to application of various indicators, these scenarios allowed for the detailed assessment of demographic processes and the dynamics of economic changes in the countryside, as well as transformations in the production system and in the farm structures.

A similar qualitative character was displayed by the scenarios elaborated in Finland upon commission from the Finnish Ministry of Agriculture and Forestry (Rural Finland... 2006). The authors of that project made use of more than ten factors which, in their opinion, will shape the future of the Finnish countryside (like, e.g., globalisation, energy prices, demography, extension of the EU, technological changes, cooperation with Russia, state of the natural environment, climate changes, etc.). An assessment of the directions and rates of changes was the basis for proposing four scenarios.

In the first of these scenarios – Healthy Rural Area – an increase was assumed of the significance of localism, harmonious cooperation and diversification of the enterprise structures in the countryside. The second scenario – Individual Subjects – assumes a global economic crisis, increase of significance of bioenergy and the services concentrated on the domestic market. In the third scenario – Economy of the Western World in Crisis – the key role is played by the globalisation processes, which will weaken the

small rural enterprise, while strengthening the centralisation trends, while this will make the socio-economic situation in the countryside worse than in the initial year 2005. Then, in the Bipolar World scenario, an increase in networking is envisaged (linkages between public administration and business as well as the service sector), along with the increase of economic uncertainty, associated with the increasing energy prices, pressure from large corporations and from other external factors.

The scenarios elaborated in the framework of the EURURALIS project (three editions) had quantitative character and were based on statistical models, making use of a rich database containing data on the economy, demography, land use and climate change (Westhoek, van der Berg & Bakkes 2006; Rienks 2008; Klijn et al. 2005). The analysis of future changes within the rural areas of Europe on the scale of regions (NUTS 2) and in the perspective of the year 2030 encompassed such processes as: depopulation and ageing, urbanisation, extension of the European Union, globalisation of production and trade, climate change, land use changes and technological progress.

The effect of work was then presented through the elaboration of four scenarios (Global Economy, Continental Markets, Global Co-operation, Regional Communities), based on two superior kinds of conditions: scale – global or regional approach, and economic policy – market orientation or interventionism. The project mentioned also enabled a deeper study of scenarios related to landscape and land use (Verburg et al. 2006; Verburg, Veldkamp & Rounsevell 2006). The potential directions of change in land use were also the subject of another study, carried out in the framework of the project ACCELERATES (Assessing Climate Change Effects on Land use and Ecosystems from Regional Analysis to The European Scale). On the basis of four socio-economic scenarios (World Markets, Regional Enterprise, Global Sustainability, Local Stewardship), the influence here was assessed of climate change on agricultural land use in three time horizons – 2020, 2050 and 2080 (Abildtrup et al. 2006).

Polish scientific literature offers little in terms of ideas on the future of countryside. Among the few reports on this subject, one can mention those by J. Wiklin (2005), L. Kolarska-Bobińska, A. Rosner and J. Wiklin (2001) and J. Bański (2013a, b) devoted to the forecasting of the social and economic processes in the countryside over the horizon of more than a dozen years on different spatial scales. The Polish countryside is inhabited by close to 40% of the total population, while the farming sector operates in more than

half the country's area, employing 12% of all the working persons. That is why the future of Polish rural areas appears to be a very important subject of discussion from the economic, social and political points of view.

The objective of the present report is hence to attempt the identification of the most important factors that will shape Polish countryside until the year 2050 and to outline the feasible scenarios of changes in rural areas. The study is based primarily on the qualitative analyses and on the knowledge of experts, specialising in rural subject matter in its different thematic domains.

2. The method

Scenarios may have explorative or anticipative character. In the first case, we will deal with formulation of a logical sequence of events leading to a feasible future, with consideration of the key tendencies in the systemic environment. In the second case, we will assume an image of the future (a vision) and the events that will influence the reality in such a manner that the assumed image will be realised. In the study, the explorative scenario is used, such that probability was assessed of appearance of definite factors along with the strength of their influence. Six groups of factors were distinguished (economic, technological, legal and administrative, political, socio-demographic, natural) and for each of these groups, the most important conditions were analysed. In the opinion of the experts, they have the most significant influence on future events in rural areas.

Four types of scenarios can be elaborated in the framework of the method applied:

- the optimistic scenario, accounting for the most advantageous development trends regarding rural areas;
- the pessimistic scenario, being the opposite of the optimistic one;
- the most probable scenario, which can also be referred to as the most realistic one; and
- the surprise scenario, which assumes random shifts in the directions of changes in rural areas (this scenario was not analysed in the study).

Fig. 1. Groups of factors influencing rural areas

In view of the expert-based methodology of the study, an essential role was played in the construction of scenarios by the knowledge and experience of the experts. In this concrete case, these experts were four

professors from three academic centres, their research interests concerning rural areas¹.

