



INSTITUTE OF AGRICULTURAL
AND FOOD ECONOMICS
NATIONAL RESEARCH INSTITUTE

**Development *per*
public policy support
in the food economy
– the example of Poland**

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ECONOMY UNDER THE CONDITIONS OF
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Development *aVc* public policy support in the food economy – the example of Poland

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This publication was prepared within the IAFE-NRI Multi-Annual Program 2011-2014 “Competitiveness of the Polish food economy in the conditions of globalization and European integration”, as a contribution to the research on the following subject **Analysis of the effects of selected instruments of Common Agricultural Policy and Rural Development Policy** within the framework of the research task *Variant analysis of the impact of CAP instruments on the changes in agriculture and rural areas*.

The main objective of the study is an analysis of the development and chances of achieving long-term goals of agriculture, food industry and rural areas in Poland based on the CAP instruments. The authors present the issues of public policy role, market failures and asymmetries in access to market information, the analyses of global factors affecting the functioning of the food economy, the analyses of the current situation in agriculture and food industry, the characteristics of public assistance programmes for the agri-food markets, an analysis of the land factor and the role of this factor in shaping the development of agriculture and non-agricultural activities in rural areas and a summary of considerations regarding the above-mentioned areas.

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1. Introduction

At present, the global experiences prove that the market and the state have to co-exist and the state intervention should be always limited to support market mechanism and not replacement thereof. The state should interfere only when it has a clear advantage over the market mechanism; hence only when the market fails to protect the general interests of the society¹. In the agricultural sector the intervention is manifested by state's involvement in the shaping of agricultural prices, awarding different types of investment grants or through the establishment of norms and standards.

The contemporary global economy often rejects the thesis on the perfect market² thereby justifying the role of state intervention. When explaining the main reasons for intervention in the modern global agriculture J.E. Stiglitz³ and J. Wilkin⁴ point to the high level of risk linked to agricultural activity and lack of efficiency as regards prevention of this risk. This risk results from e.g. changing climate conditions, lack of sufficient information and underdevelopment of agribusiness structures, including also consultancy. The need for interventions in the agribusiness sector is justified also by: the phenomena of external costs and effects, low price elasticity of supply, lower level of labour productivity than in other sectors of the national economy, low mobility of the workforce employed in agriculture, the need to provide public goods, implementation of the sustainable development concept.

The CAP constitutes an example of state intervention in the food sector, which among its instruments has market-based instruments (referring to supply and demand regulation) and non-market instruments (direct and indirect grants). The market-based instruments, related to price support, favour the biggest producers, in particular the most productive ones and producers of goods. Thus they fail to meet the criterion of fairness and providing support to the weaker as the reason for intervention⁵. The rural development programmes are an example of non-market instruments. As an instrument of state intervention policy they provide an opportunity to stabilise the policy in several production cycles. They stimulate changes as regards the production structures, competitiveness improvement, environmental protection and multi-functional

¹ A. Woś, *Transformacja polskiego sektora żywnościowego*, IERiGŻ, Warszawa 1995.

² A. Czyżewski, *Makroekonomiczne uwarunkowania rozwoju sektora rolnego*, [in:] A. Czyżewski (ed.), *Uniwersalia polityki rolnej w gospodarce rynkowej – ujęcie makro i mikroekonomiczne*, Wydawnictwo Akademii Ekonomicznej w Poznaniu, Poznań 2007, p. 24 and the following pages.

³ J.E. Stiglitz, *Some theoretical Aspects of Agricultural Policies*, "The World Bank Research Observer" 1987, Vol. 2, Issue 1, January, p. 52.

⁴ J. Wilkin, *Interwencjonizm państwowy w rolnictwie: dlaczego był, jest i będzie*, [in:] Materiały z konferencji „Dostosowania polskiego rynku rolnego do wymogów Unii Europejskiej”, ARR, Warszawa 2003, p. 27 and the following pages.

⁵ W. Rembisz, *Krytyczna analiza podstaw i ewolucji interwencji w rolnictwie*, „Współczesna Ekonomia” 2010, No 4(16), p. 10.

development of rural areas. Thus they constitute the basic instrument supporting the process of food economy and rural areas modernisation.

The CAP is also one of the most important pillars of European integration, in determining the functioning of the food sector and rural areas in Europe. Among its achievement there is the creation of the European common market for agri-food products. The mechanisms of the CAP and related policies are aimed at improving the profitability and competitiveness of the agriculture and food industry, environmental protection as well as stable and sustainable development of rural areas in economic, social and natural dimensions.

The ongoing debate on the EU forum concerning the future of the CAP after 2013 indicates that this policy will play a key role in ensuring food security, sustainable development of agriculture and rural areas, as well as natural resources management. It will be an effective instrument focused on new Community challenges, for instance, those related to: resources protection, climate change, water resources management, biodiversity, renewable energy as well as risk and crisis management. According to the Government of the Republic of Poland, it is appropriate to maintain the current structure of the CAP, i.e. the common organisation of markets, the system of direct payments and rural development policy with an appropriate level of Community funding – at least in its present amount.

The Resolution on the CAP towards 2020 adopted by the European Parliament in June 2011 includes: “Meeting the food, natural resources and territorial challenges of the future” and therefrom it transpires that food security remains a key challenge for the food sector, not only in the EU but around the world. According to the FAO projections, by 2050 the world population will grow to 9 billion (mostly in developing countries). This will make it necessary to increase food production by about 70%, while the availability of scarce resources, particularly water, energy and land will be limited. This implies a growing pressure of the global markets on increasing food production, risk of price fluctuations on agri-food markets, greater pressure on the natural resources. Food, just like in the past centuries, will be of strategic significance.

The best way to ensure food security will be to maintain stable and competitive agricultural and processing sectors by maintaining the production potential of rural areas, environmental sustainability, maintaining agricultural activities in rural areas and preventing depopulation. Eurobarometer surveys show that 90% of the EU citizens believe that agriculture and rural areas are important for the future of Europe and 83% are in favour of providing financial support for food producers. According to the European Parliament, a new agricultural policy should be focused on sustainable food production systems, based on the fundamental complementarity between the first pillar, including direct payments, and the second pillar, which includes measures to support rural development and modernisation of the agri-food sector. Food quality policy should be a priority area of the CAP for the EU to be able to maintain its leadership in this area. In the case of high-quality products, the use of risk

management, market protection and promotion tools should be made possible, while sustainable growth and competitiveness improvement of the European food sector should be promoted.

The subject of this publication deals with the issues of development and the role of public policy in the food industry illustrated with the Polish experience in the period after accession to the EU. With regard to the theoretical foundations of classical economics, Chapter Two presents the issues of public policy role, market failures and asymmetries in access to market information. Chapter Three provides an analysis of global factors affecting the functioning of the food economy in Poland. It refers mainly to macroeconomic factors such as growth in demand and prices on food markets, volatility in exchange rates, the role of transnational corporations in the functioning of food markets and the processes of globalisation and European integration. Chapters Four and Five contain, respectively, the analysis of the agricultural and food processing sectors. They included, *inter alia*, the analyses of the current situation in agriculture and food industry, the characteristics of public assistance programmes for the agricultural sector and assessments of changes in the agri-food markets as a result of covering them with the instruments of the Common Agricultural Policy. Chapter Six presents an analysis of the land factor and indicates the role of this factor in shaping the development of agriculture and non-agricultural activities in rural areas. The next chapter – Chapter Seven – evaluates the development and chances of achieving long-term goals of agriculture and rural areas development based on the new CAP instruments for the period until 2020. The analysis focuses on the presentation of the evolution of objectives and instruments of the CAP, an assessment of the current proposals of the European Commission, the expected results of this policy and points out the potential sources of conflict between contradictory internal objectives and instruments of future policy. Chapter Eight is a summary of considerations regarding the above-mentioned areas. The entire publication ends with a comprehensive list of literature used in the course of the study by its authors.

I hope that the publication in your hands answers, at least to some extent, to the questions on the effectiveness of public policies and the competitiveness of the agri-food sector. However, I am aware that we failed to provide answers to each and every question related to the publication title. The authors also know that despite the extensiveness of the study, we have not exhausted the list of questions related to the issue under consideration. Thus we will have the possibility to continue this serious discussion. Such a possibility is given to us thanks to the multi-annual programme implemented in 2011-2014 by the Institute of Agricultural and Food Economics – National Research Institute under the title “Competitiveness of the Polish food economy in the conditions of globalization and European integration”. The discussion on the issue will be continued on the platform of seminars and scientific conferences organised by the Institute, as well as in a publishing series of multi-annual programme reports.

2. Theoretical grounds for the use of the public policies

2.1. Concept of market failure as a rationale for government intervention

The extent and type of instruments the regional and structural policy of the European Union results from the postulate of an active role of government in the process of eliminating inefficiencies of market mechanisms within the concept of market failure⁶. This concept suggests that in the realities of the market economy, the structure and size of supply is not reflected in adequate level of demand as a result of the lack of autonomous re-balancing mechanisms⁷. In practice, the processes of allocation of goods and services, despite the assumption of conditions of perfect competition and complete information as attributes of a complete market, show a number of frictions. As a result, the state of actual equilibrium achieved by the market is characterised by the allocation of goods and services, which does not comply with Pareto optimum⁸. In broader terms, the concept of market failure is a trend in economic theory which identifies the scope and circumstances of observed defects of market mechanisms that lead to the perpetuation of market imbalances. In this context, one points out the positive aspects of market intervention by public authorities⁹.

K. Arrow¹⁰ was one of the first to point out that, in fact, one can distinguish two different states of efficiency in the allocation of goods depending on the degree of fulfilment of the Pareto demands. The first approach suggests that each allocation of goods in equilibrium meets only the demand of the so-called “poor efficiency” in the sense of Pareto. In this perspective, there is no balance on the market, which would potentially increase the level of usefulness of all its participants. Collective consideration of usefulness of operators is critical to this approach. In fact, one cannot distinguish an attribute of “equitable distribution” in market mechanisms, as the market cannot be assessed from the perspective of ethical distribution of wealth, skills or holdings¹¹. Achieving the state of completeness by the market means lack of barriers to take up

⁶ Cf. F.M. Bator, *The Anatomy of Market Failure*, “The Quarterly Journal of Economics” 1958, Vol. 7, Issue 3, pp. 157-175.

⁷ S.G. Medema, *The Hesitant Hand: Mill, Sidgwick, and the Evolution of the Theory of Market Failure*, “History of Political Economy” 2007, Vol. 39, No. 3, p. 33.

⁸ W.J. Baumol, *Welfare Economics and the Theory of the State*, London School of Economics and Political Science, Longmans, Green and Co., London 1952.

⁹ J.E. Stiglitz, *Markets, Market Failures, and Development*, “American Economic Review” 1989, Vol. 79, Issue 2.

¹⁰ K.J. Arrow, *An Extension of the Basic Theorems of Classical Welfare Economics*, [in:] J. Neyman (ed.), *Proceedings of the Second Berkeley Symposium on Mathematical Statistics and Probability*, University of California Press, Berkeley 1951, pp. 507-532; reprinted in *Collected Papers of Kenneth J. Arrow*, Vol. 2: *General Equilibrium*, Belknap Press of Harvard University Press, Cambridge, Mass. 1983.

¹¹ P.J. Hammond, *The Efficiency Theorems and Market Failure*, [in:] A. Kirman (ed.), *Elements of General Equilibrium Analysis*, Wiley-Blackwell 1998.

business or individual impact on the price level, as well as absolute knowledge of market parameters as a result of equal access to information. All these factors provide a sufficient condition for allocation satisfying the assumptions of Pareto efficiency.

The empirical problem consists in extremely non-utilitarian nature of the assumptions that describe the functioning of the market system. Many entities achieve privileged position against competitors during operating activities because of the unique attributes of knowledge and skills, and the asymmetry in the distribution of market conditions (including size of the assets, tangible and intangible assets, type of goods). In a broader context, the barriers to entry into the relevant market limit entrepreneurship and prevent all entities from achieving the same competitive position, which in extreme cases leads to monopolization of the market.

The second dimension of the analysis of market efficiency points to the more complex nature of the allocation of goods that meet the demand of the so-called “strong efficiency”, when potentially there is no alternative state of distribution of goods on the market, which would allow, at least one, entity to increase usability without deteriorating the state of prosperity in other entities. We should note, against the background of the first dimension of efficiency of the allocation of goods in terms of Pareto, that any allocation satisfying the postulate of strong efficiency can be classified as “poor”, but in reverse terms the relationship is not satisfied. Moreover, even if the transfer of goods allows for an efficient allocation in terms of Pareto, it does not rule out the existence of alternative market equilibriums. This means that market mechanisms lack the natural stimuli, so that the market can consequently evolve to desired equilibrium in terms of Pareto. Even if the market equilibrium assumptions had met the Pareto efficiency assumptions, it would be characterised by a particularly high instability with a tendency to move towards alternative market equilibriums that do not meet such demands¹².

It should also be noted that complete and competitive markets do not *per se* provide market equilibrium, which always ensure efficient allocation in terms of Pareto due to a number of boundary conditions, including continuous and convex preferences or closed set of capacity. Without implementation of the postulate of complete markets, the market system is naturally inefficient in terms of Pareto¹³. In the context of equal forms of efficiency in terms of Pareto, it should be noted that in the first approach, the above conditions are not necessary, as the hypothesis of poor efficiency provides that the market is in equilibrium, implying the existence of such a state. However, in the second approach, there are additional assumptions: that there is a pricing structure appropriate for the distribution of resources for a complete and competitive market in equilibrium.

¹² P.A. Samuelson, *An Exact Consumption-Loan Model of Interest with or without the Social Contrivance of Money*, “Journal of Political Economy” 1958, Vol. 66.

¹³ B. Greenwald, J.E. Stiglitz, *Externalities in economies with imperfect information and incomplete markets*, “Quarterly Journal of Economics” 1986, Vol. 101, Issue 2.

Reflections on the conditions of market equilibrium meeting the Pareto efficiency demands lead to the conclusion that such a state is not only one of many possible, but it is also a very brief one. The state of equilibrium in a complete and effective market in terms of Pareto is a discrete state and possible if a number of boundary conditions are met. Therefore, the question of market failure is permanently present in the analysis of market systems¹⁴.

In practice, the decisions of individual market participants resulting from individual conditions for maximization of their own usefulness lead to the choices that are not always effective from a societal point of view. As a result there is a shortage or accumulation of goods and services in certain sectors of the economy. One of the manifestations of market failure is a persistent phenomenon of insufficient (or lacking) supply of certain goods and services, despite a high and effective demand in the market. That imbalance occurs in spite of the price adjustment mechanism, which, however, does not ensure achievement of effective market equilibrium due to the inverse supply function. Thus, the size of supply is decreasing from a certain price level, despite its continued growth and existence of effective demand at each price level. The negative correlation between the price level and the size of supply is often an important argument for the presence of inefficient exchange of goods in the market, which requires the implementation of mechanisms of economic interventionism by public administration in order to reduce the supply gap. Economic theory distinguishes a number of reasons for market failure. Conventional ones in this field include:

- the presence of externalities,
- attributes of the so-called public goods,
- the problem of transaction costs.

From the 1970s, the concept of market failure has been extended with new arguments in considerations distinguishing primarily factors of information asymmetry from the perspective of:

- adverse selection,
- moral hazard,
- principal-agent problem.

2.2. Classical concepts of market failure

Externalities

In the functioning of enterprises we can distinguish a number of specific determinants that decide their market position (and in macro scale – the structure of supply on the market), but they are not directly reflected in the pricing mechanisms. Some elements of the production process (including the quality of manufactured goods

¹⁴ W.D.A. Bryant, *Misrepresentations of the Second Fundamental Theorem of Welfare Economics: Barriers to Better Economic Education*, “Journal of Economic Education” 1994, Vol. 25.

and services, innovation, operational efficiency) are directly dependent on the decisions of the management. However, at the same time, we can distinguish a number of links and reciprocal interactions of the company with the proximal and distant market environment, which affect the development of the market position of companies, although they do not result from the shape and intensity of the operating processes of entities in the market.

A. Marshall¹⁵, one of the first economists studying the impact of external factors on the level of entrepreneurship, pointed to a number of potential and real benefits that a company receives only because of its proximity to other enterprises. At the same time, the company does not directly incur costs for this (e.g. transport infrastructure, skilled human resources, telecommunications).

However, Marshall's successors have shown that the impact of the environment on the company is twofold. In this context, the reduction of entrepreneurship may be due to the need to pay additional costs that affect the shape of the production function, but without a direct impact on the scope and intensity of these negative factors. Furthermore, both the benefits and the losses are very diversified, not only because of the range of impact, timing and extent of impact, but also because of their nature – tangible (availability of raw materials) or intangible (diffusion of information)¹⁶.

In this context, the distinctive features of the impact of externalities on entrepreneurship include¹⁷:

- participation of factors in the production function that are beyond the direct influence of the company on key parameters such as cost, quality and size;
- lack of voluntary and intentional action assuming an agreement between the author and recipient of an external effect, which prevents direct incorporation of externalities into the economic account, as well as effective exclusion from the scope of its impact;
- deficit of the fully effective price mechanism compensating for inefficiencies in the production process and determining the costs of obtaining external benefits;
- disruption of the optimal allocation of goods in the economy by generating a system of opportunistic incentives that cause abandonment of actions creating external costs and the deliberate exposure to the maximization of impact of external benefits (the so-called free rider effect)¹⁸.

¹⁵ A. Marshall, *Principles of Economics*, Macmillan, London 1890.

¹⁶ W.J. Baumol, *On Taxation and the Control of Externalities*, "American Economic Review" 1972, Vol. 62, Issue 3.

¹⁷ J. Stiglitz, *Ekonomia sektora publicznego*, PWN, Warszawa 2004; G. Tullock, *Public Goods, Redistribution and Rent Seeking*, Edward Elgar Publishing Inc. 2005; R.H. Coase, *The Lighthouse in Economics*, "The Journal of Law and Economics" 1974, Vol. 17, October; C.J. Dahlman, *The problem of Externality*, "The Journal of Law and Economics" 1979, Vol. 22, April.

¹⁸ See E.C. Pasour Jr., *The Free Rider as a Basis for Government Intervention*, "Journal of Libertarian Studies" 1981, Vol. V, No. 4.

Limited capacities of unit categorization of external costs and benefits in an individual economic account of an enterprise and distortion of the market mechanism as a result of their presence are prerequisites for State intervention. Government actions are to prevent petrification of tendencies restricting the supply of certain goods (e.g. as a result of market monopolies) and the multiplication of adverse events (e.g. inequality in access to loans). On the other hand, the mechanisms of State intervention that favour fixation of desired externalities in the functioning of enterprises (such as the Labour Code, health and safety legislation, licensing economic activity of special importance) can lead to a reduction in the potential private benefits arising from the market mechanisms and thus reduce incentives to develop efficient allocation of capital and goods on the market.

Therefore, it has been postulated that State intervention is undertaken as a result of an analysis on the scope of impact of externalities on the market failures. In this perspective, the activity of the State in the economy is justified when public authorities support mechanisms to reduce the risk of economic activity – in individual terms (through patent protection of innovation and system for establishment and enforcement of legal standards) and market terms (preventing monopolization of the market and supporting the development of small and medium-sized enterprises). The rationale of State intervention should be the principle, according to which the effect of public support will be a surplus of social benefits over private ones, due to externalities generated in a broader range than the benefits of target beneficiaries¹⁹.

In the case of enterprise development, the above rule indicates the extent of government action, aimed at the development of this form of entrepreneurship, e.g. in small and medium-sized enterprises (SMEs). On the one hand, this sector is of great importance to the local labour markets and the share in GDP. On the other hand, there are much higher barriers (including capital, know-how, economies of scale) during the establishment and operation of small enterprises than in the case of large companies.

Functioning of public goods

Analysis of the conditions of market failures in the context of the so-called public goods is associated with the postulated State foundations to support the supply of certain goods, which imply significant external benefits to the general public, but there are inefficiencies in their supply in a market based mechanism.

Public goods are products or services, whose importance exceeds individual consumption; one cannot shape the supply of such goods in the dimension of individual customers. Collective consumption of public goods results from the necessary economies of scale, which, however, makes it impossible to restrict access through strict allocation of goods to specific recipients. The need to achieve large

¹⁹ R.H. Coase, *The Problem of Social Cost*, "Journal of Law and Economics" 1960, Vol. 3, October.

economies of scale affects the problem of the unit valuation of such goods, and thus the enforcement of optimal fees from the perspective of individual line of budget constraint for recipients²⁰.

The homogeneity of public goods prices creates problems for offsetting the full cost of their manufacture, as their collective consumption is an incentive to the behaviour using collective of consumers for individual usefulness (free rider). This behaviour results from the lack of an effective mechanism to exclude those individuals who do not bear the costs of using the public good, it causes that the population of users is greater than those actually paying. On the other hand, there is a risk that in the market mechanism these goods will be unavailable for the economically weaker entities, which may affect the lack of profitability of their provision in general. The role of the public authorities is to create a social mechanism to availability of public goods through indirect financing system based on compulsory social tribute (taxes) and thus ensure the supply of sufficient size in relation to the actual demand²¹.

An additional issue is the varied divisibility of public goods. In the case of public goods that can be consumed by individual customers (e.g. health services) there is a problem of ensuring an adequate supply in relation to surplus demand. In the case of indivisible goods (e.g. public roads), the simultaneous consumption by multiple recipients does not affect mutual availability of goods. However, even then there may be a restriction on consumption as a result of exceeding the threshold supply potential, resulting in a significant reduction in the quality parameters (e.g. traffic problems on public roads).

Conditions for the supply of social goods can lead to inefficiencies of the market system because of the so-called natural monopolies. The basis for their effective delivery is to achieve very high economies of scale, which in practice means a restriction of competition in the market – especially if the economic calculation shows that operation of only one entity is justifiable. This state occurs in industries with high capital intensity, very high fixed costs and relatively low marginal costs. The cost structure creates high barriers to entry for others (i.e. successive) entities due to limited market potential, necessary to achieve high economies of scale. Market failure in this

²⁰ R. Cornes, T. Sandler, *The Theory of Externalities, Public Goods, and Club Goods*, Cambridge University Press, Cambridge 1986; T.E. Borchering, *Competition, Exclusion, and the Optimal Supply of Public Goods*, "The Journal of Law and Economics" 1978, Vol. 21, April.

²¹ An example of the State's role understood in such a manner is the postulate to ensure the availability of socially desirable goods (merit goods), which, according to R. Musgrave are goods, whose consumption should result from the materiality of social needs, and not the unitary ability to cover the costs of their production. On the other hand, the State should limit the availability of goods, which, due to the extremely high external costs have negative impact on social welfare (e.g. alcohol and tobacco). A manifestation of this concept is the differentiation in taxation of particular goods depending on the scale of their importance in terms of internal benefits and costs. (cf. R.A. Musgrave, *A Multiple Theory of Budget Determination*, FinanzArchiv, New Series 1957, 25(1)).

context results from the lack of market competition and inhibited entrepreneurship, which leads to inefficient structures on the side of suppliers or customers²².

These attributes are used to distinguish public goods in relation to private goods²³. Private goods are created as a result of market competition mechanism, ensuring allocation of private benefits and costs to each individual, and excluding others from use. In turn, public goods are characterised by general and unlimited terms of consumption, and the benefits and costs are not clearly defined or assigned to specific individuals. One can also distinguish public goods of intermediate nature, which are produced by private operators, and the State, although it does not maintain ownership of the means of production, it provides public support (including to SMEs). Public administration determines the rules of supply of such goods or favours the development of specific sectors, establishing the principles of availability or directing support to specific beneficiaries, and the allocation is highly discretionary, as a consequence of regulations corresponding to the economic programmes of political authorities.

Transaction costs

In the classical theory of welfare economics the cause of market failure consist in high transaction costs that accompany the conclusion and execution of contracts in the allocation of goods and services. R. Coase²⁴ was one of the first to argue that the costs of the operators should distinguish expenses to identify the relevant transaction prices and the costs of negotiation, conclusion and securing contracts for market transactions. Transaction costs affect the decline in viability of economic activity, which reduces the activity of market participants and leads to inefficient allocation of goods and capital in the economy, and even the lack of sufficient supply of goods on the market.

Transaction costs can be considered in micro- and macro-economic terms. The independent concepts of Y. Barzel²⁵ and T. Eggertsson²⁶ represent the microeconomic approach, indicating that transaction costs are an important part of the process of change of goods and services ownership and the protection of the right of exclusive use of the goods and services. In the process of ownership change, transaction costs have been highlighted by O. Williamson²⁷ in ex-ante and ex-post terms, depending on the time of the transaction. Macroeconomic concept of transaction costs was

²² M. Mosca, *On the origins of the concept of natural monopoly*, "The European Journal of the History of Economic Thought" 2008, Vol. 15, Issue 2.

²³ A.W. Evans, *Private Good, Externality, Public Good*, "Scottish Journal of Political Economics" 1970, Vol. 17, Issue 1, February.

²⁴ R.H. Coase, *The Problem of Social Cost*, op. cit.

²⁵ Y. Barzel, *Economic Analysis of Property Rights*, Cambridge University Press, New York 1989.

²⁶ T. Eggertsson, *Economic Behavior and Institutions*, Cambridge University Press, Cambridge 1997.

²⁷ O.E. Williamson, *The Economics of Organization: The Transaction Cost Approach*, "The American Journal of Sociology" 1981, Vol. 87, No. 3.

presented, *inter alia*, by K.J. Arrow²⁸, who described the overall costs of the operation of the economic system with a structured subjective relationships affecting petrification of models for the exchange of goods and services.

Based on these elements, one can indicate the main aspects of transaction costs, associated with the process of initiating a contract for change of ownership, individual attributes of the goods as the object of the contract, as well as the sanctioning of changes of ownership.

In a first aspect, the parties bear the costs associated with finding contract partners and reaching consensus on opposing negotiating positions. The concept also takes into account the macroeconomic environment of transactions, with particular importance of institutional arrangements that promote or hinder the transaction (for example, the functioning and the degree of organisation of secondary market trading).

Depending on the types of goods and services, there are the costs of valuation, depending on the scope of their specific attributes that determine the complexity and overall risk of the transaction. This also takes into account motivations, the knowledge of the market and skills of the parties to the transaction²⁹. Limited rationality of action arises from the fact that the parties to the transaction operate under conditions of asymmetric information, which creates the possibility of using informational advantage to maximize the utility by one party over another. Neutralization of adverse effects is possible as a result of using tangible, financial or legal collateral, but that raise the overall cost of the transaction. In general, the more complex the contract, due to the specification of the conditions and the extent of the necessary clauses, the higher the costs of transaction.

The last aspect of transaction costs includes expenditures for legal services and institutional and legal consolidation of property rights. It is an essential part of the legal form of the contract and eliminating the risk of the return to the initial violation of the interests of one of the parties to the transaction. In this context, transaction costs result from the risk of re-negotiation of contracts and the actual enforcement of contract.

In terms of economic activity, transaction costs are particularly important in the functioning of the State administration in the broad sense of the institutional environment (including licensing procedures, registration procedures, the need to comply with norms and standards, efficiency of tax enforcement and economic law enforcement). Formal institutions that protect property rights in the process of sharing and reduce the negative externalities, also become a source of transaction costs, due to the complexity of procedures and low transparency of decision-making process. Then, the structure of supply may result from the high transaction costs arising from administrative conditions rather than from market conditions. Cost barriers to private contracts only change their nature, and still restrict entrepreneurship.

²⁸ K.J. Arrow, *The Organization of Economic Activity: Issues Pertinent to the Choice of Market versus Non-market Allocation*, Joint Economic Committee of Congress 1969.

²⁹ O.E. Williamson, *The Economics of Organization...*, op. cit., p. 552.

2.3. Information asymmetry as a contemporary concept of market failure

Incomplete or imperfect information is conducive to a failure of market mechanisms as a result of the rise of inefficient allocation of resources in the market. Because of the imbalance of parties to the transaction in terms of scale of resources and quality of information resources, trading decisions are not optimal in terms of Pareto. Lack of complete market information is the cause that the primary mechanism for the valuation of goods and services does not reflect their actual value, but constitutes a resultant of expectations of parties to the transaction which depends on their knowledge. Influence of subjective factors in the process of exchange undermines the credibility of prices as the primary instrument of efficient allocation of goods and services. At the same time, there may be negative phenomena affecting the level of utility of parties in the market processes, as the lack of complete information makes it risky to conduct economic activity³⁰.

Depending on the scale of intensity, the risk may lead to unavailability or restriction of the supply of specific goods and services, despite the existence of effective demand and vice versa. Market equilibrium under conditions of asymmetric information is the result of not only the structure of supply and demand, but also the actual perception of the risk of transactions undertaken in the conditions of incomplete or distorted knowledge about the parameters of the transaction.

In model terms, information asymmetry is manifested in³¹:

- adverse selection,
- moral hazard,
- agency dilemma.

In the case of adverse selection, the source of market failure and inefficient allocation of goods and the capital is the “over-representation” of goods with low utility or the financing of projects with above-average risk of failure. Distortion of rationality of the decision-making process is due to the imbalance in information resources between entities reporting supply and demand of goods and capital.

Due to the specific attributes of information (i.e., the difficulty in actually assessing the quality of ex ante information), as well as the limited capacity to estimate the scope and cost required to obtain the necessary information resources in the decision making process (the so-called paradox of information), market mechanisms lead to inefficient allocation of goods and capital in the economy. The entities

³⁰ A. Mas-Colell, M.D. Whinston, J.R. Green, *Microeconomic Theory*, Oxford University Press, New York 1995, chapters 13-14.

³¹ G.A. Akerlof, *The market for lemons – Quality uncertainty and the market mechanism*, “The Quarterly Journal of Economics” 1970, Vol. 84, Issue 3; A. Mas-Colell, M.D. Whinston, J.R. Green, *Microeconomic Theory*, op. cit, p. 477; B. Holmstrom, *Moral hazard and observability*, “Bell Journal of Economics” 1979, Vol. 10, No. 1, Spring.

notifying demand for goods lack the ability to distinguish the actual quality of the goods before the transaction³².

The problem of identifying the actual conditions of parties to the transaction leads to the equalization of goods prices and capital, despite quality parameters other than those officially declared. The same valuation of all goods or investment projects of a certain type activates the market mechanism promoting growth of low-quality goods in the structure of supply at the expense of high quality goods. Taking into account the risk parameter reduces the transaction prices of goods and increases the cost of capital. As a result, the entities creating the supply of goods that are actually equivalent to specifications are not able to get a satisfactory price and decide to withdraw from the market. Identification of the actual quality of goods creates an additional category of transaction costs, which in the absence of appropriate institutional support is a major barrier for the decisions to transfer ownership of goods in the economy. Thus, the market does not lead to a Pareto efficient allocation of goods, which is a reason for the active intervention of the State.

Similarly, providers of capital, compensating for the risk of default, contrary to their own interests, cause that part of credible investment projects will not be completed due to the rising cost of financing. The high risk premium in the cost of financing reduces the availability of capital by promoting investment projects with higher than average rate of return, which are characterised by a higher than average risk of failure. Allocation of capital in the market system is then disturbed, as part of the available capital resources are lost through the financing of investment projects that contribute to the development of the economy by increasing risk aversion on the side of supply of capital. Capital barriers pertain to the greatest extent to entities with low assets, which limit the growth of entrepreneurship in the economy³³.

Manifestations of moral hazard are significant in the above problem of adverse selection and concern negative incentives for individual opportunistic behaviour. Then, one party can take action to improve their own utility at the expense of a partner who has no equally extensive knowledge about the subject of the contract. Moral hazard may thus lead to actions adversely affecting the economic balance of some entities which, as a result of such actions, limit the availability of certain goods, *inter alia*, by modifying the pricing terms to take account of the potential costs arising from the moral hazard of customers. It is worth stressing that, even though it is assumed to be possible to estimate the scale of moral hazard in macro-economic terms, the entities are not able to identify the risks in relation to the individual partners to the transaction.

The agency dilemma has its origin in the asymmetry of information in any relationship where one party affects the other, with different sources of maximizing the utility of each of the parties, affecting other conditions of the motivation to act.

³² A. Mas-Colell, M.D. Whinston, J.R. Green, *Microeconomic Theory*, op. cit.

³³ J. Stiglitz, A. Weiss, *Credit Rationing in Markets with Imperfect Information*, "The American Economic Review" 1981, Vol. 71, Issue 3, June.

In the endogenous dimension of enterprise operation it can be demonstrated that managers have limited ability to assess the quality of work of employees on the basis of direct results, as they are the result of external (e.g. economic conditions in the industry, information asymmetry) and internal variables (e.g. workplace equipment, organisation of procedures).

In exogenous dimension one can distinguish influence of public authorities on company operations. Then the agency dilemma is reflected in the quality and efficiency of public administration and self-government offices, identifying potential for business development in the area. In fact, the analysed aspect of information asymmetry occurs in all relationships.

The presence of information asymmetry is the stimulus for the generation and dissemination of information hindering the efficient allocation of goods and services through the difficulty of ex-ante estimate of their actual usefulness. In addition, the asymmetry of information triggers the multiplier mechanisms that favour behaviour of entities representing supply and demand that generate negative externalities. Therefore, the argument in favour of State intervention is to have enforcement mechanisms to make full information public, as well as the ability to implement the apparatus of repression against those who deliberately violate the interests of other parties to the transaction. In this way the State mechanisms may stimulate transparency of information among market participants.

Another aspect of State intervention against information asymmetry is to ensure the supply of information, which is difficult to generate solely by market mechanisms (including public information on legal standards defining the rules of transaction, such as a list of mandatory or prohibited clauses). This kind of information, on the one hand, reduces the asymmetry of information (especially between parties with different activity potential), on the other hand, it has the features of social good³⁴. State intervention has opposite meaning in the process of information diffusion within the scope of provision of patent protection and support to innovations resulting from capital intensive investments in research and development (R&D). Here, the State to some extent supports information asymmetry in the market, however, it contributes to economic growth, encouraging market players to invest in projects with a high degree of risk.

However, State intervention should not completely replace market mechanisms, but only support transparency and integrity of flow of accurate public information through a set of regulatory incentives. In this context, public administration itself targets the problem of information asymmetry in the scope of assessment and awareness of all the consequences and own regulatory actions. In addition, decision-making mechanisms are often highly bureaucratic and thus create significant barriers to the functioning of market players.

³⁴ N. Barr, *Economic theory and the welfare state: a survey and interpretation*, "Journal of Economic Literature" 1992, Vol. 30, No. 2, p. 764.

3. Influence of global factors on the Polish food economy

In the world economy in recent years, rapid and profound transformation has occurred, which is the result of faster globalisation processes. The reasons for these changes should be seen in the significant increase in international exchange of goods, services, capital, technology, information, knowledge, and the development of international business, as well as political and political system changes in many parts of the world.

The effects of globalisation can be different in the shorter and longer term. Therefore, there are often discrepancies in their assessment. That is why, it is important to know the processes of globalisation and assess them even partially. As M. Gorynia and J. Saykiewicz³⁵ note rightly: “globalization ... is decisive for Poland’s position in the world economy; it creates many opportunities and, at the same time, threats to the Polish economy. In addition, there is often the impression that in the context of priorities of contacts with the European Union it is sometimes an underrated factor”.

One of the most important and perhaps the most important thing for the world is providing it with food. Never before has food been written about and discussed as much as now. Food economy has become subject to theoretical considerations and empirical studies. This is because of the importance of this area of economic activities to society. There is definitely more intervention from international institutions and organizations, individual States and transnational corporations (financial, commercial and manufacturing). Also, technical and technological progress plays a smaller role than in other sectors of the economy.

At the turn of 20th and 21st centuries there was a rapid development of TNCs (transnational corporations), which was linked with transformations of a technological, social and political nature. Undeniably, however, it can be said that despite the various arguments for and against, the dynamic development of corporations is inevitable in the near future. One can even get the impression of increased random and emotional, but also selfish and speculative action. The perpetrators of the latter are mostly transnational corporations, which are considered dominant players in the arena of international economic relations.

Nobel Prize laureate J. Stiglitz³⁶ rightly notes that “... the lack of a global approach to global cartels and monopolies is one more example that the globalisation of the economy is ahead of political globalization”. W. Szymański³⁷ states something similar, namely that at this stage of globalisation the main problem becomes “... increasing imbalance between growing forces motivated by macroeconomic interest,

³⁵ M. Gorynia, J.N. Saykiewicz, *Zarządzanie zmianą w warunkach transformacji i globalizacji*, „Przegląd Organizacji” 2007, No 1.

³⁶ J.E. Stiglitz, *Wizja sprawiedliwej globalizacji*, PWN, Warszawa 2007, p. 217.

³⁷ W. Szymański, *Kryzys globalny. Pierwsze przybliżenie*, Difin, Warszawa 2009, p. 20.

and insufficient and more and more weakening forces motivated by macroeconomic and microsocial interests. Addressing those growing conflicts is one of the major challenges of the 21st century”. Therefore, among other things, he refers to the current globalisation as “incomplete globalisation”, and “the current crisis reflects the inability to deal with the functioning of the global economy” because “the contemporary incomplete globalization resembles a game without rules and without an arbitrator”³⁸. Incomplete globalization creates an opportunity to use this situation for one’s own particular interests.

Globalisation of food economy at the current level of development of the world economy remains “incomplete” similarly to the entire world economy:

- it does not concern, to an equal extent, all the links of the food chain, i.e. agriculture, processing, trade and consumers,
- macroeconomic globalisation of power and management mechanisms fails to keep pace with microeconomic globalisation³⁹.

Whether or not the modern world will be able to change this system still remains an open question. From the perspective of years 2004-2011 key (according to the authors) global factors having an impact on the Polish food economy can be considered to be:

- prosperity in the global economy,
- Poland’s integration with the European Union,
- increase in global prices of primary agricultural products,
- instability in currency exchange rates,
- increased importance of transnational corporations,
- liberalisation of trade and speculative capital flows.

In this chapter, an attempt was made to briefly present the most important global political and economic events that have had and will have an impact on the Polish food economy. The analysis of the global food economy is a necessary consideration for shaping the process of the development of the Polish food economy, because it is increasingly based on global considerations.

3.1. Analysis of global factors of a macroeconomic nature

Determinants of global food economy are associated both with political, and environmental activities, transnational corporations, and with the progress of science⁴⁰. They can shape strategies for the development of the global food economy in the long, medium as well as short term. The most important determinants shaping the strategy for the development of globalization in food economy in the long run include:

³⁸ Ibidem, p. 31.

³⁹ S. Kowalczyk, *Globalizacja agrobiznesu: specyfika, wymiary, konsekwencje*, SGH, Warszawa 2010, p. 10.

⁴⁰ The chapter uses excerpts from article P. Chechelski, *Ocena wpływu światowego kryzysu na gospodarkę żywnościową*, „Zagadnienia Ekonomiki Rolnej” 2010, No 4.