The procedure of developing the scenarios encompassed three stages, each of these stages being composed of a series of steps. The first stage consisted in identification of the most significant factors shaping the future of Polish countryside. Each of experts could propose up to four factors in each of the six groups. The assessment of the influence, exerted by the trends related to each of factors (increase, stabilisation, decrease) on future changes within the rural areas was the second and the most important stage of the investigation. The initial step in this stage consisted of the scoring assessment of the strength of influence, exerted by each of the possible trends, on the scale from “-5” (highly negative influence) to “+5” (highly advantageous influence). The second step consisted in the indication of probabilities of certain trends appearing, with the values of these probabilities for each factor necessarily summing up to 1. In the third stage the scenarios were formulated.

3. Identification of factors shaping the future of rural areas

Experts have formulated a set of diverse factors in the group of economic conditions, with the main emphasis naturally being placed on these factors, which are associated with the situation of farming. In Poland, agriculture still constitutes the leading economic function in most rural areas and so the development of these areas depends primarily upon the economic vigour of farms. Experts were also of the opinion that a vital role in the shaping of the future of rural areas will be played by the subsidies from the European Union and by the situation on the global market, with special emphasis on the role of the “emerging” economies (see Table 1).

The conditioning factors, which were listed for the technological sphere, focused on three issues. Thus, the development of the rural areas in the perspective of the coming decades will depend upon the innovativeness of the production solutions in the farming sector, the digital and the transport-

¹ Ekspert 1 – Roman Kulikowski (Institute of Geography and Spatial Organization, Polish Academy of Sciences), Ekspert 2 – Krzysztof Janc (Wrocław University), Ekspert 3 – Marcin Wójcik (Lodz University), Ekspert 4 – Jerzy Bański (Institute of Geography and Spatial Organization, Polish Academy of Sciences).

wise accessibility of the countryside, as well as the level of equipment of the households with the basic elements of the technical infrastructure. An important part of the rural areas in Poland is still characterised by the low values of indicators of technical infrastructure. Hence, it is not surprising that the experts indicated as important the factors that have reached high standards in rural areas of Western Europe quite a long time ago (see Table 2).

Table 1. Identification of economic factors and assessment of their influence on the future of rural areas

Expert	Factor	Trend	Strength of influence	Probability
Expert 1	Long-term tendency of change in the level of economy in Europe	+	5	0.7
		+/-	2	0.2
		-	-3	0.1
	Ratio of prices of agricultural produce and other products	+	4	0.4
+/-	4	0.4		
-	-2	0.2		
Magnitude of exports of agricultural produce	+	2	0.3	
	+/-	5	0.5	
-	-3	0.2		
Magnitude of means for the development of ecological farming	+	4	0.5	
	+/-	3	0.4	
	-	-3	0.1	
Expert 2	Significance of online services	+	4	0.7
		+/-	2	0.2
		-	-3	0.1
	Role of large Asian countries in the world economy	+	-4	0.6
		+/-	-1	0.2
		-	4	0.2
	Dynamics of changes in conditions for economic activity	+	-3	0.6
		+/-	1	0.3
-		4	0.1	
Level of unemployment	+	-5	0.3	
	+/-	-1	0.4	
	-	4	0.3	
Expert 3	Level of entrepreneurship	+	4	0.2
		+/-	1	0.5
		-	-4	0.3

Expert	Factor	Trend	Strength of influence	Probability
Expert 3	Liberalisation of food trade	+	3	0.2
		+/-	1	0.6
		-	-3	0.2
	Level of agricultural production	+	1	0.1
		+/-	2	0.5
		-	-3	0.4
Magnitude of assistance means from the EU	+	2	0.3	
	+/-	1	0.3	
	-	-4	0.4	
Expert 4	Dynamics of the economic development of the country	+	5	0.2
		+/-	2	0.5
		-	-5	0.3
	Competitiveness of the emerging economies	+	-3	0.6
		+/-	1	0.3
		-	3	0.1
	Significance of the food sector in the GDP	+	3	0.1
		+/-	1	0.3
-		-3	0.6	
Degree of multi-functionality of the countryside	+	4	0.5	
	+/-	-1	0.4	
	-	-3	0.1	

Source: own elaboration

Table 2. Identification of technical factors and assessment of their influence on the future of rural areas

Expert	Factor	Trend	Strength of influence	Probability
Expert 1	Equipment of rural areas with technical and road infrastructure	+	5	0.6
		+/-	-2	0.3
		-	-3	0.1
	Equipment level of rural dwellings	+	3	0.7
		+/-	2	0.2
		-	-3	0.1
	Transport-wise accessibility to bigger cities	+	5	0.4
		+/-	-2	0.4
		-	-3	0.2