- Limited area of farmland in the world, which for many years has not changed; with population growth this brings smaller agricultural crop areas per capita, which in the years 1960-2003 decreased by almost 50% to 0.5 ha. The downward trend will continue and in 2025 there will be 0.4 ha of the area suitable for agricultural production per capita⁴¹. The phenomenon of soil degradation is also becoming stronger.
- The growing water deficit. Agriculture consumes almost 70% of water, for which competition from other sectors of the economy and the household sector is growing. Water deficit is particularly acute in China, India, the Middle East, North Africa and North America. The three largest producers of cereals: China, USA and India are considerably dependent on water – mostly China, where 70% of cereals are produced on irrigated soils, in 50% India and 15% in the USA⁴².
- The expected rapid growth of world population, from 6.7 billion in 2008 to 7.8 billion in 2025 and 9.1-9.5 billion in 2050, resulting not only from the increase in births, but also due to life expectancy becoming longer.
- Climate change caused by the development of civilization, for example. global warming, pollution of the environment impeding the development of agriculture. As stated in the report *Climate Change. Impact on Agriculture and Costs of Adaptation* published in September 2009 by the *International Food Policy Research Institute*, climate and demographic change will trigger great food shortages in 2050⁴³.
- The increasing demand for food, resulting both from the growth of the world's population, and the increase in the prosperity of inhabitants, especially in dynamically developing countries with a high population, such as China⁴⁴, India, Brazil, Russia, Mexico and a number of African countries, for example, South Africa, Nigeria, and also changes in consumption patterns.
- Protection of food markets provided by individual States and supranational organisations (EU, NAFTA). It is seen, *inter alia*, in subsidies⁴⁵ for agriculture in highly developed countries and protectionist practices used by many states. In recent years this concerned both highly developed countries and the developing countries.

⁴¹ L. Brown, *Plan B 20. Rescuing a planet under stress and civilization in trouble*, Earth Policy Institute, W.W. Norton & Company, New York–London, 2006.

⁴² J. Zegar, *Globalny problem żywnościowy a polskie rolnictwo*, „Wies i Rolnictwo” 2001, No 3.

⁴³ E. Benedyk, *Plan na plon*, „Polityka” 24.10.2009.

⁴⁴ “The Economist Newspaper Limited”, London (21.03-27.03.2009) says that in China, in the past decade, consumption of milk increased sevenfold, and olive oil consumption went up sixfold. The Chinese consume twice as much of vegetable oil, 60% of poultry, 30% of beef and 25% of wheat. However, despite this growth, residents of China still consume, on average, three times less milk and meat compared with rich countries, such as: USA, Australia or the United Kingdom. This difference is even greater in the case of India and African countries, but they also develop quickly.

⁴⁵ T.T. Kaczmarek, *Globalna gospodarka i globalny kryzys*, Difin, Warszawa 2009, p. 30. The World Bank estimates that subsidies in highly developed countries are causing a reduction of GDP by more than 32 billion USD per year in third world countries.

- The systematic increase of transnational corporations in the production and sale of food, which caused an increasing risk of using monopolistic and monopsonistic practices.

3.1.1. The impact of prosperity on food economy

2004-2011 is a time of profound change, both political and economic, in the world. Among the first ones, we can mention first of all the enlargement of the EU with Eastern bloc countries, marking its ultimate collapse and increased self-reliance of the developing countries, and greater activity of EU, ASEAN and MERCOSUR. However, the world's most important economic events include a prosperity period in years 2004-2007, and a downturn in the following years. The second period is in particular sparked deep transformation of the world economy: global financial crisis (greatest for 30 years) and the preceding food crisis linked to the rising prices in years 2007-2008 and the next wave of food crisis in years 2010-2011.

By analyzing the current crisis, it is still hard to make any judgments, because after a period of 3 years since its start (i.e. second half of 2008) opinion on its end are divided. The outlook for the next few years in the global and European economy is not good. Economic growth in the USA will probably not be as high as before the crisis. The trend of slower growth is clear. Highly indebted budgets in these countries (at the end of June 2011, the USA owed USD 14.3 trillion) will mean that social programmes will need to be made lean, which could trigger social unrest both within these countries (an example here are the incidents in London, Greece, Italy, Portugal, etc.), as well as between the countries of the Schengen Agreement (an example here is the questioning by the rich countries of the European Union – France, Italy, Denmark, Germany) and building barriers to international trade and investment. Poland's economy is strongly linked to European and world economy and those changes may impact negatively on the country.

The growing unpredictability of financial markets is reflected by the behaviour of stock markets. For example, in the last 50 years the average bear market coverage on Wall Street (assuming that a bear market means a drop in an index by 20%) accounted for 37.6%, and there were eight in that time. From March 2000 to October 2001, bear market lasted 18 months and the drop was by 49.4%. Bear market was next noted in July 2007-February 2009, with a duration of 19 months, down by 68.5%. After 24 months of price increases in April 2011, comes a new wave of drops. By September 2011 it already reached 27.4%⁴⁶, which may indicate that the time of drops has not yet finished. Therefore, the year 2012 may prove to be a difficult year for the world economy, which will probably be reflected in the Polish economy.

⁴⁶ T. Hańdo, *Po pół roku obecna bessza wciąż nie dorównuje tym z przeszłości*, „Parkiet” 6.10.2011.

The current economic crisis seems to be still different from some of the previous ones. It turned out to be less dangerous than expected in the beginning, but in turn the effects of recovery may be longer. It may prove to be a breakthrough for the global economy. So far, the biggest impact on the evolution of the global economic climate has been from countries of the West, with the largest share in the global economy. They have also usually been the first ones to enter such crises and the first ones to recover. In this crisis, the roles have reversed. This resulted in significant political and economic changes being initiated, which may herald a beginning of changes in the quest for more sustainable development of the world, which may also have a significant impact on the global food economy. The current crisis in the financial market has not, at least so far, impacted significantly on the volume of changes in production in the global food market. There has only been a slowdown in production and consumption in developed countries, which was offset by growth in developing countries.

Polish food economy has not much felt the effects of the crisis either. In 2008, global agricultural production grew by 3.2%, including crop production by 8.3%, and livestock production decreasing by 2.9%. In 2009 it increased by 2.4% – crop production by 3.0%, and animal production by 1.6%. For the first time in many years the increase in agricultural goods production was similar to the growth rate of production in the food industry. The value of sold produce in the Polish food industry (calculated at reference prices) increased by 2.1% in 2008 compared to the very good year 2007, and in 2009 it increased compared to the previous year by 4.1%. The worst period for the food industry was the second half of 2008, and the first half of 2009, when the value of sold produce in constant prices increased by only 1% (compared to the same period of the previous year). From mid 2009, production in the food industry increased again at the pace of ca. 5-6% on an annual basis.

Minor structural changes in food consumption in Poland, which occurred during the crisis, were a continuation of the trends started in the earlier period (after accession to the EU), and there are similar to the changes in the consumption patterns, which happened in societies of highly developed countries. Some minor and short-term fluctuations in consumption of certain foods, for example pork meat, fruit and vegetables, were mostly related to the short-term price increase, due to their shortage in the domestic market, due to crop failures, e.g. vegetables and fruits or the so-called pig cycle rather than the economic recession.

The biggest changes took place in internal trade. During the crisis, it concentrated substantially mainly due to global retail chains. In the years 2008-2010, approximately 5 thousand small trading companies were eliminated from the market. Slowly, but steadily, trade turnover of foodstuffs increased in Poland. The deterioration in the results of external trade of agri-food products, which occurred during the economic crisis, especially in 2009, was only temporary. In 2010, a recovery in foreign trade turnover was noted as well as a growth in trade between all groups of countries. Foreign trade turnover in 2010 exceeded 12% – with the highest level of the year 2008, and trade balance was higher than the record level of approx. 20%.

3.1.2. Increase in global prices of primary agricultural products

In the years 2007-2011 the world food market experienced strong price fluctuations. The highest in 30 years price increase of primary agricultural products was reported in 2007-2008, and then their radical decline and a new increase in 2010-2011 contributed to changing the assessment of certain factors affecting the evolution of quotations of agricultural products in world markets. Most economists and analysts of agricultural markets associate these events with dynamic changes in the processes of globalisation. The increase in food prices started already at the end of 2006. However, only in mid-2007, there was strong growth, when the FAO food price index exceeded 160%. Peak prices were recorded in June 2008. The index reached 224% then, i.e. an annual increase by 70%. Another increase in food prices, but at a higher level, began in July 2010. It reached its peak in February 2011, when the price index amounted to 238%. Since this moment food prices have been falling again, but slowly.

The biggest price increase of five basic groups of primary agricultural products: meat, dairy products, cereals, oils and fats and sugar, affected the last group. From the beginning of 2004 to January 2011, the price of sugar rose by 320%. Such a high price dynamics was due to *inter alia*: limitations of its production in the EU (production limits for individual countries), using a part of sugar cane production in Brazil (the largest producer) for the production of biofuels, increase in consumption of sugar in the world and the possibility of more sugar speculation in commodity markets because of a smaller market compared with other basic primary agricultural products. In the past three years (from January 2008 to January 2011) prices of sugar increased by 250% (price index increased from 170 to 420).

Disruption also occurred on the major markets of plant products and milk market. Quotations of grain prices in February 2011 were on a similar level as in April 2008 (down 9%), i.e. in the period of greatest severity of previous food crisis, but at the same time almost twice higher than those listed before this crisis. These data indicate that the reductions in grain prices, which occurred in the seasons 2008/2009 and 2009/2010, were temporary and that there is still a clear upward trend in the world grain prices. The cause of this is the faster growth of consumption (about 2% per year) than the world production of cereals (1.8% per year). It is also important that consumption shows a constant upward trend, and the production is characterized by strong fluctuations, causing high volatility of production balance and consumption of end stocks⁴⁷.

As can be deduced on the basis of the most recent data (June 2011), another global food crisis has probably reached its peak. This is evidenced by declines in prices of main primary agricultural products, and the latest projections included in the report of the

⁴⁷ R. Urban, *Wzrost światowych cen produktów rolnych i jego skutki*, „Przemysł Spożywczy” 2011, No 1.

US Department of Agriculture (USDA)⁴⁸. Another good news is the following: abolition of a ban on grain exports by Russia, a fall in oil prices and favourable weather conditions in the United States and in Western Europe, which back in May 2011 contributed to the increase in the prices of maize to record levels. The current prices of most agricultural products are higher than those projected by FAO not only for 2010, but also for the year 2018⁴⁹.

3.1.3. Causes of increased food prices

The most important rule shaping the level of prices is the law of supply and demand. In accordance with it, the price is determined by market demand and supply market for a good. At times, when we are dealing with demand that is not met fully, prices are rising and, in times of surplus production we have to deal with falling prices. In this system prices play the role of a regulator of market processes. This rule has a universal character.

Prices in the world food market depend on political, economic, social, technical, climatic and speculative factors. What represents a determinant of prices is their listings on commodity markets, but as it is often the case on stock exchanges, psychology and sentiments are often crucial for purchases and sales.

In the years preceding the global financial crisis, we had to deal with a surplus of supply over demand in the food market. Well-known agricultural economists A. Czyżewski⁵⁰ i R. Sobiecki⁵¹ commented that "... the problem lies not so much in the excessive supply of food in the world market, but insufficient demand for food". Expenditure on food in the years 1990-2007 in the world increased in constant prices by 80%, although their share of GDP fell from 15.6% to 11.3%. World GDP in this period increased by 195% (i.e. almost doubled), mostly in Asia. As a result, the growth of prices in agricultural products in the current decade was clearly higher than in the 1980s and 1990s of the 20th century⁵². It is also undoubtedly associated with the generally good world economic climate, with the occurrence of such phenomena as: increase of income *per capita*, fast pace of industry growth, particularly in developing

⁴⁸ In June 2011, the price of wheat on commodities exchanges was reported to decline by 10% and that of maize by 5%, their stocks are also higher compared to the previous year by more than 10%. In the season 2011/12, supply of land for cultivation of wheat and maize in the USA increased by more than 5% compared to the previous season.

⁴⁹ A. Czyżewski, A. Poczta-Wajda, A. Sapa, *Globalne uwarunkowanie rynków rolnych*, [in:] *Polityka rolna Unii Europejskiej po 2013 roku*, Urząd Komitetu Integracji Europejskiej, Warszawa 2008, p. 14-33.

⁵⁰ *Ibidem*.

⁵¹ R. Sobiecki, *Kryzysy rolne a bezpieczeństwo żywnościowe*, [in:] R. Sobiecki, J. Pietrewicz (ed.), *Przedsiębiorstwo a kryzys globalny*, SGH, Warszawa 2010.

⁵² M. Kwasek, *Tendencje w spożyciu żywności w krajach rozwijających się na tle rozwoju społeczno-gospodarczego*, seria „Program Wieloletni 2005-2009”, no 123, IERiGŻ-PIB, Warszawa 2009.

countries. One may deduce on this basis that the dynamic development, especially in developing countries, with large populations, such as: China, India, Brazil, Mexico, etc., has contributed significantly to the global growth in demand for food. For example, China consumed 1/5 of the world's wheat, maize, rice, and soybeans in 2006. In the middle of the decade, the country was the world's largest importer of soybeans. China's share in world imports of this product reached as much as 40%⁵³. This led to the situation that the supply of food started not keeping up with the demand. *Food Policy Research Institute* stated in 2008, that the increase in consumption and gradual changes in consumption in the developing countries are the most important factors that affect the increase in global food prices. Literature reviews indicate that there were more reasons for the increase in food prices. We can also include most of the previously mentioned and described world food economy determinants. Other important causes affecting food prices may also include:

- Development of the biofuels market. In the years 2000-2009, there was a five-fold increase in bioethanol production. Production of biological diesel increased 19 times, mainly in the countries of the European Union. In the USA, the main raw material for the production of biofuels is maize, in the European Union it is rape and sugar cane in Brazil. The development of the biofuels market can imply physical and economic restraints in access to food. It is expected that the share of farmland used for the production of biofuels will increase from 1% in 2004 to 2.5-4.2% in 2030. This will cause a more limited cultivation area for primary agricultural products intended for consumption, which can affect the further increase in world food prices.
- The price increase of commodities and food was directly associated with the weakening purchasing power of the US dollar, which is traditionally used to represent most prices of most goods from this group. This currency is also used for all important indicators of prices in international trade.
- Media information distorting reliable information. The global reach of the media contributes to faster and more effective penetration of information and market incentives that can encourage changes in the prices of commodities and food.
- The increase in prosperity of the global population translates into a change in the food consumption patterns. There is increased consumption of animal products, especially meat and highly processed products. An increase in consumption of food with a higher value added causes prices to increase.
- Increase in the price of oil and gas. In December 1998, the price of a barrel of oil was around 10 US dollars, at the end of the first decade of the 21st century it increased 9-10-fold. Oil and gas prices affect, *inter alia*, increases in the cost of production of fertilizers, food transport, and industrial agriculture.

⁵³ J. Dudziński, *Uwagi o ruchu cen surowców i żywności w handlu międzynarodowym w obecnej dekadzie*, [in:] E. Najlepszy, M. Bartosik-Purgat (ed.), *Determinanty i wyzwania gospodarki światowej*, „Zeszyty Naukowe Uniwersytetu Ekonomicznego w Poznaniu” 2009, No 126.

- Declines and fluctuations in world food stocks increase uncertainty in the markets of primary agricultural products, which often translates into higher prices. For example, global stocks of cereals in 2007-2011 were subject to significant fluctuations. In the first year of food crisis, i.e. in 2007 they amounted to 17.4% of production, in the following years 20.6%, 22.5%, 19.8%, and in 2011, they are predicted to be at 18.5%.
- Wrong policy decisions. For example, the EU assumed that it would produce less sugar, which it would import. It turned out that when the Union began to produce less sugar it started to be insufficient around the world and its prices increased. A similar threat in the world market of meat can cause a liberalisation of trade between the EU and MERCOSUR. The countries of South America have a competitive advantage in the production of livestock and meat. After the opening of the EU market, prices of meat in Europe may fall, which will be beneficial for consumers, but not for the producers. It is likely that, after broader opening of the EU market for meat from South America, the price of meat in the world market, at least in the first period, will however increase.

The effect of increased food prices may be that protectionist trends will reoccur. The number of intervention measures has increased, such as: increase of customs tariffs, introduction of restrictions or bans on the import and export of food, subsidies for prices, attempts of controlling prices of strategic food resources. Intervention measures used may result in a change of the liberal trends developed in previous decades in many developing countries' economies and a return to the idea of self-sufficiency. The cause may be a loss of confidence in global markets as a source of supply of staple food in conditions of strong growth of its prices and their frequent fluctuations.

3.1.4. Instability in currency exchange rates

The most sensitive factor affecting the size of the foreign trade of any country is certainly the exchange rate. Strong currency reduces the profitability of exports by reducing price and cost advantages and represents a threat to its further growth. Appreciation of a currency increases the cost of imports. In turn, weaker currency increases external demand and encourages exports. The stability of exchange rates is also important for the public debt of the State. It also has a wider scope, it can, for example, be relevant for farmers when converting direct payments from EUR to PLN. Devaluation of PLN against euro increases the payments. Currency fluctuations by far impede trade, especially to small and medium-sized producers. They help, however, earn transnational corporations and global retail chains⁵⁴. As is clear from the analysis carried out by the Institute for Market, Consumption and Business Cycles Research⁵⁵

⁵⁴ For example, the global retail chain Tesco, only in 2009, earned 11.7 million pounds in currency exchange rate differences between its branches in the world.

⁵⁵ *Polityka gospodarcza Polski w integrującej się Europie 2008-2009*, Raport Roczny IBRKiK, Warszawa 2009, p. 153.

only 5% of commercial transactions in Poland are settled in PLN, almost 80% in euros and 15% in USD. This shows large dependence of Polish foreign trade on foreign exchange rates, especially the euro.

The first decade of the 21st century, and especially its second half, is characterized by high volatility in currency exchange rates of the world's economic powers, the USA, EU, Japan, but also the Polish Zloty. Investors – speculators are showing more interest in currencies used in countries with relatively low fiscal deficits and low public debt, such as recently, for example, the Swiss franc. This usually ends with an intervention by central banks⁵⁶. In 2004-2011 Polish currency was subject to constant fluctuations. In the global market zloty is considered one of the “currencies of emerging markets”, which are thought to be more risky than the currencies in the largest world economies, such as: dollar, euro, yen, pound, etc., and at the same time as generating more income (in the sense of speculation). Upon the entry to the EU, 1 EUR cost PLN 4.85. This meant that export at the then existing exchange rates and prices was very profitable for exporters, and at the same time Poland's offer was attractive to importers. In the following years, there was systematic strengthening of the zloty to the level of 1 EUR = 3.26 PLN in July 2008, which, however, did not limit the growth rate of agri-food exports. This did, however, undoubtedly reduce its profitability.

In mid-October 2008, our country experienced a speculative attack on the zloty, whose peak was in February 2009. The euro exchange rate was then at PLN 4.64. The situation of the financial markets in 2008 showed that stiffening an exchange rate can have negative consequences for the condition of individual economies (this was the case of Lithuania, Latvia and Estonia). At the same time, depreciation of the currency can be a good shock absorber for economic collapse and can increase international competitiveness of economies (the case of Poland). In the following months, zloty strengthened, and in August 2011, its exchange rate against the euro again fell to approximately PLN 4.40. A weaker currency can help in ensuring a calmer experience of the next phase of a crisis.