Expert	Factor	Trend	Strength of influence	Probability
Expert 1	New technologies in farming	+ +/- -	4 -2 -3	0.5 0.3 0.2
Expert 2	Rate of technological changes	+ +/- -	-2 1 2	0.8 0.1 0.1
	Industrial investments level	+ +/- -	-2 1 2	0.8 0.1 0.1
	Dependence upon the Internet	+ +/- -	-2 1 3	0.5 0.4 0.1
	Level of use of alternative energy sources	+ +/- -	3 1 -2	0.7 0.2 0.1
Expert 3	Degree of mechanisation	+ +/- -	2 5 -2	0.3 0.6 0.1
	Degree of computerisation	+ +/- -	5 -3 -5	0.7 0.2 0.1
	Degree of equipment with technical infrastructure	+ +/- -	4 1 -4	0.2 0.7 0.1
	Area of agricultural land	+ +/- -	-2 4 -2	0.1 0.3 0.6
Expert 4	Transport-wise accessibility of peripheral areas	+ +/- -	2 -1 -3	0.6 0.3 0.1
	Dynamics of ICT development	+ +/- -	3 1 -1	0.3 0.5 0.2
	Rate of technological changes in agriculture	+ +/- -	2 1 -1	0.3 0.5 0.2

Expert	Factor	Trend	Strength of influence	Probability
Expert 4	Degree of diversification of energy sources	+	3	0.6
		+/-	-1	0.3
		-	-3	0.1

Source: own elaboration

In the legal and administrative sphere, most of the factors identified are related to the role of regulations, which are established at the level of the European Union and, in the opinion of most experts, an increase of dependence upon the centrally imposed regulations will bring disadvantageous changes in rural areas. The second category of factors is constituted by the conditions associated with making decisions at local level. Furthermore, regarding the future of the countryside, significance should also be assigned to the liberalisation of the law and its clarity (see Table 3).

Table 3. Identification of legal and administrative factors and assessment of their influence on the future of rural areas

Expert	Factor	Trend	Strength of influence	Probability
Expert 1	Degree of restrictiveness of the legal regulations concerning the revitalisation of rural areas	+	4	0.5
		+/-	2	0.2
		-	-3	0.3
	Degree of clarity of regulations concerning the implementation of the EU CAP	+	4	0.4
+/-		2	0.3	
-		-3	0.3	
Degree of regulation in the laws concerning alternative energy sources	+	4	0.4	
	+/-	2	0.5	
	-	-2	0.1	
Degree of restrictiveness of laws on maintenance of land in good culture	+	4	0.4	
	+/-	1	0.4	
	-	-2	0.2	
Expert 2	Degree of dependence upon the international law	+	-3	0.6
		+/-	-1	0.3
		-	2	0.1

Expert	Factor	Trend	Strength of influence	Probability
Expert 2	Scope of central regulations	+	-3	0.5
		+/-	1	0.3
		-	3	0.2
	Level of control over the flow of information	+	-5	0.6
		+/-	2	0.3
		-	3	0.1
	Level of control over the flow of human capital	+	-2	0.5
		+/-	1	0.2
		-	3	0.3
Expert 3	Significance of the Community Law	+	-4	0.7
		+/-	-1	0.2
		-	4	0.1
	Degree of self-government	+	5	0.4
		+/-	1	0.3
		-	-4	0.3
	Degree of freedom on the land market	+	3	0.4
		+/-	1	0.4
-		-3	0.2	
Level of spatial planning	+	3	0.5	
	+/-	1	0.3	
	-	-2	0.2	
Expert 4	Clarity of the legal-administrative procedures	+	2	0.5
		+/-	-2	0.4
		-	-3	0.1
	Liberalisation of laws	+	2	0.3
		+/-	1	0.5
		-	-2	0.2
	Degree of self-government	+	4	0.4
		+/-	1	0.5
		-	-3	0.1
	Role of UE in the shaping of the legal procedures	+	-3	0.6
		+/-	2	0.3
		-	1	0.1

Source: own elaboration

In the sphere of political conditions, the most important group is constituted by the factors associated with the political activity of inhabitants of the countryside. An increase of the level of this activity should, as a rule, bring positive changes in rural areas. High significance is also attached to the democratisation of the political life in the country, as well as the active functioning of the political parties having a peasant flavour. It must be added that peasant parties have been always playing a vital role in the Polish political life. Since the downfall of the socialist system – that is, for more than 25 years now – the representatives of the peasant party (Polish Peasant Party – PSL) have continued to form a group of MPs and participated in several administrations. Experts have also emphasised that the development of rural areas will be significantly influenced by the political situation in the EU and in the world.

Table 4. Identification of political factors and assessment of their influence on the future of rural areas

Expert	Factor	Trend	Strength of influence	Probability
Expert 1	Role of support for competitiveness of rural areas in the assistance programs	+	5	0.4
		+/-	-2	0.5
		-	-3	0.1
Expert 1	Role of inhabitants of countryside in self-governmental authorities	+	5	0.2
		+/-	1	0.6
		-	-4	0.2
Expert 1	Role of inhabitants of countryside in political organisations	+	5	0.3
		+/-	1	0.5
		-	-3	0.2
Expert 2	Level of direct democracy	+	4	0.7
		+/-	-1	0.2
		-	-3	0.1
	Expert 2	Military conflicts	+	-1
+/-			1	0.7
-			2	0.1
Expert 2	Intensity of terrorism	+	-2	0.7
		+/-	1	0.2
		-	3	0.1
Expert 2	Tendencies to get independent of the central authorities	+	4	0.6
		+/-	-1	0.2
		-	-4	0.2

Expert	Factor	Trend	Strength of influence	Probability
Expert 3	Role of peasant party in the country	+	-2	0.1
		+/-	-1	0.4
		-	3	0.5
	Decentralisation of authority	+	4	0.2
+/-		2	0.4	
-		-3	0.4	
Political integration in the EU	+	-1	0.5	
	+/-	2	0.3	
	-	-2	0.2	
Political tensions in the EU	+	-4	0.6	
	+/-	1	0.2	
	-	4	0.2	
Expert 4	Liberalisation of customs policy of the EU	+	-3	0.3
		+/-	1	0.4
		-	2	0.3
	Role of political parties in self-governmental bodies	+	-3	0.3
+/-		-1	0.4	
-		3	0.3	
Degree of dependence of the state upon the EU policy	+	-3	0.6	
	+/-	-1	0.3	
	-	2	0.1	
Level of political relations with Russia, Belarus and Ukraine	+	4	0.4	
	+/-	1	0.3	
	-	-4	0.3	

Source: own elaboration

From among the socio-demographic factors, influencing the future of the rural areas in Poland the leading role was ascribed to the changes in the age structure of inhabitants of the countryside. This factor is brought forward by all the experts. The age structure will be the result of the balance of migrations between urban and rural areas, the level of childbearing of women and the balance of foreign migrations. Of high importance will also be the social situation in the countryside, including the differentiation of the levels of wealth and education among the rural inhabitants.

Table 5. Identification of the socio-demographic factors and assessment of their influence on the future of rural areas

Expert	Factor	Trend	Strength of influence	Probability
Expert 1	Social position of the inhabitants of countryside	+	5	0.3
		+/-	2	0.4
		-	-2	0.3
	Share of population in working age in the total rural population	+	5	0.2
+/-		1	0.5	
-		-3	0.3	
Social capital of rural inhabitants	+	3	0.4	
	+/-	2	0.3	
	-	-2	0.3	
Share of young women in the entire female population in the countryside	+	4	0.3	
	+/-	1	0.5	
	-	-3	0.2	
Expert 2	Number of births	+	4	0.3
		+/-	-1	0.3
		-	-4	0.4
	Inflow of migrants from abroad	+	-5	0.8
+/-		-1	0.1	
-		4	0.1	
Inflow of urban population	+	4	0.6	
	+/-	1	0.3	
	-	-3	0.1	
Level of poverty in the countryside	+	-4	0.2	
	+/-	-2	0.3	
	-	4	0.5	
Expert 3	Degree of depopulation of the countryside	+	-3	0.6
		+/-	2	0.2
		-	3	0.2
	Social disproportions in the countryside	+	-4	0.4
+/-		1	0.4	
-		3	0.2	
Social pathologies	+	-5	0.4	
	+/-	1	0.3	
	-	5	0.3	
Social trust	+	5	0.2	
	+/-	3	0.1	
	-	-4	0.7	

Expert	Factor	Trend	Strength of influence	Probability
Expert 4	Rural population number	+	-2	0.2
		+/-	1	0.5
		-	3	0.3
	Level of social activity of rural inhabitants	+	3	0.3
		+/-	-1	0.4
		-	-3	0.3
	Advancement of ageing of rural population	+	-4	0.4
		+/-	-2	0.5
		-	2	0.1
	Availability of social infrastructure in the countryside	+	2	0.3
		+/-	-1	0.5
		-	-2	0.2

Source: own elaboration

In the sphere of nature, the experts indicated similar kinds of conditions. In their opinion, the future image of the countryside will firstly depend upon the processes of adaptation to climatic change and upon the activities. They were associated with nature protection, with an excessive increase of surfaces, then protected in various ways. It is a potential source of disadvantageous changes in the countryside, as resulting from the checks on the possible investment and development projects as well as on the use of modern techniques in farming.

Table 6. Identification of the nature-related factors and assessment of their influence on the future of rural areas

Expert	Factor	Trend	Strength of influence	Probability
Expert 1	Level of biodiversity	+	4	0.3
		+/-	3	0.4
		-	-2	0.3
	Quality of underground waters	+	4	0.4
		+/-	3	0.4
		-	-2	0.2
	Area of ecological farms	+	5	0.6
		+/-	1	0.3
		-	-3	0.1