Jerky movements in currency exchange rates cause more damage than benefit. It is definitely better when the exchange rate is stable. Then it does not significantly affect the financial results in a shorter run. Ways to guard oneself against changes in exchanges rates create additional costs for the companies. The acute depreciation of the zloty in late 2008-2009 revealed the problem of currency options, showing that some of the transactions in Poland were of a speculative nature. Companies did not secure the needs arising from trade, but tried to “play” on the exchange rates.

In view of the expected further improvement in the economic climate in our country, it is hoped that foreign investors, by discounting, as it were, future levels of

⁵⁶ Interventions to weaken domestic currencies are much more effective than interventions aimed to strengthen it. The Bank issues domestic money, for which it buys foreign currency, boosting its foreign exchange reserves, while in the case of strengthening domestic currency, it would have to sell foreign currencies from a limited resource of foreign exchange reserves.

economic development in Poland, will still manifest great interest in the Polish currency, which may create further fluctuation in the zloty's exchange rate. In this context, the good news (from 22.12.2010) is the fact that the Executive Council of the International Monetary Fund approved the extension of the Flexible Credit Line (FCL) to Poland, and raised the amount of funds available to 29 billion dollars (19.2 billion SDR) and extended the period of their use to two years. This will (to some extent) secure our currency before any possible attacks by speculators.

3.1.5. Increased importance of transnational corporations

The greatest influence on changes happening in the global economy resides within transnational corporations. They may use their economic power both in relation to other companies, as well as to the countries, and in different ways. Therefore, the impact of transnational corporations on the processes of globalisation can be analyzed on many levels, *inter alia*, by specifying their impact on a particular sector or a branch of the economy in a direct and indirect manner. In a direct manner, they have an influence as the most significant players taking an active part in production, sales, etc. At the same time, indirectly – as players with a strong influence – they affect the behaviour of other players, thus even more strongly affecting the general functioning of the process of globalization.

Their activities raise a lot of controversy. The basic criticism is to do with speculative and monopolistic activities, that are carried out at the expense of other market participants. Global strategies of transnational corporations separate the various phases of production and other activities to create value added in different markets and in different countries. Thus, the ability of individual States to produce an impact on the effective enforcement of their rights towards transnational corporations is becoming smaller, especially that the latter want to produce where it is most favourable, that is cheapest. Transnational corporations gain an increased share in the added value of the economy not only as a result of their effective and competitive advantage, but also as a result of the use of taxation, pricing and organizational solutions. Also, the pressure of global companies on suppliers is one of the most important features of the current process of globalisation.

Transnational corporations operate in all links of the food economy in the world and they have a strong impact on it. For example, three TNCs hold more than 80% of the world's cocoa trade, and three TNCs hold 80% of trade in bananas, six TNCs have an 85% share in the world's grains trade, six TNCs have a 55 to 60% share in coffee trade, and 11 TNCs provide 81% of the world's agricultural chemical products, and 24 TNCs control more than a half of seeds. In the food industry, four TNCs have a 51% share in the production of beer, four TNCs – have a 56% share in the production of tobacco products⁵⁷.

⁵⁷ S. Kowalczyk, *Globalizacja agrobiznesu...*, op. cit., p. 18.

The scale of the share of transnational corporations in the various global food economy's links may vary. It is largest in trade, and a bit smaller in processing (the food industry) and in the supply of agriculture, being at its lowest in agriculture. It is similar in Poland. However, compared with the developed countries of the world, and even with some of the countries of Central and Eastern Europe, the share of TNCs is lower in our country. This is due, *inter alia*, to a large number of small entities both in Polish retail, industry and agriculture. TNCs reluctantly take over small entities, they prefer to grow through expansion of their branches, which requires a longer time. In Poland, virtually all the largest TNCs operating in the world's food economy are present. Changes happening in the food chain in Poland are evidence of the growing similarity of on-going processes and a link of our food economy with the global economy. They mainly occur through activities by transnational corporations in the food industry and global corporations.

In the context of globalization, the number of companies that control the demand and production is becoming smaller in the various sections of the industry and market segments, both national and foreign. For example, in the tobacco, brewing and oil industry in Poland, about 90% of the production is done in 3-4 subsidiaries of transnational corporations. The result is that more and more often unfavourable monopolistic production activities are carried out by transnational corporations in our food economy. Hence, more and more enterprises with domestic capital decide to start cooperation with retail corporations. This despite the fact that the latter take high commissions while at the same time forcing suppliers to charge the lowest prices. Another limitation of the autonomy of smaller companies is production for global retail chains under their brand names. Competition between the chains for suppliers is small, but the subcontractors strongly compete with each other. As a result, global chains reap the greatest benefits (economic surplus) from the whole process of production and trade (monopsonistic activities).

As a result of the activities of transnational corporations, food market in Poland changes rapidly. The behaviour of Polish consumers is still not very stable and often changes over time. In shopping, an important role is played by advertising and marketing activities. Therefore, TNCs are leaders in the advertising market. For example, in the first half of 2011, according to a ranking by the site Wirtualne Media (09.07.2011), corporations were in the lead. The first position was taken by Unilever, which spent PLN 279.2 million on advertising followed by: Nestle Polska, which spent PLN 180.6 million on advertising, Danone (PLN 161.4 million), Ferrero Polska (PLN 113.7 million), Mars Polska (PLN 100.7 million), Coca-Cola (PLN 78.4 million), Kraft Food Polska (PLN 77.4 million), and Grupa Żywiec (PLN 77.2 million).

In addition to adverse actions, transnational corporations brought much good to our food economy, which includes, *inter alia*:

- a supply of capital for modernization of trade and the food industry; this concerns agriculture to a small extent,
- knowledge transfer,

- wider range of products in the food market,
- beneficial changes in employment – better wages and qualifications of employees in the TNCs’ subsidiaries have a positive impact on the whole economy,
- a large part of the Polish exports of agri-food products is done by global trade chains and manufacturing corporations,
- increased revenue for the State budget,
- contribution to lower food prices,
- a positive effect on concentration, both of production and trade in foodstuffs,
- they force other entities to consolidate through their actions.

The direct impact of global companies on changes in agriculture is still relatively small. A much greater impact is produced by widely understood imitation done by domestic companies for which transnational corporations are models to follow.

3.2. Analysis of global factors of an institutional nature

3.2.1. Integration with the European Union

Adapting Polish food economy to the requirements of integration with the European Union can be considered as an important step in enhancing the benefits of globalization. The entry to the EU has changed the conditions of doing business in the Polish food economy, and also resulted in changes in consumer behaviour such as⁵⁸:

- covering our agriculture by the Common Agricultural Policy and uniform regulations on trading in agri-food products with third countries,
- changing the system of intervention in the market of major agricultural products,
- support with EU funds of the process of modernisation and restructuring of agriculture, rural areas and the food industry,
- obligation to apply uniform standards and procedures laid down by the EU regulations.

In the opinion of researchers and analysts, there is general agreement that Poland’s accession to the European Union was good for the Polish economy, especially for food economy. Upon integration, the EU became the main representative of Polish food economy internationally. And this fact alone can generally be considered an asset, because it is a representative of 0.5 billion people and a large developed economy. It is a major exporter and importer of food in the world. It has therefore greater abilities to influence favourable decisions for itself in the global economy than Poland does. Polish membership in the European Union also provides an opportunity for overcoming emerging challenges related to globalisation more easily.

⁵⁸ R. Urban, *Polska gospodarka żywnościowa na tle rynku wspólnotowego i globalnego*, „Roczniki Naukowe Stowarzyszenia Ekonomistów Rolnictwa i Agrobiznesu” 2007, Vol. IX, Issue 4, p. 202.

Polish agriculture. Poland is a beneficiary of EU membership in the scale of the whole economy, but especially in the agri-food sector. Coverage of Poland by the Common Agricultural Policy instruments has created the possibility of additional funding for agriculture from the budget of the European Union. National budget expenditure has also increased. Polish agriculture and rural areas were covered by financial instruments in the form of direct payments, funds for rural development and intervention buying, resources for modernisation of agriculture and subsidies to exports. Support given to farmers from the EU budget and the State led to a significant improvement in the level of income in Polish agriculture and reduced the difference between agricultural income and average salary in the domestic economy. In the year 2008, income per adult person in agriculture was 2.5 times greater than in the year 2003. Grants from the EU accounted for 39% of agricultural income in 2004, up to 52% in 2006. Polish agriculture quickly adjusted to the standards and requirements of the EU. It also increased the quantities of commodities for the needs of the domestic market and rapidly growing exports. However, a comparison of the economic performance and structure of Polish agriculture shows that these figures are still much less favourable than in most countries of the European Union.

In the clash with globalisation, agriculture seems to be the weakest link in Polish food industry, being technically and technologically backward, with low concentration of production, low labour productivity, etc. Considerable funds received from the EU and directed to agriculture accelerated its modernisation, yet it still remains uncompetitive as compared to global agriculture. Increased grants for agriculture have diminished the pressure to improve efficiency of farming, intensify agricultural production or to transform agricultural structures. Comparative analysis of prices of agricultural products shows that the prices in the world markets are generally lower than the prices offered by the Polish agriculture. Despite the integration with the EU, there are still large price fluctuations, for example, in the case of cereals and pork.

Open competition in the global market, as a manifestation of globalisation, gives rise to more threats than development opportunities for our agriculture. The threats are neutralised by Poland's integration with the European Union, yet the EU agriculture itself is rather unable to cope with open competition in the global market. This is where we can look for major benefits for ourselves which follow from common action related to the protection system for all agriculture in the EU Member States.

The food industry is also a major beneficiary of the integration with the European Union. In the years 2003-2008 total investment support for the food industry amounted to PLN 3.5 billion, which represents 8.5% of investment expenditure of this industry and 25% of the investment in sensitive sectors (milk, meat, fish). There are a few sources of accelerated growth of the food industry after the integration, including:

- the pressure associated with the need to adapt food industry undertakings to standards applicable in the European Union. It forced businesses to increase investment intended for modernisation, both for adapting facilities to the required

health, veterinary, environmental conditions, as well as to exchange machinery, and often replacing technologies used with more modern ones. This contributed to increasing the efficiency and competitiveness of our food industry in the world market. Thanks to these actions, Polish food industry is considered one of the most modern in Europe;

- diversification of funds for investment. Investments in the food industry were funded by resources from: own domestic enterprises, foreign investors (FDI accounted for most of the resources in the whole group), subsidies of the European Union and the State;
- gaining access to the large and rich market of the European Union has revealed competitive advantages of the Polish food industry. After the entry into the European Union, about 45% of increase in the production of this sector was located in foreign markets and the share of exports in the revenue of the food industry more than doubled (from 11% in the years 2000-2002 to 24% in 2009);
- increase of domestic demand mainly caused by increased income made by the population and changes in consumption structure (more processed products are currently consumed in Poland);
- increased availability of commodities for production, both from the domestic market, and from the imports;
- competitive advantages, low price and high quality of Polish products of the food industry (safe, healthy and tasty food).

However, in addition to the positive factors of industrial development there are also some threats, which may include:

- the increasing share in production and advantage of transnational corporations over producers with domestic capital. The greatest differences occur (or even increase) in the level of competence of staff (management, marketing, efficiency of using assets etc.). This means smaller entities face becoming out of business;
- liberalisation of trade causing reduced comparative advantages of the Polish food industry in the global market, resulting from higher wages, lower productivity, higher prices of supply, poor promotion, etc., in relation to products coming from other countries, and especially developing countries;
- increase in concentration of production, causing a threat of oligopoly and monopsonistic activities;
- growth of protectionism in the world, hampering competition for Polish companies in foreign markets (e.g. in Russia, Ukraine);
- fluctuations of zloty exchange rates compared to foreign currencies.

The current economic crisis has slowed the pace of production in Polish food industry⁵⁹, but at the same time has improved its financial performance, helping to

⁵⁹ The value of sold production (calculated at basic prices) in 2008 increased by 2.1% compared to the very good year 2007, and in 2009 it increased compared to the previous year by 4.1%.

maintain, and perhaps even improving its comparative advantages. This assessment is exacerbated by low consolidation and concentration of production, especially in industries with a predominance of enterprises with domestic capital: meat, fish, dairy, fruit and vegetables⁶⁰. Good economic climate after the entry to the European Union meant that a large part of the enterprises in these industries is not fully adapted to competition in the global market, given the small scale of production, limited ability to implement innovation and promote the brand and organize distribution channels. It should be added that these are the industries which are decisive for the Polish export of agri-food products.

By analyzing the financial condition of food industry, we will notice a regularity – typically industries with a very large and large level of globalization (share of TNCs in production) achieved better performance than the industries of a low level of globalization. In the years 2007-2010 globalization also had impact on the change in the structure of the food industry. The share of industries with a very high level of globalization increased by 2.2% and by 0.8% in the case of industries with a high level of globalization, while the share of industries with a low participation of foreign companies decreased by 30%. These changes are evidence of the growing globalisation process of the food industry, i.e. increased participation of transnational corporations in its production⁶¹.

Foreign trade. Trade with foreign countries is one of the most measurable and objective measures of a country's or sector's of the economy participation in the process of globalization. It shows its openness, competitiveness and potential. A large increase in foreign trade of agri-food products in years 2004-2011 increased Polish participation in the international trade of agri-food products, on which better economic climate in the world markets had a significant influence in the first years after accession (to 2008). It is, however, justified to claim that a much greater impact on participation in this trade was down to Poland's integration with the European Union, because the global financial crisis, especially in the year 2010 and in the first half of 2011, did not have a significant impact on hampering the growth of trade. The following arguments are in favour of it:

- accession of Poland to the EU meant a radical change in trade policy and changed our competitive position both in relation to EU and non-EU countries. The role of the various factors affecting the volume of import and exports of agro-industrial products changed;

⁶⁰ P. Chechelski, A. Judzińska, *Wpływ kryzysu na polski przemysł spożywczy*, seria „Komunikaty, Raporty, Ekspertyzy”, No 552, IERiGŻ-PIB, Warszawa 2011.

⁶¹ P. Chechelski, *Procesy globalizacji na polskim rynku żywnościowym po integracji z Unią Europejską*, [in:] R. Urban (ed.), *Stan polskiej gospodarki żywnościowej po przystąpieniu do Unii Europejskiej. Raport 5*, seria „Program Wieloletni 2005-2009”, no 109, IERiGŻ-PIB, Warszawa 2008.

- agri-food trade growth after integration with the EU proves that the customs tariffs and quantitative and quality restrictions applicable in the pre-accession period were a major barrier to the development of trade (especially to EU countries);
- access was gained to a large, wealthy, single European market (provided that we respect EU health, veterinary, environmental protection and animal welfare standards). Currently Poland sells about 80% of exports of agri-food products to the European Union;
- when entering to the EU Poland gained access not only to the internal market of the Community, but also to agreements ensuring duty free trade with many countries of the world, a fact which is rarely mentioned. The EU has many bilateral trade agreements with individual countries and regions around the world. It concluded trade and cooperation agreements with such countries as: Turkey, Russia and former Soviet republics. For the poorest countries of the world it established a generalized system of preferences. It also concluded an agreement with the Republic of South Africa, which provides free trade. It negotiates a free trade agreement with six members of the Gulf Cooperation Council, i.e. Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. In Latin America, the EU concluded agreements with Mexico and Chile. In autumn of that year an agreement with South Korea enters into force. Negotiations with the MERCOSUR Group – Argentina, Brazil, Paraguay and Uruguay are in progress. Polish exporters obtained the same level of customs protection and the ability to use instruments to support export (including export subsidies) in international markets as is the case of exporters from the other countries of the Community.

In addition to positive events, threats can also be observed:

- most – more than 80% of food exports in 2008, was to EU countries, which in the case of an economic collapse might mean their restriction; export destinations should be more diversified, taking into account the increased importance of developing countries;
- production and export constraints in the EU are also an obstacle; quotation of the production of milk, sugar, potato starch and isoglucose reduces export opportunities for those products, maintains high domestic prices and weakens domestic demand;
- the opening of the Polish economy causes the zloty to be subject to strong foreign exchange fluctuations, which is often independent of the current condition of our economy, and more dependent on the assessment of the situation in a given region of the world; currency fluctuations cause a weakening of the position of domestic enterprises in relation to transnational corporations.

Development of links with foreign markets was not only a factor for widening markets for Polish food producers, but it also became a factor stabilizing the domestic food market, making the current situation independent of fluctuations in internal economic climate and current political game. The latter impact, however, causes greater

sensitivity of agri-food market and the whole food economy to global phenomena, especially of a crisis nature⁶².

Substantial changes under the influence of globalization processes after the integration with the EU also occurred in the **consumer market**. Inspirers and authors of new behaviours and needs in the food market were usually transnational corporations, seeking to unify the consumption of food products especially due to the economic benefits that are associated with it. In the years 2004-2010, the food market in Poland changed very quickly and become similar in terms of the wealth of trade offer (range of products) to highly developed countries. During this period, it was observed that:

- changes in food consumption patterns occurred, both quantitative and qualitative,
- new directions of processing developed, for example, production of energy drinks, supplements for children and adults, etc.,
- aesthetics of food products (packaging) improved,
- the quality of products improved,
- way and place of sale of food products changed to some extent,
- marketing activities of companies producing and selling food changed,
- consumer knowledge about food and its consumption changed.

With an increase in income of the population and reduced differences in the prices of food between Poland and developed countries (especially EU), we observe increased imports of Premium (more luxurious) products. This is particularly noticeable in the case of stimulants. For example, there is rapidly increasing consumption of branded spirits and grape wines.

The following trends can be seen under the influence of globalisation **in internal trade:**

- a strong increase in competition occurred, which has caused an increase in the concentration of trade. The result of this among Polish trade companies was the bankruptcy of many small companies (shops) and creating domestic retail chains,
- monopsonistic practices became stronger and more widely used by major retail chains,
- there is a systematic increases of market share in retail and wholesale sales chains (hypermarkets, supermarkets, discount stores), mainly global corporations,
- in production and sales, the share of own (trade) brand foodstuffs made by global chains is increasing (in 2010 their sales were at PLN 24.6 billion),
- wholesale functions are taken over by manufacturers and logistics service centres run by specialized companies, mostly foreign,
- the number of global manufacturers with their own nationwide wholesale chains increases rapidly, which are getting larger, and their development often happens by

⁶² R. Urban, P. Chechelnski, *Ocena stanu dostosowań polskiej gospodarki żywnościowej do integracji z Unią Europejską. Konkluzje i wnioski*, [in:] R. Urban (ed.), *Stan polskiej gospodarki żywnościowej po przystąpieniu do Unii Europejskiej. Raport 6 (synteza)*, seria „Program Wieloletni 2005-2009”, no 145, IERiGŻ-PIB, Warszawa 2009, p. 179.

taking over or subordinating local wholesalers. This occurs especially in the following industries: brewing, soft drinks, tobacco, spirits,

- concentration of trade, both of global and domestic chains, increases rapidly.

3.2.2. Liberalisation of trade in agri-food products

The World Trade Organisation has been regarded as an institution promoting and, to a large extent, responsible for the shape and pace of globalisation and liberalisation⁶³. That is why the liberalisation processes in the international trade headed by the WTO are one of the most significant impacts determining competitive potential of national economies and their sectors. The growing liberalisation of world trade in agri-food products was supposed to result in changes of competition conditions both at a global and regional scale⁶⁴.