Expert	Factor	Trend	Strength of influence	Probability
Expert 1	Air purity in the countryside	+	4	0.4
		+/-	4	0.4
		-	-2	0.2
Expert 2	International environmental regulations	+	-4	0.5
		+/-	-2	0.4
		-	3	0.1
	Ecological catastrophes	+	-5	0.2
+/-		-1	0.7	
Climate changes	+	-1	0.6	
	-	4	0.1	
Expert 3	Climatic anomalies	+	-3	0.5
		+/-	-3	0.2
		-	4	0.3
	Magnitude of protected areas	+	2	0.4
+/-		5	0.4	
Level of pollution	+	-4	0.2	
	-	5	0.4	
Expert 4	Degree of landscape 'going wild'	+	2	0.8
		+/-	1	0.1
		-	-1	0.1
	Magnitude of protected areas	+	-3	0.5
+/-		1	0.4	
-		2	0.1	
Share of the large acreage farms	+	-2	0.7	
	+/-	1	0.2	
	-	2	0.1	
Role of forestry and agriculture in diversification of energy sources	+	4	0.5	
	+/-	-1	0.4	
	-	-3	0.1	
Climate warming	+	3	0.4	
	+/-	1	0.3	
	-	-1	0.3	

Source: own elaboration

4. Three scenarios

4.1. *The optimistic scenario*

The factors identified by the experts display a very wide differentiation. Yet the averaged strengths of influence in each of the six groups of conditions considered are not very pronounced. The most optimistic changes ought to be expected in the natural and socio-demographic spheres, while the least important influence – in the opinion of the experts – will be exerted by the legal and administrative factors.

According to the first of the experts, the most advantageous trends for the development of rural areas will take place in the political and economic spheres. These include, in particular, the support for the competitiveness of the rural areas, increasing social and political activity of the rural inhabitants, the dynamic development of the European economy and the stabilisation of exports of food products.

The strength of influence in the remaining groups of factors is only slightly lower. This expert expects the positive changes associated with the improvement in the technical equipment of the rural households, the increase of the share of population in working age and the popularisation of production of healthy food. In the eyes of the second expert, the most important positive influence on rural areas should be associated with the economic and socio-demographic factors. Yet, it must be stressed that the probability of appearance of these positive trends is very limited in the opinion of the same expert. The positive influence of the factors from other groups would be much weaker.

The third expert assigns the most pronounced positive role to the natural and technological factors, among which one finds the following: stabilisation of the degree of mechanisation in farming; development of ICT in the countryside; stabilisation of the area of the legally protected surfaces; decrease of environmental contamination; and the increase of areas of natural landscape. Other groups of factors would exert weaker influence on the development of rural areas, but this expert indicates amongst them a very significant role of the social factors.

The fourth of the experts expresses a decidedly lower assessment of the potential strength of influence of factors. He indicates only one factor – the increase of dynamics of the economic development at the national level –

that could have a really pronounced impact on the positive course of the development processes within the rural areas. In the opinion of the fourth expert, the strength of the positive influence of other factors would thus attain a rather moderate level.

Table 7. Average values of the strength of influence exerted by the factors in the considered groups of factors according to the optimistic scenario

Factor group	Expert 1	Expert 2	Expert 3	Expert 4	Average strength of influence
Economic	4.5	4.0	2.7	3.7	
Technological	4.2	2.5	4.5	2.5	
Legal-administrative	4.0	2.7	3.7	2.2	
Political	4.5	2.7	3.2	2.7	
Socio-demographic	4.2	4.0	4.0	2.5	
Natural	4.2	3.7	4.7	2.7	

Source: own elaboration

On the basis of the analysis carried out, a scenario could be proposed assuming the most advantageous socio-economic changes within the rural areas. This scenario would presume the increase of dynamics of economic growth in Poland. This growth, in turn, would stimulate the positive economic trends in rural areas, including the appearance of new businesses and economic undertakings, the expansion of the job offer and an increase of incomes of the households. The food sector will still be playing the leading role in the countryside, while new functions will appear in its environment (service, production, energy generation). Owing to the specialisation of food production and the high quality of Polish food products, they will be in demand on both the domestic and foreign markets. An important stimulating role will still be played in food production by the agricultural subsidies.

There will also be an improvement in the development of the ICT technologies, ensuring free access to the broadband internet for the inhabitants of the countryside, which will enable the use of e-services and e-commerce and will lead to the wider use of teleworking. On the other hand, improvement of the transport-wise accessibility of the peripheral areas will enhance their attractiveness regarding tourist and recreation activities, and

will facilitate the development of the health-related services. Rural areas will make an increasing use of alternative energy sources, based primarily on the raw materials originating from forestry and farming. This will also contribute to the increase of the functional diversification of the countryside.

The social and economic success in rural areas will be the effect of decentralisation of the authority and of the increased self-governmental awareness of the inhabitants. There will be an increase in their activity in the NGOs and in political organisations. Introduction of the new and more transparent electoral procedures should weaken the influence of the political parties in local authorities and should break down the coteries, existing in some regions, which should first take care of all their own interests. Other regulations and procedures should also limit the local nepotism. Decisions, concerning the directions of local development and the distribution of public means, will be taken by the inhabitants, who have the best knowledge of the needs within the confines of their local homelands. At the same time, there will be an improvement in the legal and administrative system, with the legal procedures undergoing simplification.