Over the last few years liberalisation process of trade in agri-food products within the WTO structures was practically halted. The most important decisions so far regarding access to agricultural market, internal support and export subsidies were taken at the Uruguay Round of the GATT/WTO. The agreement negotiated at this occasion started a process of the reform of agricultural trade and national agrarian policies, intended to liberalise trade in agri-food products. As a result of the decisions taken at the round, the dynamics of the world trade, including trade in agri-food products has been multiplied. Negotiations were continued after 6 years at the Doha Conference in November 2001. Negotiations were planned to be completed in 2005, at a Ministerial Conference in Hong Kong. However, due to diverging negotiation positions of main participants to the process (the EU, USA, and the G-20 developing countries⁶⁵) the consensus has not been reached so far.

One of the most difficult subjects of negotiations is facilitating access to agricultural markets of industrialised countries for export from developing countries, and levelling competition conditions in export by alleviating all subsidies to food export by the developed countries, including the European Union. At negotiations, several issues were raised, such as: removing obstacles in trade of agricultural products, reduction of custom duty, facilitation of trade for the poorest countries, export subsidies and subsidies for agriculture. The aim of the negotiations is mutual opening of markets. Apart from the issues related to agriculture, issues of trade in industrial products and services are negotiated.

⁶³ W. Zapędowski, *Liberalizacja handlu towarami rolnymi w ramach WTO – wyzwanie dla europejskiego rolnictwa*, [in:] *Dziś i jutro gospodarstw rolnych w krajach Centralnej i Wschodniej Europy*, seria „Program Wieloletni 2005-2009”, no 98, IERiGŻ-PIB, Warszawa 2008, p. 226.

⁶⁴ More on the subject see: K. Pawlak, W. Poczta, *Międzynarodowy handel rolny, teorie, konkurencyjność, scenariusze rozwoju*, PWE, Warszawa 2011.

⁶⁵ Members of the G-20 Group are: Argentina, Bolivia, Brazil, Chile, China, Cuba, Egypt, Guatemala, India, Indonesia, Mexico, Nigeria, Pakistan, Paraguay, Philippines, The Republic of South Africa, Tanzania, Thailand, Venezuela and Zimbabwe.

In the case of finalising of the WTO negotiations, it might be expected that the decrease in custom protection of the Community market and total removal of all subsidies for food export may decrease its value and increase the value of agri-food import from and to the European Union. It may hinder competition in agri-food products cultivated in the territory of the EU both at the internal market and at the international one. It is assumed that certain Community Member States may lose their competitive advantage they have had so far in international agricultural trade to countries with low production costs.

It may also threaten Poland, as its major partners in agri-food sector are EU Member States, where ca. 80% of total export of agri-food products is destined, and 70% imported food also originates from the EU. K. Pawlak and W. Poczta⁶⁶ also conducted simulations of forecasts for 2008-2015, regarding foreign exchange of EU and Poland in two variants differing with the level of reduction of custom tariffs. In the first, they took into consideration negotiation proposals presented by the WTO in December 2008 and total removal of subsidies in food export. In the second variant they took into account the current state of custom tariffs (no liberalisation of trade exchange). The simulations performed so far lead to the conclusion that potential liberalisation of agricultural trade from the point of view of the agri-food sector in the EU will be disadvantageous, and its competitive position on the global market may be subject to a significant weakening. Products of animal origin produced in the EU Member States, through their significant competitive advantage, may have also the strongest position on the global market in the future, contrary to plant products. At present negotiations are at large concerning the so-called geographical labelling. The European Commission makes every effort to extend the protection to high quality products related to the territory of production, such as meats or dairy, and to introduce registers of these labels on the global scale. Introduction of geographical labelling would additionally strengthen the competitive position of these products in global trade.

In the case of Poland, as for the EU, the strengthening of liberalisation tendencies in global agricultural trade may result in the decrease of the value of export and the increase of the value of import of agri-food products. It might be said that liberalisation of economic exchange with abroad will increase competition from countries with low production cost at national and international markets alike. According to the estimates, by 2015 Poland may remain net exporter of meat and dairy products. What may be subject to limitation is export of oils and fats and sugar. The decrease of the protection level of the EU market should not result in any significant changes in trade in grains and fruit and vegetables. Among the products with relative higher competitive position in the European Union more processed products can prevail, which results from even lower labour costs and processing margins in Polish food industry.

⁶⁶ K. Pawlak, W. Poczta, *Międzynarodowy handel rolny...*, op. cit., pp. 171-187.

3.3. The influence of global factors on the current and future developments in the Polish food industry

The assessment of the impact of globalisation processes on the Polish food economy in 2004-2011 is not unanimous, since its scope, progress and results were different. **In foreign trade** in agri-food products the assets were as follows: High dynamics of turnover growth, positive trade exchange balance, higher protection of the internal market from the inflow of cheaper products and raw materials, and the defeat – low diversification of export directions (too high potential of export to the EU countries exceeding 80%). **In food industry**, there has been a slowdown in the globalisation processes compared to the previous years (in particular to the privatisation period). The share of transnational corporations in production increased, though, and production and export of producers with national capital also increased. However, in several industry sectors there has been a concentration of production by TNCs. Generally speaking, globalisation processes have had a positive impact on Polish food industry, which is confirmed by high production and export dynamics and other economic factors. **In agriculture** significant funds from the EU directed to agriculture sped up its modernisation, but still it is not a competition for global agriculture. The increase in subsidies for agriculture weakened the regime of efficiency improvement for economy, intensification of agricultural production or restructuring of agriculture. Agriculture seems to be the weakest link in Polish food industry. Direct influence of globalisation on agriculture was slight (for instance, by foreign trade in agricultural products, supplies of raw products to the TNCs branch), as it was protected by the EU provisions. The growth of world prices of agricultural raw products also did not make any improvement for the profitability of Polish agriculture. Big changes that were initiated by the globalisation were observed in consumer behaviour on the markets of food products. They were inspired to a large extent by the activities of TNCs, and the opportunities for free movement. The biggest changes took place in internal (national) trade. Global corporations play a much greater role here than transpires from their market share. Not only are they responsible for changes in trade as such, but also in its environment. These influence, *inter alia*: foreign trade turnover, production of food industry, prices of food products, consumer behaviour. They are the best example of vertical and horizontal integration in the agri-food sector. Changes in globalisation of particular sectors of Polish food economy may be indicative either of the growing similarities between the processes, or their links with the global economy.

From the point of view of globalisation processes' impact on Polish food economy⁶⁷, in the short period to 2013, the most significant factors will be:

⁶⁷ It should be pointed out that the influence of globalisation on particular chains of food economy will be different.

- Global economic conditions. Currently world economy has been touched by a wave of financial crisis, the so-called debt crisis (affecting in particular the developed countries, to a lesser extent, also Poland). It seems that in conditions when governments need to limit expenditures and household make savings, growth can be generated mainly through the increase in export. An obstacle for Polish export of agri-food products may be unfavourable situation in the majority of EU Member States (which are the main importer of our food). On the other hand, Polish products have a comparative advantage on this market (both in terms of price and quality) and at times of crisis these may even increase, as price is the factor that counts most. Activities of global networks of commerce, which contribute to the growth of export and depreciation of the currency rate of PLN, may also be factors in this case. What may also contribute to the growth of export is growing demand of the developing countries and a relatively good condition of our biggest trade partner – Germany. In export of agri-food products the decisive, ca. 80% share has food industry, which has recently had an advantageous financial situation, which may facilitate export even with lower profitability.
- The growth and volatility of prices on global markets of agricultural products. *Per analogiam*, by 2009-2010 it might be suspected, that at times of crisis – as today – prices of agricultural raw products decrease. It may facilitate import (hence also production growth) for some re-exporting sectors of food industry: fish, tobacco, sugar, coffee and tea processing etc.
- Fluctuations in currency rate of PLN. The depreciation of PLN which started in August 2011 will probably last for several months to come. The weakening of PLN will have a positive impact on our economy, and in particular, export.
- Integration with the EU still contributes to the development of Polish food economy. Resulting from the accession to the EU, globalisation processes in the Polish economy slowed down, the economy is protected by the EU provisions, and enterprises have opportunities (means and time) to adapt to the market conditions. The European Union still helps level opportunities for low-globalisation sectors and vast number of small and medium enterprises by support from Structural Funds under different programmes, like Innovative Economy, Human Capital, Infrastructure and Environment, Regional Operational Programmes and government activities supporting promotion of Polish food products abroad, as well as the development of R&D activities related to food economy.
- Domination of transnational corporations. In the nearest years the role of TNCs in Polish food economy as a factor that influences the shape of the internal trade, production of food industry and turnover in foreign trade will increase. This will be, to a greater extent, the role of an integrator and coordinator than a producer or exporter.

In the years to come, one might expect that the share of global companies in Polish food industry will continue to increase. Premises supporting such a development

are the following: The growth of interest of the EU Member States in products of Polish food industry, relative low production costs compared to the other EU Member States, opportunities to buy enterprises relatively cheap, the occurrence of relatively significant comparative advantage between TNCs and national companies, the increase of wealth of the Polish society (consumption growth, including highly processed high-quality products).

The development of global companies brings our industry closer to the global level, but on the other hand, is related to diverse consequences for the economy. The majority of the expected structural transformations in the food industry have been and will be first and foremost a reaction to growing competition from global companies. The presence of TNCs in food economy activates national entities. This contributes to the development of the whole sector. Therefore, one can expect that the nearest years will be a period of further significant progress in growth of labour efficiency and the productivity of the majority of food industry.

For Polish food industry, in particular for agriculture, the biggest risk would be liberalisation of trade, which would prevent continuation of support and CAP mechanisms. Lack of the inflow of the EU funds could prevent processes of production and productivity growth, resulting from structural changes and technological progress. Difficulties originating from the second wave of crisis probably will not allow fast conclusion of the Doha negotiation round. Modern economy, including food economy, functions in the conditions of many links and co-dependencies. It makes the situation on the markets increasingly less predictable.

Against other European states, the economic growth in Poland in Q2 2011 was very good and amounted to 4.3% GDP. Among the European countries, only Sweden and the Baltic states had higher GDP growth. The condition of the Polish economy, compared to other states, is good. In 2011 the dynamics of investment grew, which shows that enterprises expect further production and sales growth. Consumption in single households remained at a high level, even though in Q2 2011 we were dealing with a speedup in inflation, which might be a problem for the real income. Export was again accelerated and its dynamics was again higher than that of import. Such good economic information failed to protect Poland against the August (2011) downturn on Warsaw Stock Exchange, or depreciation of the PLN (probably yet another speculative attack on our currency). In food economy we also have examples of the impact of world phenomena on our economy. The collapse of the vegetable market in June 2011 was a result of a panic related to EHEC coli poisoning. Russia used this pretext to put embargo on the import of vegetables from the EU. Exporters from Poland also suffered as a result of this policy.

The condition of the Polish economy, including food economy, is good. It seems that we are quite well-prepared to face potential problems. However, we are but a part of the global economy, hence we are prone to be affected by serious regional or global trends. Recent events were also indicative of polarisation of the global economy.

Reactions of markets in particular countries, to a growing extent are related to political and economic events in the largest countries, such as: USA, China, Japan, but also: EU, NAFTA, ASEAN, MERCOSUR. The countries that participate in these organisations are evaluated not only in the context of their national economies, but as participants to the entire organisation.

Economic crises in recent years (financial, food) added to the uncertain environment. On the one hand we have natural calamities such as hurricanes, droughts, floods which destabilise agricultural production, on the other hand – more and more turmoil in the economy. These appear, unexpectedly, as in nature. In this context, one can list, *inter alia*, increases and decreases of currency rates, stock exchange listings, changing prices of raw products, crude oil and gas, economic protectionism with economic barriers (custom duties, a wide range of non-tariff barriers), as well as barriers of political (national security, consumer protection), ideological, religious character, and the activity of transnational corporations. It is impossible to predict all the factors.

In the light of the limiting opportunities for traditional developments in food production by the increase of the cultivated area, lack of water, removal of economic barriers and development of science, in particular genetic and biological engineering will be particularly important. As a result, limited natural resources will not be an obstacle in feeding the human population, but will have a potential for making the world even more dependent on the activities of transnational corporations, with all the results possible, including the negative ones, such as the growth of food prices, speculation on agricultural raw products markets, limited access to modern technology.

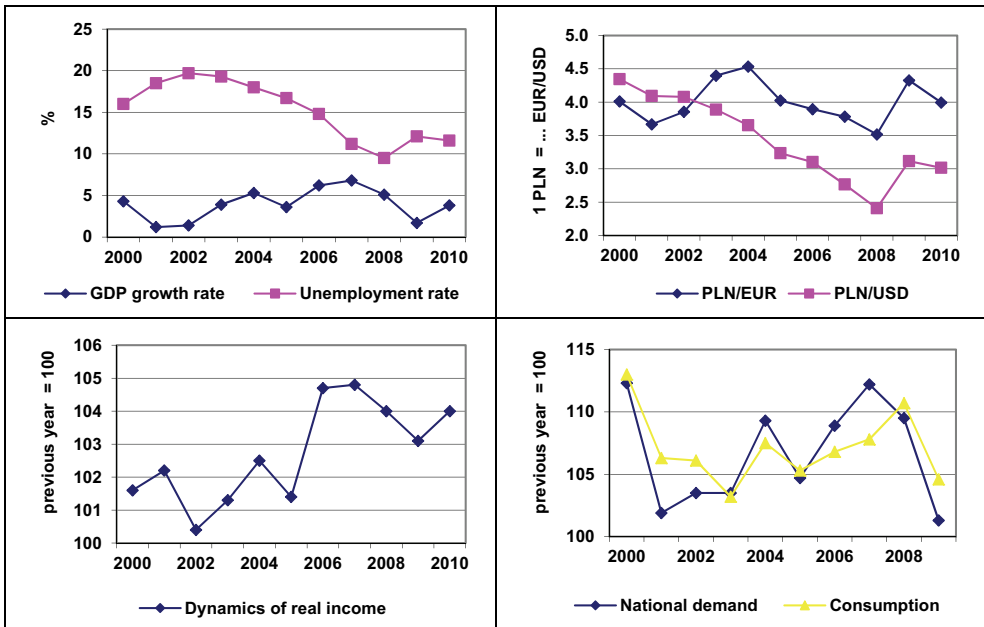
Global food economy requires changes which would help combat increasing risks. Such changes would include, *inter alia*, increasing transparency of global food market, for instance, regulating the market of futures contracts, increasing food reserve, liberalisation of trade, legal regulations, activity of transnational corporations, including in agriculture, food industry and trade. Current distortions on the food market should also point out the importance of a long-term strategy for strengthening of global food security. Since food prices may dynamically increase in the future, common adaptation mechanisms should be developed by the international organisations.

4. Changes in the Polish agriculture after the accession to the EU

4.1. Macro-economic environment

Following the accession to the EU, Polish economy developed dynamically, in particular, in the 2006-2008 period, when the annual GDP growth amounted on average to 6%. In the next years, due to the global recession, the pace of the economic growth slowed down, but still remained higher than in other EU Member States. Good economic position of the country supported the strengthening of the national currency against euro and the US dollar. The inflation rate, in particular in the first years after Poland's accession to the EU, significantly dropped. The dynamic economic growth translated into the reduction of the unemployment rate and general improvement of the income of Polish citizens (Figure 4.1).

Figure 4.1. Basic macroeconomic indexes of Poland



Source: Authors' own calculation according to CSO data.

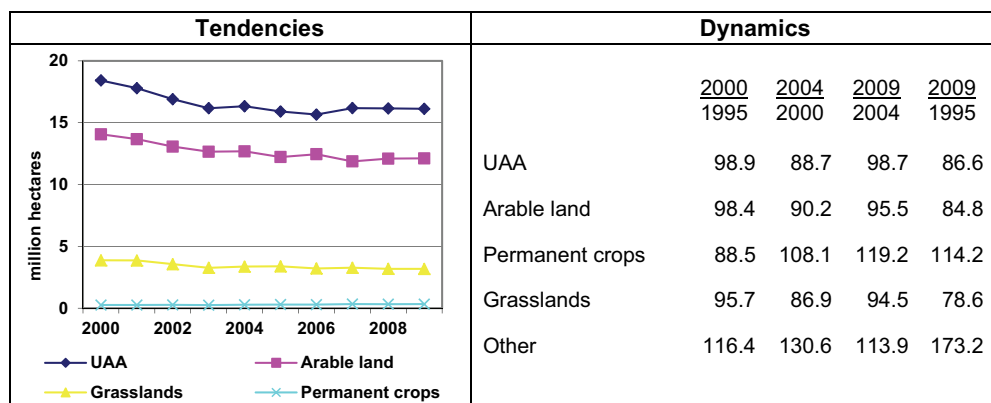
This, in turn, was reflected in the growing demand, including demand for food products. However, the share of the latter in household budgets remains substantial (ca. 25% of the general expenses). As a result, Polish consumers are largely affected by the price increase of food products, which limits the scale of demand growth for food. In this context it should be pointed out that following the accession to the EU relative food prices significantly increased. Substantial growth of non-food cost of living also contributed to the slowdown of the dynamics of the demand for food (Figure 4.1).

In the conditions of limited growth of the national demand for food, the foreign trade played an important role in the use of surplus products. The majority of the production growth in agri-food industry was exported. The share of the Polish agriculture in creating the added value following the accession to the EU shows a tendency to decrease. Currently it is at the level of 3-4%. At the same time, agriculture employs ca. 15% of the total number of employed people, which is indicative of low labour efficiency.

4.2. Changes in the Polish agriculture following the accession to the EU

Following the accession to the EU, as compared to the pre-accession period, the dynamics of the drop in the utilised agricultural area, arable land in particular, significantly decreased. On the other hand, the decreasing tendency of the area of the multiannual plantations was reversed, as in 2009 their area was 19% bigger than in 2004. It might be suspected that changes are relative to Poland's inclusion in the CAP policy, in particular from the implementation of direct payments and support for multiannual plantations (Figure 4.2).

Figure 4.2. Changes of land use in the Polish agriculture (2000-2009)

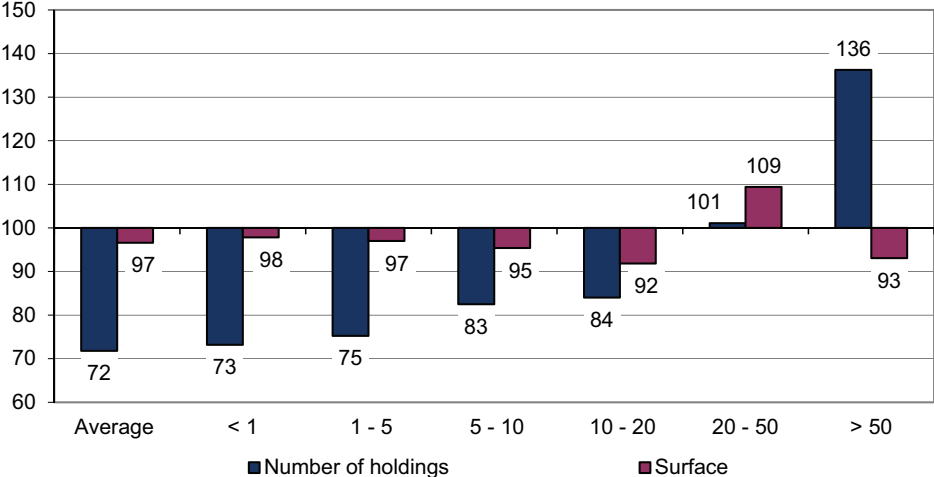


Source: Authors' own calculation according to CSO data.