Population numbers in rural areas will be gradually decreasing in connection with the increase of the degree of urbanisation of the country, the territorial expansion of the cities and the low levels of childbearing. Improvement of the transport-wise accessibility and the availability of infrastructure, along with the development of the new functions in the countryside, will contribute to limitations in the outflow of population to towns.

The outflow of young women is expected to be significantly curbed. On the other hand, it is also expected that a group of young and enterprising town dwellers will move to the countryside. Due to this process, the age structure of the rural population will improve, but this phenomenon will have a selective character. At the same time, demand will increase for the elements of social infrastructure and, in this respect, the countryside will be self-sufficient to a higher degree than nowadays. The processes mentioned will result both in the improvement of social capital in rural areas and in the reduction of problems associated with social exclusion and other pathological phenomena.

An increase in the social awareness of the consequences of human impact on nature will bring about a more rational use of natural resources. Using pure energy, closed cycles of waste and contaminant management will appear

in areas without manufacturing, as well as producing and processing food with the use of natural methods. Such areas will become attractive in terms of tourism and recreation. Paradoxically, the surface of the protected areas will shrink, where the economic activity of people is sometimes unreasonably limited causing socio-economic stagnation. As the sources of 'pure' energy, the roles of forestry and agriculture will increase. Around this direction of development new jobs will appear and the multi-functionality of farms will increase. A highly significant role will be played by the climate changes. The slow increase of temperature will prolong the growing season, thereby increasing production volume and enhancing the diversity of agricultural production. Yet, the improvement of effectiveness of the farming sector will depend upon the capacity of farms to adapt to the increasing frequency of the dangerous extreme phenomena.

4.2. The pessimistic scenario

When considering the pessimistic scenario, most experts assumed that the disadvantageous processes in the countryside will be the effect of socio-demographic and economic trends. In the opinion of the first expert, in the pessimistic scenario, the disadvantageous processes will result from the negative tendencies in the groups of technological and political factors. The second expert thought that the most disadvantageous changes may be generated by the natural factors (harmful climate changes and extreme phenomena) and the socio-demographic factors. The same person sees also a pronounced role of the economic factors (increase of unemployment and competition from the Asian countries). According to the third expert, the disadvantageous processes in the countryside will get shaped mainly by the socio-demographic conditions (social pathologies and disproportions, as well as lack of social trust) and economic ones (decline of entrepreneurship and limitation of the financial support from the European Union). In the opinion of the fourth expert, the distribution of the negative influences will be more even with the negative processes resulting firstly from economic, political and socio-demographic conditioning factors.

Table 8. Average values of the strength of influence exerted by the factors in the considered groups of factors according to the pessimistic scenario

Factor group	Expert 1	Expert 2	Expert 3	Expert 4	Average strength of influence
Economic	-2.7	-3.7	-3.5	-3.5	
Technological	-3.0	-2.0	-3.2	-2.0	
Legal-administrative	-2.5	-3.2	-3.2	-2.7	
Political	-3.0	-2.5	-2.7	-3.2	
Socio-demographic	-2.5	-4.0	-4.0	-3.2	
Natural	-2.2	-4.2	-2.5	-2.2	

Source: own elaboration

The pessimistic scenario assumes the decrease of dynamics of the economic growth in Poland resulting from the prolonged global crisis and regional political conflicts. The increase of competition from the side of the emerging economies will curb domestic production, resulting in the increase of the share of foreign capital in this production, while this foreign capital aims at transferring profits abroad. The significance of the food sector will drop and the share of food products imported from abroad will then increase. These processes will limit the possibility of the development of new economic functions on rural areas, thereby contributing to conserving the excessive role of the farming sectors in numerous places.

The negative trends in the group of technological factors appear to have a low probability. Yet the concentration of attention in the public investment policy on the metropolitan areas may slow down the development of technical infrastructure in the countryside. In the 'blackest' scenario, liquidation of the regional railway lines, lack of modernisation of the municipal and county roads, liquidation of local coach lines in conditions of unprofitability and the absence of subsidies may even worsen the accessibility to some of the peripheral areas in the country. High technological costs of the "pure" energy and the preference for the nuclear energy will make difficult the process of diversification of the energy sources. This will have a particular impact on the rural areas, where production of energy on the basis of renewable sources has the biggest chance of development and constitutes an opportunity for the future.

Complication of the legal and administrative procedures, along with the lowering of the level of liberalisation of law will make the activity of the small and medium enterprises in the countryside more difficult. The necessity of referring to legal counselling and prolonged procedures related to bureaucratic matters will push down the interest in creation of new businesses. At the same time, the increase of the role of regional and central authorities in stimulation of local development will decrease the activity and the significance of the functioning local groups. The increasing role of Brussels in defining the legal procedures and in execution of law will contribute to a decrease in the possibility of self-development and to the further extension of the bureaucratic maze which is, by now, already blooming.