There have been major changes in the agrarian structure which continued long-term trends. In the period preceding accession to the EU (1996-2002), large agricultural holdings (20-50 ha UAA), which took over arable land from small and medium agricultural holdings, but also from holdings of over 50 ha, developed dynamically. The growth in numbers was accompanied with the decrease of surface. The arable land of holdings below 1 ha grew, but their number dwindled. Following the accession to the EU, the number of holdings decreased by 28%, and their surface – by 3%. The development of large holdings lost dynamics, but still arable lands were taken over by holdings of the surface of 20 to 50 ha, from both smaller holdings, of which the number and area decreased, and bigger, the number of which, despite the decrease

of the area, grew. The limiting of the number of the biggest holdings is relative to the implementation of regulations limiting the area of family agricultural holdings and the ending of the lease period in second half of the previous decade. The number of holdings taking over land slightly increased. The number of holdings smaller than 1 ha decreased by 27%. To a slightly lesser extent the number of small and medium holdings decreased (from 25% to 16%). Their area also shrank, including, to a largest extent, in the group of 10 to 20 ha (by 8%). These changes indicate that the Polish agriculture, despite major changes, is still to a large extent dispersed (Figure 4.3).

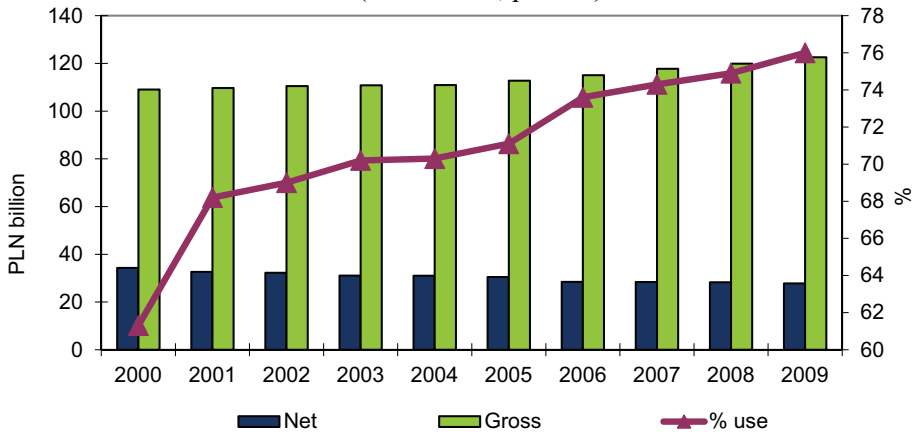
Figure 4.3. Changes in agrarian structure in Poland after the accession to the EU



Source: Authors' own calculation according to CSO data.

In 2002 26% of agricultural holdings did not run agricultural activity, and in 2010 this share decreased to 17%, which confirms the thesis of the growth of productive and pro-market orientation of holdings. After transformation into market oriented economy in Polish agriculture there appeared a slow increase in the fixed assets share in the structure of means of production, on the one hand, and, on the other, decapitalisation of fixed assets was observed. Average image of the Polish agriculture is very detrimental in this regard. In 2009, the use of fixed agricultural assets exceeded 75% (Figure 4.4). This situation concerns mostly buildings and facilities. The usage of machinery is considerably lower. While, following the accession to the EU, the investments largely increased, and their share in the value of fixed assets almost doubled, it does not change the general situation of the Polish agriculture. Firstly, investments are made by large holdings, economically strong, secondly, investments concern in majority the machinery and not buildings and facilities used in agricultural production. The estimated number of farms amounts to 150-250 thousand. Agricultural activity conducted in the remaining farms does not enable reproduction of fixed assets which increases its usage.

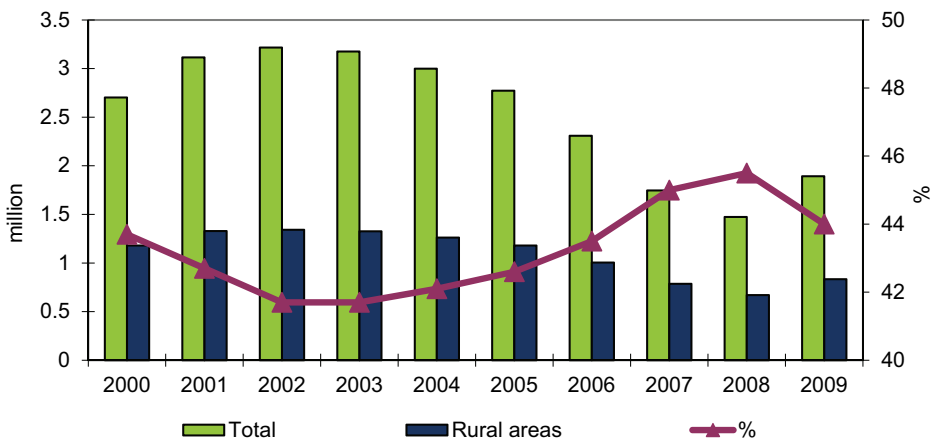
Figure 4.4. Fixed assets, degree of usage in the Polish agriculture (PLN billion, percent)



Source: Authors' own calculation according to CSO data.

It is very difficult to estimate the unemployment in rural areas. According to CSO data, the number of employees in agriculture has been relatively stable recently and it was at the level of slightly over 2 million. Nevertheless, the so-called “hidden unemployment” is included in these numbers, as significantly large part of family holdings members spend little time working in agriculture. Undoubtedly, the employment in agriculture decreases. Currently ca. 22-24% of the working age rural residents work in agriculture. It should be pointed out, that 40-45% of the total number of the unemployed live in rural areas. Following the accession to the EU, this proportion slightly increased, but it resulted from the reduction of unemployment in other sectors of the national economy (Figure 4.5).

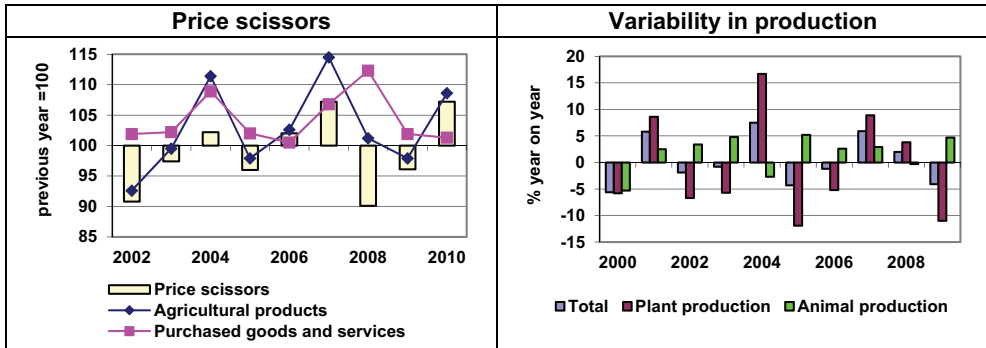
Figure 4.5. The total number of the unemployed in Poland and in rural areas



Source: Authors' own calculation according to CSO data.

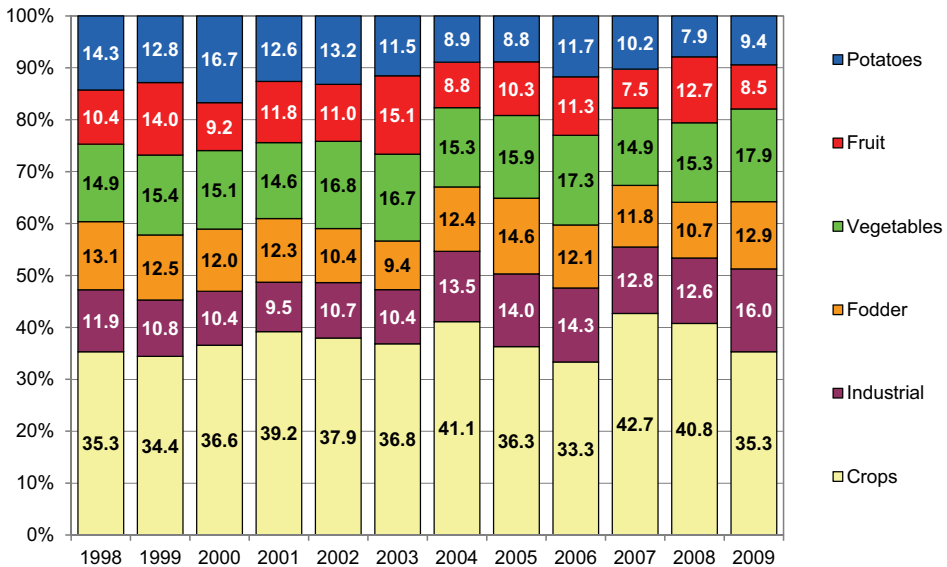
Agricultural production in Poland, plant production in particular, is characterised by significant variability. It mostly results from lower technological level and relatively low-quality soil that considerably increases the plantation sensitivity to weather conditions. Following the accession to the EU there was certain improvement in terms of production technology. However, it was not sufficient to considerably impede fluctuations in production, especially due to serious weather anomalies observed in this period. Fluctuations in production cause changes in prices of plant products and, consequently, result in business fluctuations in livestock sector, and change in the production level (Figure 4.6).

Figure 4.6. Index of price scissors in the Polish agriculture (%)



Source: Authors' own calculation according to CSO data.

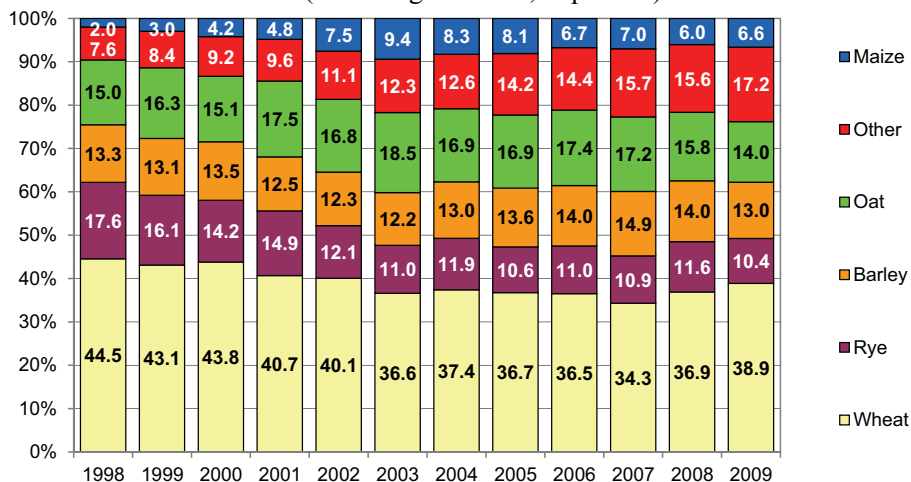
Figure 4.7. The structure of plant production in the Polish agriculture (according to the value, in percent)



Source: Authors' own calculation according to CSO data.

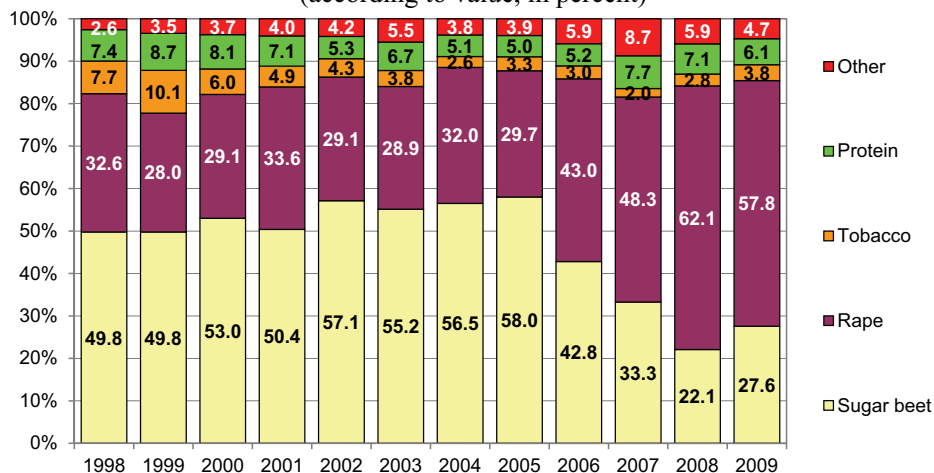
Following the accession to the EU no major changes were observed in the share of plant and animal products. There were certain shifts within both categories. The share of industrial plants and horticultural products increased, while the share of potatoes decreased (Figure 4.7). As for the industrial plants, the share of rapeseed grew at the expense of reduced share of sugar beet, which reflects the impact of the reform of the EU sugar market (Figure 4.9). In the structure of production of crops the share of maize and other crops grew, in particular of triticale and cereal blends. The share of rye decreased, though (Figure 4.8).

Figure 4.8. The structure of crop production in Poland (according to values, in percent)



Source: Authors' own calculation according to CSO data.

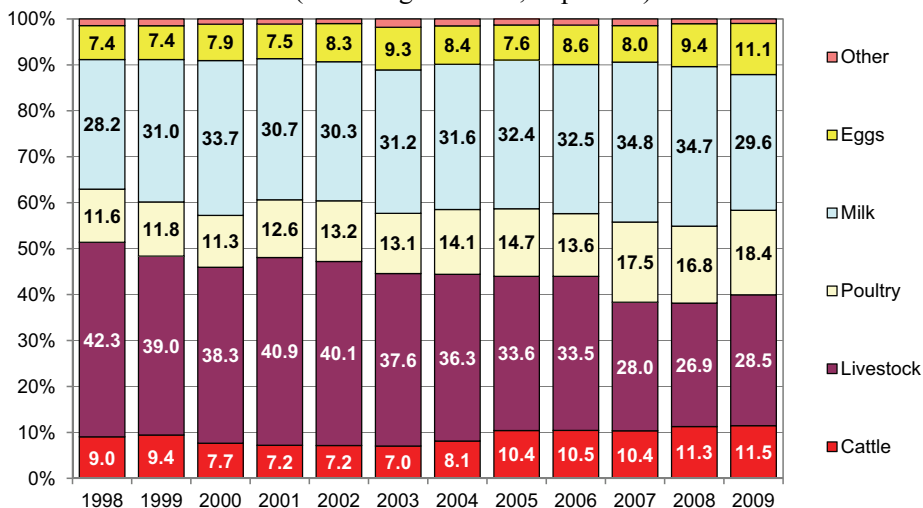
Figure 4.9. The structure of production of industrial plants in Poland (according to value, in percent)



Source: Authors' own calculation according to CSO data.

The most significant changes in animal production concerned the decrease of the share of swine. The significance of poultry, eggs and beef increased. The share of milk production remained at the same level (Figure 4.10).

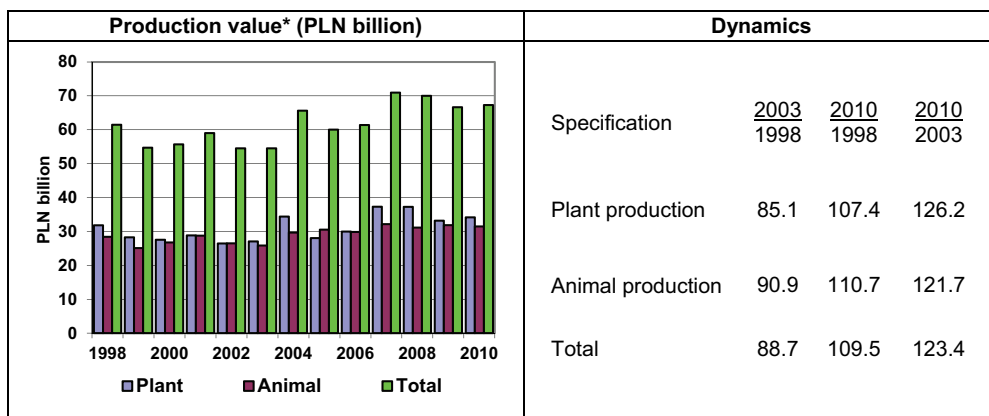
Figure 4.10. The structure of animal production in Poland (according to values, in percent)



Source: Authors' own calculation according to CSO data.

In 2010, compared to 2003, the production value in fixed prices of 2005 grew by over 23%, including plant production by 26%, and animal production by 22%. Compared to previous periods, the dynamics of the growth of agricultural production following the accession grew by several times (Figure 4.11).

Figure 4.11. The value of agricultural production in Poland and its dynamics

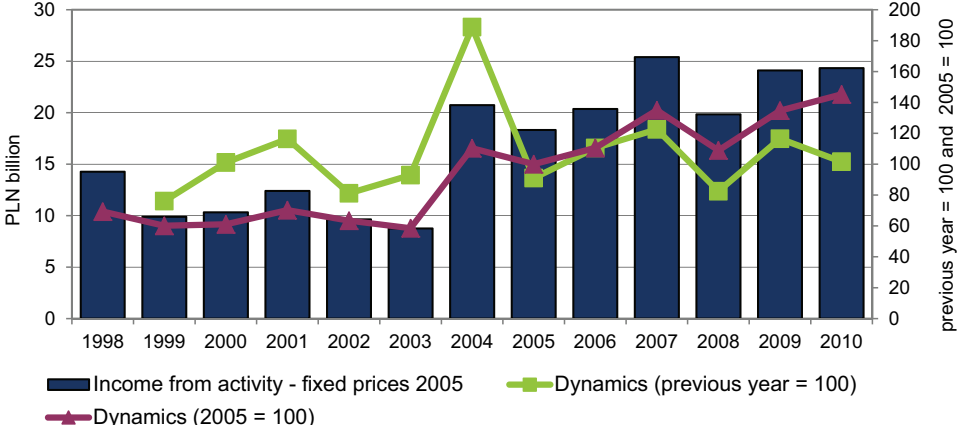


* value in fixed prices (of 2005)

Source: Authors' own calculation according to CSO data.

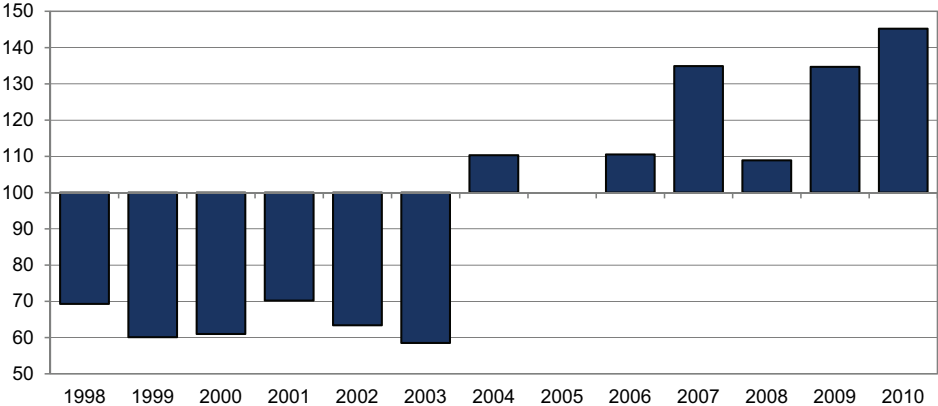
Following the accession to the EU, the income of the agricultural sector significantly increased. A sudden increase of income was noted in 2004 (over PLN 20 billion against less than 10 billion in 2003), namely in the first year after Poland’s accession to the EU and covering the national agriculture with the CAP income support system. In following years the dynamics of income growth was slowed down, yet a clear growing tendency was observed. In fixed prices of 2005, their value in 2010 amounted to almost PLN 25 billion, as compared to less than PLN 10 billion in the pre-accession period (Figure 4.12). The growing income of the sector, combined with employment reduction, resulted in significant growth of income calculated per person employed full time. In 2010 their amount was almost twice higher than in 2005 and almost twice as high compared with the pre-accession period (Figure 4.13).

Figure 4.12. Income in the Polish agriculture and their dynamics in 1998-2010



Source: Authors’ own calculation according to CSO data.

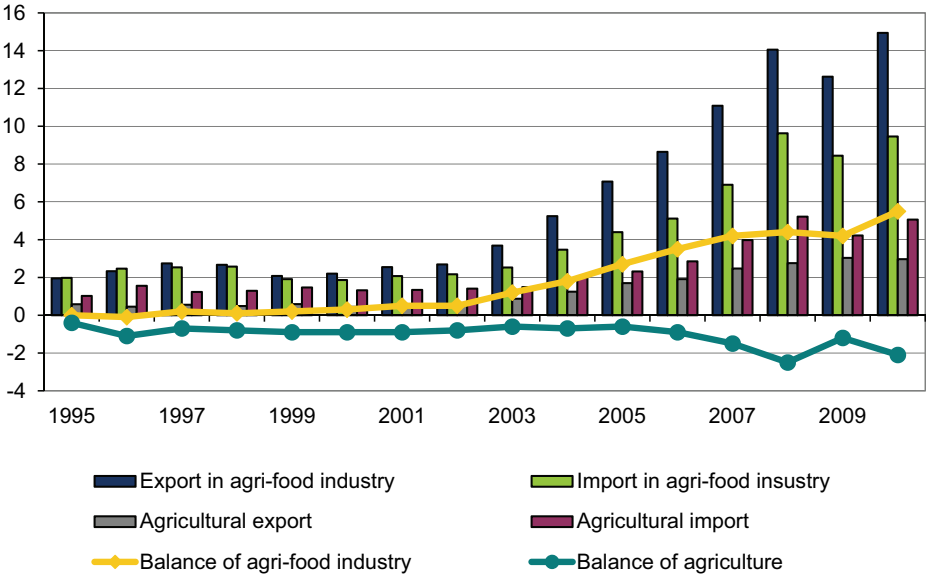
Figure 4.13. Income growth in the Polish agriculture per fully-employed person (2005 = 100)



Source: Authors’ own calculation according to CSO data.

At the moment of accession to the EU, Poland became a member of the single customs territory of the EU, where no administrative or custom barriers exist in goods exchange, including exchange in agricultural products. Contrary to doubts, the Polish market was not “flooded” with imported food products. On the contrary, the European Union became the main outlet for the Polish agri-food products. The key role was played in this context by partial liberalisation of trade in the pre-accession period, and total removal of trade barriers after the accession. The significance of the remaining regulations (import regime with high custom duties and export with export subsidies) was not as pronounced in this context. The dynamics of import also grew, but to a much lesser extent. In consequence Poland became a net exporter of food, and surplus in trade in the recent years exceeded USD 4 billion (Figure 4.14).

Figure 4.14. Poland’s foreign trade in agri-food products in USD billion



Source: Authors’ own calculation according to CSO data.

While accession to the EU resulted in a clear improvement of foreign trade results in agri-food products, for trade in agricultural products results decreased. The trade balance of agriculture is still negative and it has aggravated in the last years. However, this phenomenon does not have to be perceived only in negative terms. For years Poland was importing significant amounts of agricultural products not produced in the country. Apart from that, vast amounts of agricultural commodities are imported, processed and exported afterwards. The import of the commodities described above determines to a large extent the size of the deficit in trade in agricultural products. It should be pointed out, however, that the impact of the CAP regulations on

competitiveness of products of the Polish agriculture on international markets is insignificant. In the first years after the accession export subsidies increased the competitiveness, yet, as the price differences between the EU and global markets levelled, their role was limited. In addition, the envelope reimbursements were challenged by third countries within the structures of the World Trade Organisation. Positive impact of the situation on food industry trade is manifested in stabilisation of markets by the use of national surplus, as the majority of production growth is exported.

4.3. CAP and changes in the Polish agriculture

As transpires from changes described above, the impact of the CAP on the Polish agriculture is evident, which is illustrated by the growth of income of agriculture in the first place. This is mostly the effect of direct payments scheme. Direct payments are an easily accessible instrument. They are used by 70-90% of agricultural holdings of over 1 ha. However, for all agricultural holdings this figure amounts only to 60%. One of the supplementary measures is the support paid under the LFA (ca. 730 applications per year). The influence of direct payments is diverse and, to an extent, contradictory. On the one hand, direct payments boost the farmers' income, stabilise their situation and encourage them to enlarge their farms. On the other, their impact on the size of farms is limited, as:

- the resources of soil (high-quality soil in particular) are limited,
- direct payments contribute to the growth of prices of land,
- as a stable source of income, they partly sustain the existing agrarian structure.

The above factors explain why, despite major changes, the agrarian structure is still dispersed and widely polarised. On the other hand, the impact on production (by definition about decoupling) is insignificant, however, the selection of plants for production reflects to a certain degree the list of plants that are eligible for certain payments. Direct payments also have a relative impact on investments in agriculture.

The impact of instruments supporting modernisation of agriculture is also relatively high. These instruments indirectly influence changes in agrarian structure and concentration of production. The number of beneficiaries of these programmes remains limited, though. Despite the above, after the accession to the EU there has been a noticeable technological progress in the Polish agriculture. The quality of technical equipment improved, which is confirmed by the growth of the number of tractors and other machinery (e.g. harvesters) per hectare. However, the scale of these programmes is relatively small. In 2011 the number of applications (call for proposals) amounted to 34.7 thousand, while in the previous years it was much smaller (ca. 20 thousand), which, compared to the vast number of agricultural holdings in Poland, is an insignificant number. Nevertheless, thanks to the support under the CAP one can clearly see the increasing investment activity of farmers (increase in the value of investments and their share in fixed assets). However, a very small group of farms is involved in

investments. A vast majority of them are rather large commercial holdings. In others one may observe decapitalisation of fixed assets. As far as the machinery is concerned, the situation is relatively good, but decapitalisation of buildings and facilities is fast. This results in the growth of usage of fixed assets (of up to 3/4). It should be pointed out that the basic disadvantage of the situation is the limited number of beneficiaries. Modernisation programmes support concentration of production and its specialisation, and have a positive impact on the agrarian structure.

Impact of the other CAP regulations on agriculture is considerably lower, or not as evident, at least in the current perspective. Production quota and the cross compliance requirements have a positive impact on agrarian structures and the processes of concentration of production. However, the scale of impact is very limited. Moreover, the cross compliance requirements are controversial according to farmers, for they hinder production and result in growth of cost. Production quotas on the other hand are a direct market intervention. They are, in fact, an administrative limitation of supply. Among the more important consequences of the production quotas (milk or sugar markets) are the decrease of the use of capacity, a deficit in national balance, growth of import and disturbing farmers' decision-making process.

Environmental regulations also have a limited range. Despite relatively high value of support per beneficiary (in average PLN 8-10 thousand), still a small number of farms benefit from these programmes. However, year after year, the number has dynamically increased, which undoubtedly contributes to raising farmers' environmental awareness. Nevertheless, impact of the regulations to date on the entire sector is insignificant. Similar conclusions can be drawn from the expert opinion by L. Wicki⁶⁸.

Agricultural products and agri-food products are of great significance for Polish trade balance and balance of payments. The positive balance of foreign trade in the above-mentioned products has decreased the foreign trade deficit. Export of agri-food products became an important sales channel for the national food industry. Large part of the national production growth is sold abroad which stimulates economic situation in many sectors of agriculture and agri-food industry. Export maintains prices of agricultural products in the situation of relatively stable (or slowly increasing) the national demand which is important for managing surplus of agricultural products through processing and sale in the foreign markets.

Lack of trade barriers enables easier filling of shortages (both structural, and business) in agricultural products. Increasing deficit in turnover in agricultural products is by no means indicative of the decreasing position of our farmers compared to imported products. Large part of agricultural import consists in products that are not cultivated in the country, but imported to the national market and to be processed in food industry and export in the form of processed products. It does not concern animal products, especially swine and pork meat. Deterioration of the situation was caused by the market factors.

⁶⁸ L. Wicki, *Teoretyczne aspekty WPR*, transcript, Warszawa 2011.

5. The effects of the CAP for the food industry

5.1. Characteristics of State aid programmes for the Polish food economy

Since 2002 the Polish agriculture, food economy and rural areas have been supported with the resources of programmes co-financed from the EU budget that overlap and complement each other. Sometimes, however, the measures taken by the same programme meet internally contradictory goals. Without a doubt, State aid is an important policy tool to support structural change in agricultural holdings and the food industry establishments, as well as socio-economic change in rural areas. The total value of financial aid schemes overseen by the Ministry of Agriculture and Rural Development (together with direct payments) for the agri-food sector and rural areas from 2002 until June 2011 exceeded PLN 113 billion. This comprises SAPARD programme payments – ca. PLN 4.5 billion⁶⁹, SOP “Agriculture” – ca. PLN 6.4 billion, RDP 6.4 – ca. PLN 11.1 billion⁷⁰, RDP 11.1 – PLN 27.5 billion⁷¹ and almost PLN 63.5 billion from direct payments.

The above-mentioned programmes are characterised by continuity of general objectives, gradually extending the forms of aid and changing the scope and value of provided support. The SAPARD programme was the instrument of a structural nature, financed from the Guarantee Section of the European Agricultural Guidance and Guarantee Fund (EAGGF). Its tasks resulted from the provisions of Agenda 2000, which assumed e.g. to help improve the competitiveness of the European food industry with regard to environmental issues, improve income, simplify legislation and decentralise the implemented agricultural policy instruments.

Agricultural policy priorities adopted in Poland (considered as equivalent) related to: improving the efficiency of the agri-food sector (46% of the programme funds spent) and improving conditions for running the business and creating new jobs (52% of funds). The remaining 2% of the money was spent on other measures of a technical and training nature. Measures carried out in accordance with the above priorities were meant to improve the competitiveness of Polish food economy on domestic and international markets, adapt the principles of functioning of the agri-food sector to the *acquis communautaire* and support multifunctional development of rural areas. The consistency with the guidelines, “Coherent structural policy for rural development and agriculture” and the “National Programme for the Accession to the European Union”, was fully preserved.

In 2004-2006 the food sector and rural areas were supported by the financial resources of the Sectoral Operational Programme “Restructuring and Modernisation

⁶⁹ The amount includes PLN 468 million of payments financed from the RDP 2004-2006.

⁷⁰ The amount does not include payments from SAPARD commitments and the payments of commitments moved to be financed from RDP 2007-2013.

⁷¹ Together with the commitments of the RDP 2004-2006 – ca. PLN 9.2 billion.

of the Food Sector and Rural Development” (SOP “Agriculture”) and the Rural Development Plan. The first programme was financed from the EAGGF Guidance section, while the second from the Guarantee section. The solution was to contribute to the integration of structural policy in agriculture with the support of rural development. Both SOP “Agriculture” and RDP were in line with the National Development Plan, i.e. they related to “the development of a competitive economy based on knowledge and entrepreneurship, capable of long-term, balanced growth, providing increased employment and improvement in social, economic and spatial coherence with the EU at regional and national level”⁷². Shared priorities of both programmes were to support the changes and adjustments in the food sector, sustainable rural development and technical support. In total, the two programmes earmarked, respectively – 40%, 42% and 8% of the funds for these objectives. “Although the funds in 2004-2006 were several times higher, they did not involve support for technical infrastructure development in rural areas (financing infrastructure development was moved to the Integrated Regional Development Programmes). Therefore, these programmes can hardly be considered extensive”⁷³.

In 2007-2013, support for the food sector and rural areas (apart from market support) is continued by the European Agricultural Fund for Rural Development (EAFRD). The measures of the RDP 2007-2013 were concentrated in four priority axes, namely: improving the competitiveness of the agricultural and forestry sector (42.8% of the funds), improving the environment and rural areas (31.3%), improving the quality of life in rural areas and diversification of the rural economy (19.9%), LEADER axis (4.5%) and technical assistance (1.5%).

The inclusion of the rural development under the CAP and its simplification by combining two funds (Guarantee and Guidance sections) constitute important changes reflecting an attempt at consolidating this policy. Measures of Axis 1 designed to promote investment in agricultural holdings and food industry companies are the continuation of the SAPARD measures, SOP “Agriculture”, and the RDP 2004-2006. Others, such as structural pensions, deplete the pool of funds earmarked for modernisation and increased competitiveness. The purpose of Axis 2 is actually much broader than the improvement of the natural environment. Measures placed under the axis (including LFA payments or environment payments) also contribute to the improvement of the income situation of farmers. But it is hard to talk about extensive support for improving the quality of life in rural areas without the co-financing of infrastructural projects. A multitude of activities funded by the RDP 2007-2013

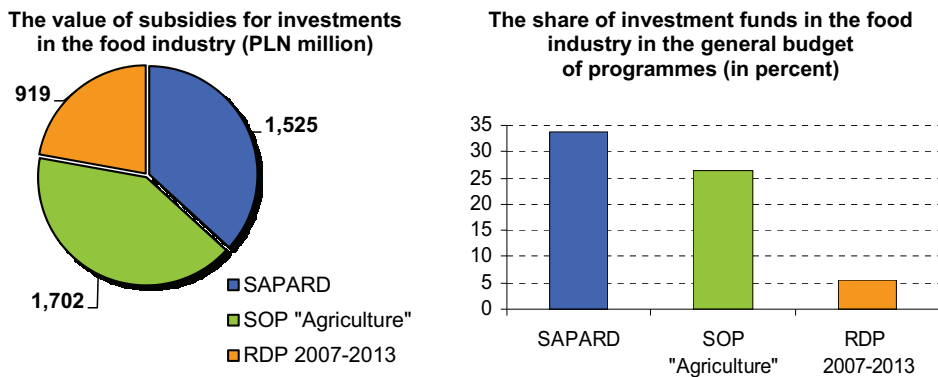
⁷² *National Development Plan for 2004-2006*, A document adopted by the Council of Ministers on 14 January 2003, Warsaw.

⁷³ K. Gradziuk, *Wsparcie polskiej gospodarki żywnościowej i obszarów wiejskich z funduszy unijnych w latach 2000-2013*, [in:] J. Rowiński (ed.), *Wpływ funduszy współfinansowanych ze środków UE na rozwój regionów wiejskich w Polsce (Studia i Materiały)*, seria „Program Wieloletni 2005-2009”, no 156, IERiGŻ-PIB, Warszawa 2009, p. 264.

indicates a large dispersion of funds and a lack of consistent and clear policy objectives for agriculture and rural development.

The food industry benefits also from State aid co-financed from EU funds. The value of the subsidy is relatively small in relation to the general budget of the above programmes, despite increasing investments in 2002-2013 from PLN 0.9 billion to about PLN 3.7 billion. Its share in the overall budget of SAPARD, SOP “Agriculture” and the RDP 2007-2013 systematically decreased from ca. 34% to slightly more than 5% (Figure 5.1, right hand side). This indicates a growing (according to CAP creators) competitiveness of the food industry, and gradually decreasing need for its support, while at the same time there are still high needs for subsidising other agricultural policy priorities related to the restructuring of the agricultural sector, multi-purpose rural development and prevention of environmental problems.

Figure 5.1. The value of subsidies from EU programmes for investment in the food industry from 2002 to October 2011, and the share of funds for these investments in the general budget by programme



Source: Own calculation based on ARMA monitoring data.

A total of about PLN 4.1 billion from public funds (Figure 5.1, left hand side) was spent on investments co-financed from the EU funds from 2002 to October 2011. According to the available budget of the RDP 2007-2013, there are still about PLN 2.8 billion to be used. However, the value of submitted applications exceeds the available budget more than twice. Thus, it is clear that part of the investment will not be financed from the EU budget and will have to be financed from other sources.

The analysis of the policy supporting the food industry transformation points to the fact that since 2002 the State aid programme objectives were subordinated to improving its competitiveness and adapting to the sanitary and veterinary standards of the European Union. The improved competitive position on the domestic market and international markets is determined by such factors as the efficiency and productivity; technical equipment, resource base, safety and quality of food and agricultural products;

compliance with sanitary and veterinary standards of the EU; technological innovation and innovation in the areas of management, marketing, and distribution; efficient wholesaling system, environment-friendly technologies. The scope and form of impact of the SAPARD, SOP “Agriculture” and the RDP 2007-2013 programmes on these areas, however, was very varied.

In the run-up to Poland’s EU membership, in terms of adaptation to the *acquis communautaire*, meeting EU standards and improvement of the competitiveness of production, the most sensitive were four industries, namely meat sector, including slaughter and processing of poultry; dairy; fish; and fruit and vegetables. The food industry was characterised by low profitability, and the lack of capital did not allow plants to take the investments necessary in terms of integration with the EU. The need to support was also the result of the evaluation that the food processing sector is of great importance for the Polish economy, in terms of production volume, the labour market share, and because of the impact of the “condition” of the processing sector on the situation of agricultural producers. The subject of the SAPARD programme subsidies were investments to improve the safety of production and the quality of food, increase the number of facilities that meet the EU sanitary and veterinary requirements of food processing, support the restructuring of production and improve competitiveness, strengthen agricultural producer groups and reduce the negative impact of the food industry on the environment.

Along with the progress of the integration process, the next programme SOP “Agriculture” included the following priority actions: food security and quality, environmental protection, use of existing “market niches”, creating new distribution channels, using new technologies, increase in value-added production, improved animal welfare, adjusting infrastructure of wholesale markets to the wholesale trade in agri-food products, refrigeration of food products and their sorting. Subsidies for the processing sector were extended to more sectors included in Annex I to the Treaty, except for fishery and forestry. The group of industries covered by the subsidies (apart from current ones) included the processing of cereals, potato starch, eggs, hops, honey, flax and hemp, service establishments for storing and freezing of meat or egg packing and wholesale trade. Assistance was provided to an establishment on condition that it met standards of hygiene and sanitation, environmental protection and animal welfare. In the case of establishments engaged in the processing of milk and meat, which have applied for a time to adjust to the required standards and prepared individual schedules for corrective action, the standards were to be met at the end of investment projects.

The RDP 2007-2013 is a further expansion of the group of beneficiaries. Currently the measure “Adding value to agricultural and forestry production” entitles to a subsidy processors established in the following industries: the meat sector, including poultry processing; egg; potato; fruit and vegetable; oil mill; dairy (except for butter production); cereals; fodder; processing of honey; spirits; wine (excluding

wine products and wine-based products), cooling (only freezing and storage services of agricultural products); wholesale trade of cereals, unprocessed tobacco, seeds (rape seed as well as agricultural plant and vegetable seed), flowers, plants, fruits and vegetables, milk, dairy products, eggs, edible oils and fats; extracting fibres from flax and hemp. Only companies that have good production and economic results, and produce in conditions conforming to sanitary and veterinary standards, environmental protection and animal welfare may benefit from the assistance; and the submitted economic documentation shows that the project will improve their competitive position. Therefore, the purpose of the measure is achieved, which is to improve the competitiveness of enterprises and wholesale trade in agri-food products as a result of the increase in value added, improved quality, reduced costs, the introduction of new materials, the use of new processes and technologies, as well as new standards.