From among the political factors, the negative role will firstly be reflected in the decrease of the level of cooperation with the eastern neighbours. This will result in the difficulties, related to foreign trade (for instance, exports of food, imports of energy carriers) and in political tensions, making social and the cultural cooperation with neighbours difficult. Political boundary will constitute a barrier to the flow of goods, people and services, and this will bring about further peripherisation of the eastern regions of Poland. Party politics at the level of local self-governmental bodies will worsen corruption and contribute to emergence of local coteries. Excess dependence of the state upon the EU policies will, in the case of increase of influence exerted by the strongest economies, bring about the economic subordination and an increase in the level of social frustration.

The increase in the population numbers in the countryside will result from the movement of urban dwellers into suburban areas and migration stagnation on the traditional rural areas. Problems on the labour market will limit the migration outflow from the countryside, which will conserve the agrarian structure to date with the maintenance of the excess labour in agriculture. At the same time, there will be an increase in the share of population in a post-productive age in rural areas, increasing the demand with respect to the systems of social and health care. Given the ineffective social infrastructure, this will cause many problems associated with poverty and with social exclusion.

There will be an excessive increase in the surface of the protected areas, making it difficult for many municipalities to carry out new investment projects. Tourism and recreation will turn out to be overestimated as the development functions. On the other hand, the development of nuclear

energy and the strong lobby of the producers of conventional energy will weaken the dynamics of growth of 'pure' energy. There will be an increase in the share of the large-acreage farms which, in the face of competition from the farming sectors of other countries, will move towards the industrial production of genetically modified food. Owing to this, overall agricultural production may increase, but problems will appear concerning the selling of the excess food produce. Besides, cheap food will not bring its producers satisfactory profits. Industrial production methods will also lower the quality of the food produced.

4.3. *The most probable scenario*

In the most probable scenario, the role of the groups of factors analysed is more balanced and their strength of influence is usually rather low. Only the first of our experts assessed the influence of the four groups of factors in a highly optimistic manner – the strength of influence exerted by the economic, technological, legal, and natural conditions is, in his case, only slightly lower than in his optimistic scenario. Regarding the remaining three experts, the average strengths of influence of the factor groups rarely exceed the value of 1, although this influence is usually positive. The most disadvantageous influence of the socio-economic factors is indicated by the third expert and of the legal factors – by the second expert.

Table 9. Average values of the strength of influence exerted by the factors in the considered groups of factors according to the most probable scenario

Factor group	Expert 1	Expert 2	Expert 3	Expert 4	Average strength of influence
Economic	4.5	-1	0	0	
Technological	4.2	-0.7	2.2	1.7	
Legal-administrative	3.5	-3.2	1.7	0.2	
Political	0.7	1.7	0	0.2	
Socio-demographic	1.7	-0.2	-4.0	0.7	
Natural	3.7	-0.2	1.5	0.5	

Source: own elaboration

In the most probable scenario, the stabilisation of the economic growth of the country is assumed. A disadvantageous influence on the economic situation will be exerted by increasing competitiveness from the side of the emerging economies, mainly from the Asian countries as more attractive than the Polish economy. This may result in the loss of jobs in the productive sectors, also including the food sector. The share of agriculture in the GDP will decrease, but, at the same time, its productivity will increase. The limitation of employment in farming and low job generation capacity of the labour market in the countryside may trigger an increase in unemployment. Development of new functions in the countryside and in the very farming sector may constitute an instrument helping to overcome these problems. Support for agriculture from the EU will decrease but, at the same time, there will be an increased promotion of ecological farming.

An improvement in the technical equipment of the countryside can be expected within the frame of the next decades to come. Improvement of transport-wise accessibility will increase the investment-related attractiveness of the peripheral areas, primarily in the domains of recreation (second homes and services, associated with catering to the visitors), tourism, health care (health resorts, spas, residential centres for the elderly) and production of 'pure' energy. Common access to the tele-computing services will increase the share of persons working at home (work-at-a-distance).

Some of the latter will choose to stay in the countryside, far from the madding crowd of the overpopulated cities and suburban zones. In terms of technical factors, the highest significance is attached to the diversification of the energy sources. Countryside will be making use of the new energy sources to a higher degree than towns, but production of this energy will primarily have a local dimension.

The stabilisation and the clarity of the legal and administrative procedures will facilitate and accelerate the paperwork related to the servicing and registering of the new businesses. However, a negative influence will come from the increase of significance of the European Union in the shaping of the legal regulations. Some of these regulations may increase the general bureaucratic burden or impose more complex procedures than the ones in force today. However, the role of the self-governmental bodies in the establishment of local law will not change.

Among the political factors to be analysed, the most pronounced role will be played by the deepening of cooperation with the eastern neighbours. The

political significance of the strongest economies of the Community (Germany, France, United Kingdom, and Italy) will increase. This might bring about political and social conflicts inside the EU and be a disadvantageous influence from the intensification of the global terrorism. Regarding the elections to the local self-governmental bodies, the maintenance of the existing electoral procedures will conserve the party schemes, with the consequence consisting in not always professional management of the local structures.

The socio-demographic phenomena will exert rather negative influence, but this influence will be quite limited. Population number in rural areas will also stabilise and this stabilisation will be accompanied by spatial polarisation. Rural areas within the metropolitan zones and in the vicinity of the sub-regional centres will feature population increase, while the 'traditional' countryside (far from the urban centres and in the periphery) will undergo the depopulation processes. A similar direction of change will concern the age structure of the population – namely on the areas of population growth the age structure will be stable or even may get younger – while in the depopulating areas there will be a slight increase of the share of population in the post-productive age (these areas already suffer from the shortage of young population).

Stabilisation regarding the social activity of the inhabitants of the countryside is now viewed as a rather negative phenomenon, since the level of this activity is not high as of now. Besides, the respective processes will not be conducive to the development of the social infrastructure, primarily in the domains of health care and education, which will remain concentrated in towns and in municipal centres.

There is a high probability that the significance of the large-acreage farms will increase. This process was assessed as negative, in view of the possibility of appearance of the environmental degradation phenomena (soil erosion, increased mineral fertiliser and pesticide use, decrease of biodiversity) and destruction of the cultural landscape. Likewise, the increase of the surface of the protected areas was also assessed negatively, since this will make economic activity in the municipalities more difficult when affected by such protection. Nonetheless, this does not entail consenting to the arbitrary economic activity on the areas of valuable nature. The issue is firstly to avoid the excessive restrictions and unreasonable bans, associated with protection, which would stifle human initiative. An important challenge within rural areas will be constituted by the diversification of energy sources, connected with the use

of a part of the agricultural and forest produce for energy generation and with the development of the wind farms.

In terms of climatic change, the most probable phenomenon is the slow increase of global temperature. In our climatic zone, this will have a positive impact on the farming economy (prolonged growing season) and on the tourist and recreation services, but one should be prepared to face the increasingly frequent extreme weather phenomena (droughts, floods, violent storms, hurricanes).

5. Conclusions

The average values of the strength of influence, exerted by the considered groups of factors, provide the possibility of moving closer to an objective image of the potential development of the rural areas. The trends, which were indicated by the experts in the optimistic scenario, feature a decidedly higher strength of influence than those from the pessimistic and the most probable scenarios.

The roles of these individual factors are balanced with the somewhat more pronounced role of the economic factors and the least pronounced – of the political factors. On the other hand, in the pessimistic scenario, the strength of the influence of trends is more differentiated. The most disadvantageous effects are expected in the domain of the socio-demographic group of factors.

Among the most probable courses of events, the experts do expect a strong influence from the technological factors. All of them have pointed out an improvement in the technological sphere regarding the countryside. On the other hand, the socio-demographic factors will tend, most probably, to hamper the development of the rural areas. However, it should be emphasised that the strength of influence exerted by the trends in the most probable scenario – except for the socio-demographic sphere – serves to assign positive values, this being evidence for the general optimism of the experts.

In the perspective of the decades to come, the image of the Polish countryside will most probably not undergo radical shifts, but it can be proposed that this countryside will be more diversified, more socially and economically active, and more attractive as the place of residence and of work. Making effective use of diversity and of the specific competitive edges

belongs among the fundamental objectives in the contemporary strategies of the socio-economic development of the regions.

The gist of the matter concerns the smart use of cultural identity, promotion of the importance and value of the regional and local products, care for the specific elements of the landscape architecture and taking sufficient advantage of place-based social and economic potential and the natural conditions, including the natural resources. Within all regions, the areas will emerge featuring qualities resulting from the location with respect to the large urban centres and their accessibility, quality of natural environment, as well as specific economic and socio-cultural functions. The mosaic character of the countryside will result primarily from the properties of the sub-regions (local homelands) which will take advantage of their development opportunities in a much better way than today.

Owing to these processes, the attractiveness of the countryside will increase. Improvement of transport-wise accessibility and possibility of working at home (telework) will extend the range of the residential areas distinctly outside of the suburban zone. The choice of the place of residence will be made on the basis of its natural characteristics (vicinity of a forest, a river, or a water body, attractive landscape, etc.), the cultural qualities (e.g. the outlook and the architecture of the village, customs, interesting historical monuments), as well as technical aspects (equipment with high quality technical and social infrastructure, shops, basic services, and so on). Even though agriculture will continue to fulfil an important economic function, the incomes of households will mainly originate from the activities in other sectors of economy (service, construction, energy), or from the businesses indirectly associated with agricultural production (food processing, agri-tourism, protection of nature and of cultural heritage).

These current processes unambiguously imply the increase of the social awareness of rural inhabitants and the increase of their entrepreneurship. One particularly vital role in the development of the rural areas will be played by the small entities functioning in the spheres of service and food production. Family farms ought to secure for themselves appropriate organisational forms allowing for an effective competition in the relevant markets, especially in the food product markets, to guarantee profitable selling of their products. Without a true engagement of a large group of farmers in such undertakings, it will indeed be difficult to succeed.

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