The SAPARD Programme divided assistance into two schemes, namely, the support for the restructuring of processing and improved marketing of animal processing products, and support for restructuring of processing and improving the marketing of fruit and vegetables. Processing plants and agricultural producer groups were entitled to obtain it. The maximum value of the co-financing amounted to 50% of eligible costs. The amount of financial assistance granted for the duration of the programme to the single undertaking could not exceed the total of PLN 10 million. In addition, the establishment could receive assistance amounting to PLN 1.1 million (PLN 2.2 million for processing fruit and vegetables) on investments for the agricultural producer groups. Subsidies of up to PLN 1.1 million (PLN 2.2 million in the second scheme) were also given to a group of farmers, fish producers and their associations. The minimum support threshold is PLN 125 thousand. The beneficiary could apply for financial assistance on several occasions during the period of the programme. Applications for assistance were submitted in 7 calls for proposals, and their value exceeded the limit of available resources.

In SOP "Agriculture" assistance was distributed in one scheme and generally involved the construction or modernisation of production facilities or wholesale trade infrastructure in agricultural products and investments related to the environmental protection and bringing a measurable environmental effect. Similarly to the SAPARD, assistance was disbursed in the form of reimbursement of 50% of eligible expenditure. The maximum subsidy amount for a single beneficiary amounted to PLN 20 million in the period of the Programme, and for the implementation of one project not less than PLN 100 thousand. Applications for financial assistance were submitted by entrepreneurs in ongoing mode. No employment limit (which would limit the number of beneficiaries) along with good experience gained through the SAPARD programme has contributed to the fact that the funds for the implementation of this measure have been exhausted very quickly.

Companies employing up to 750 employees or whose turnover does not exceed EUR 200 million, that are engaged in processing of products covered by Annex I to

the Treaty (excluding fishery products) or wholesale trade in these products are still entitled to a subsidy from the RDP 2007-2013. However, the amount of assistance has been diversified and depends on the size of the company. For large enterprises it was reduced to 25% of eligible costs; for micro, small or medium-sized to 40% of eligible costs. For micro, small or medium-sized enterprises receiving raw materials on the basis of long-term contracts with groups of fruit and vegetable producers; processing agricultural products for energy purposes; registered as an agricultural producer group, association or recognised producer organisation, the amount of assistance increased to 50% of eligible costs. The maximum assistance amount during the implementation of the RDP for a single beneficiary was PLN 20 million, and for the implementation of one project not less than PLN 100 thousand. Applications for assistance were received in 4 calls for proposals, and the limit (also because of budget constraints on the different needs of the RDP 2007-2013) was quickly exhausted, and even significantly exceeded.

To sum up, it must be stressed that investment support addressed at agri-food industry enterprises is ongoing in nature, although over the years its objectives, scope and the amount of assistance have been subject to modification. The objectives of the SAPARD programme focused on: improving production safety and food quality; increasing the number of establishments compliant with EU sanitary and veterinary requirements in respect of food processing; enhancing the competitiveness of establishments along with adjusting them to operate in the Single Market, strengthening farmer groups and limiting the adverse impact of processing plants on natural environment. The SOP “Agriculture” was primarily meant to achieve: improved hygiene conditions of production, adjusting production to market requirements, including the detection of production niches, establishing new outlet channels, improving the quality of products, increasing its value added, developing new production technologies, as well as better environmental protection and conditions for the transport and slaughter of animals. The RDP 2007-2013 is aimed to enhance competition in the sector of processing and wholesale trade by increasing value added, improving the quality of production, lowering its costs, introducing new products, applying new processes and technologies, implementing new production standards and perfecting previous ones, perfecting the processes for environmental protection.

5.2. An analysis of changes in the Polish food industry

The period of Poland’s membership in the EU is related to recovery in production, investment and trade on the food market. Between 2004 and 2010 industrial food production developed at an average rate of 4.6% per year (6.3% until 2007). This growth rate is slightly higher than the GDP increase (4%), and almost twice as fast as that of commodity production of agriculture (2.5% per year), 2.5 times greater than the increase in the consumption of food, beverages and tobacco products (1.7%) and slightly smaller than the growth rate for industrial production in Poland (5.6%).

At the same time, the growth rate of the value of food industry sales in Poland was among the highest in the EU (0.7% per year in the EU-27 countries). The increase in the value and volume of production was caused by the development of the internal market (due to the growth of GDP and improved income of residents and the ongoing changes in the structure of food consumption) and a significant increase in exports.

Faster growth helped to strengthen the Polish position on the European market. The value of food sector production in Poland (about EUR 67 billion according to the Purchasing Power Parity of currencies) accounts for about 7% of the food and beverage production in the EU-27 countries (see Table 5.1). The fact that the Polish food industry is an important partner and competitor for EU food and drink manufacturers is also evidenced by a comparison of other characteristic indicators of this sector such as:

- employment in Poland amounts to 458 thousand people, i.e. 10.6% of employment in the EU-27,
- value added in Poland – EUR 9.4 billion, or about 7.0% of the EU-27,
- number of companies, including micro-enterprises sector in Poland – 15.6 thousand, i.e. 5.0% of companies in the EU-27.

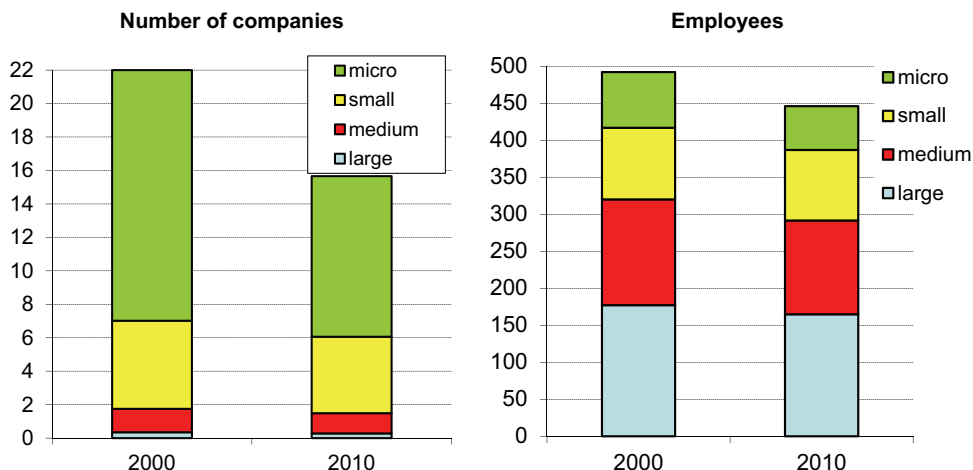
The result of the changes, including the investment processes in the Polish food industry is the consolidation of the industry. In 2000-2010, the number of active food industry plants producing food and beverages was gradually decreasing (by ca. 30%) (see Figure 5.2). The greatest decrease in the number of companies was recorded in the micro-enterprises sector (by 36%), and the lowest among small and medium-sized companies (13% in each group). At the same time (although on a smaller scale), a drop was observed in employment in the food sector (by ca. 10%). The greatest decrease in employment concerned micro-enterprises (by 22%); while in the sector of small companies the reduction was minimal or even showed an increasing tendency in some periods (in 2003-2008).

Table 5.1. Agri-food industry in the EU-27 in 2009

Turnover	Employment	SMEs share	
EUR 954 billion • -4% in relation to 2008, • the largest manufacturing sector in the EU (12.9%)	4.2 million employees • -1.5% in relation to 2008, • the largest employer in the EU (13.5%)	48.2% in turnover 62.8% in employment	
Foreign trade	Number of companies	Value added (in percent of GDP in the EU)	Expenditures of households (in percent)
• Export EUR 53.7 billion (-8.0% in relation to 2008), • Import EUR 50.8 billion (-14.2% in relation to 2008), • The balance of EUR 3.0 billion (net exporter of agri-food products)	310 thousand (fragmented structure)	2% (stable)	13.1% (slight increase)
	The EU's share in global exports 18.6% (declining share in global exports, 20.4% in 2000)	Expenditure on research and development (in percent of production value) 0.37% (insufficient spending on research and development)	

Source: *Data & Trends of the European Food and Drink Industry, CIAA 2010, p. 3.*

Figure 5.2. Number of companies and employment in Polish food industry between 2000 and 2010 (in thousands)



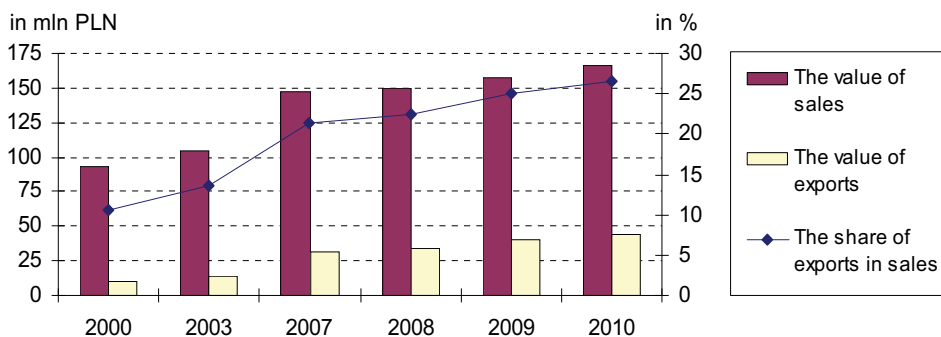
Source: Own calculations based on unpublished CSO data and R. Urban, *Przemysł spożywczy*, [in:] A. Kowalski (ed.), *Analiza produkcyjno-ekonomicznej sytuacji rolnictwa i gospodarki żywnościowej w 2005 roku (i w latach kolejnych)*, IERiGŻ-PIB, Warszawa, 2005-2011.

Joining the European Union gave the impetus for the accelerated development of the food sector in Poland. It opened up new possibilities, e.g. unlimited access to the market (more than 502 million consumers in 2011) and EU funds (which supported the process of modernising enterprises and adaptation to new market conditions). At the same time, opening the domestic market for EU producers was associated with enormous challenges, including strong international competition, which necessitated investments and the related processes of consolidation and restructuring of industries. The processes of horizontal integration (between processors) and vertical integration (along the farmer – processor – seller chain) were enhanced as well.

Adverse economic trends noted in 2008-2010 on the world market were not as severe for food producers in Poland as in other EU countries. Already in the second half of 2009 there was a revival in the production of foodstuffs on the Polish market. It consisted mainly of processing departments that have a strong market position in Europe, specialising in the exports production or manufacture products with a high share of value added. In 2010, the value of food industry sales (food, beverages and tobacco products) exceeded PLN 165 billion and was nearly 60% higher than in the year that preceded Poland's accession to the EU (Figure 5.3) and 5% higher than in 2009. The value of exports amounted to ca. PLN 44 billion and was higher by as much as PLN 34 billion (in current price terms) as compared to 2000, while its share in the value of sales increased from less than 11% to more than 26%. At that time, agricultural commodity production increased by 28.5%, and food consumption by 18%.

Manufacturing revival continues also in 2011, and certainly will also cover the coming years. According to the PMR report⁷⁴, food market in 2011 reached nearly PLN 250 billion, i.e. nearly PLN 9 billion more than in 2010. This increase was primarily generated in discount stores and supermarket segment, and driven by rising prices. Sales of food will continue to grow and over the next three years will reach nearly PLN 280 billion.

Figure 5.3. Value of sales and exports of food industry products



Source: IAFE-NRI calculations (R. Urban) based on data from the CSO and MARD.

The EU countries are the largest outlet market of Polish agri-food products (an increase from 63% of the total export value in 2003 to ca. 80% in 2010). From the moment Poland became an EU Member State, Polish export of agri-food products grew almost 3.5 times, import – three times and foreign trade balance for these products – more than 5 times (Table 5.2). All trade in agri-food products was characterised by a higher growth rate of exports rather than imports. This resulted in an increase in the positive trade balance, from EUR 0.5 billion in 2003 to EUR 2.6 billion in 2010. Also the forecast for the results for 2011 is very good. The value of trade in food is likely to increase by another 6%, i.e. export will grow to a record level of EUR 14 billion, import – to EUR 11.7 billion, while the positive trade balance will amount to about EUR 2.3 billion.

The structure of foreign trade in agri-food products is dominated by the food industry products, and the results of trade in these products have a decisive influence on the formation of trade surplus. The share of intermediate products and ready products in exports exhibits a tendency for growth. In 2010, the income on their sales constituted 84% of exports of the Polish of agri-food sector. By way of comparison, the share of processed products in the agri-food import amounts to ca. 70% of the trade value.

⁷⁴ *Handel detaliczny artykułami spożywczymi w Polsce 2011. Analiza rynku i prognozy rozwoju na lata 2012-2014*, PMR Publications, www.egospodarka.pl/74992,Rynek-spozywczy-w-Polsce-2012-2014,1,39,1.html.

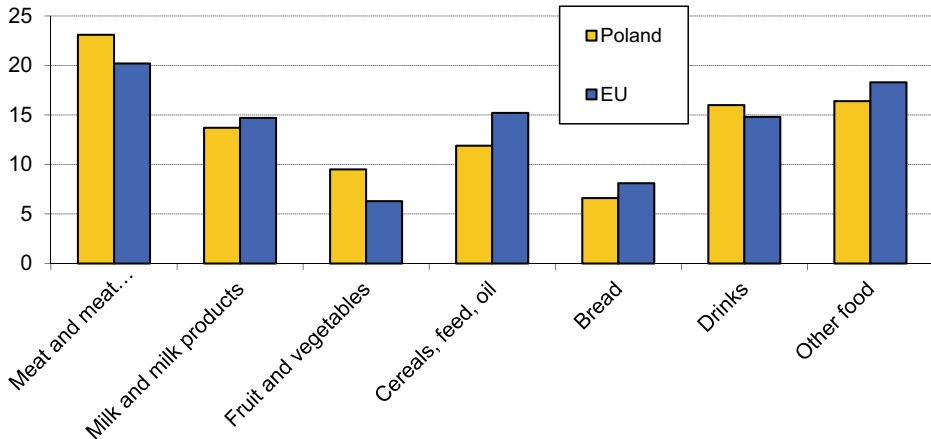
Table 5.2. Foreign trade in agri-food products (in million EUR)

Description	2003	2005	2007	2008	2009	2010 ^a	<u>2010</u> <u>2003</u>
Export of agri-food products	4,010.4	7,028.0	9,942.5	11,421.6	11,277.6	13,263.1	330.8
including: to EU-25/27	2,616.7	5,190.8	8,001.4	9,218.1	9,066.9	10,465.3	399.9
including: to EU-15	2,041.6	4,063.0	5,941.2	6,676.4	6,698.8	7,792.6	381.7
Import of agri-food products	3,556.9	5,373.5	7,972.3	10,088.7	9,111.0	10,693.5	300.6
including: From EU-25/27	2,175.9	3,388.1	5,347.4	7,023.0	6,320.4	7,277.6	334.5
including: from EU-15	1,848.5	2,938.0	4,484.6	5,985.0	5,448.9	6,253.8	338.3
Balance of foreign trade in agri-food products	453.5	1,654.5	1,970.2	1,332.9	2,166.6	2,569.8	567.7
including: from EU-25/27	440.8	1,802.7	2,654.0	2,195.1	2,746.5	3,187.7	723.2
including: from EU-15	193.1	1,125.0	1,456.6	691.4	1,249.9	1,538.8	796.9

^a preliminary data

Source: A study by IAFE-NRI based on unpublished data of the Customs Administration Analyses Centre (CAAC).

Figure 5.4. The production structure of the food industry in Poland and the EU-15 by sector in 2009 (in percent)



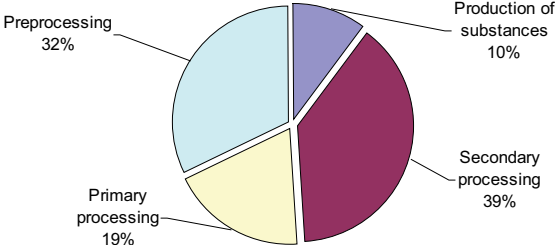
Source: I. Szczepaniak – own calculations based on unpublished data of CSO and M. Wigier – own calculations based on Data & Trends of the European Food and Drink Industry, CIAA 2010.

The production structure of the food industry in Poland, as in most EU countries, is dominated by industries processing animal products (i.e. meat and dairy), and the central role is played by the processing of pork and milk. In total, these industries produce nearly 40% of the industrial food and drink production (Figure 5.4). This share is growing steadily (since 2000 by about 4 percentage points). In employment the share of the above industries is 41%; in comparison with the EU-15 it is higher by

almost 10 percentage points. This may indicate the use by the Polish food industry of more labour-intensive technology and lower productivity. The importance of cereals, feed and oil processing has somewhat increased in the last few years. They produce a total of about 12% of the value of production, while the fruit and vegetable industry is nearly 10%. The production of beverages (ca. 16%) is still very important (though declining) in the structure.

Most dynamic development in the last decade was characterised by secondary processing of food (an increase of 85%) and manufacture of substances (an increase of nearly 50%), and less dynamic by pre-processing (up 35%) and primary processing (up 13%). Highly processed food production grew by 6.4% per year, substances – 4%; secondary processing – 3%, and the standard food production – slightly more than 1% per year. Figure 5.5 shows the production structure of the food industry in 2009 (in percent of the value of production).

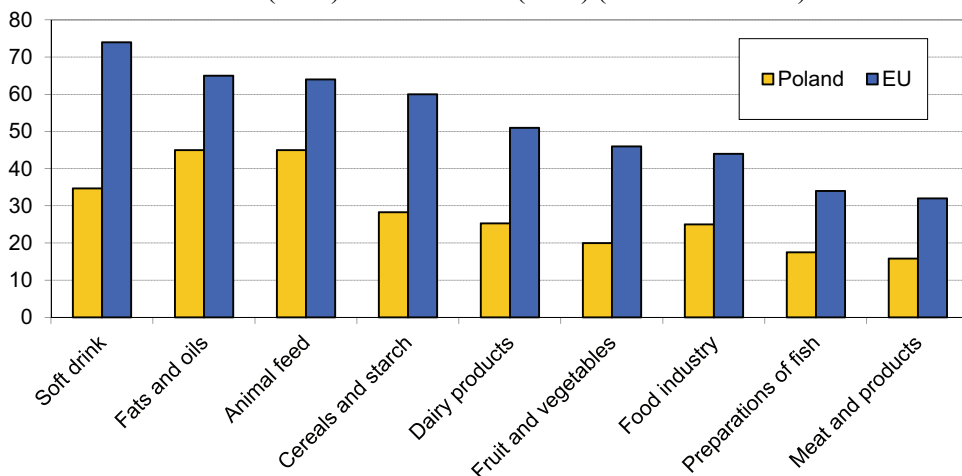
Figure 5.5. The production structure of the food industry in 2009 (in percent of the value of production)



Source: The IAFE-NRI (R. Urban) calculations based on CSO data.

In 2001-2007, the highest growth rate (over 10% per year) was noted in the production of nutrients, concentrated juices, treated food, pastries, fish products, canola oil, mineral waters, whereas 18 products were characterised by an increase of 5-10% per year. A decrease of 7% per year was recorded only in the production of fruit wines, and in the range of -2.5% to -1.0% in the production of fresh fish, milk powder, margarine and bread, coffee and tea. In the next two years, production growth slowed down, but still there were products of 8-14% growth rate (canola oil, drinking milk, prepared food, industrial slaughter of poultry, pasta, candies, sauces, pet food). In 2010, the growth rate of over 10% included the production of nutrients, cigarettes, industrial feed, processing of tea and coffee, prepared grain, fish products, chocolate and chocolate products, and pasta, and more than 7.5% – the production of poultry meat, processed meat, fresh and frozen fish, jams, sugar, milk drinks, margarine, and mineral and table water. At the same time, the production of soups, broths, flour, groats or flakes, rapeseed oil and milk powder decreased by more than 5%.

Figure 5.6. Labour productivity measured by gross value added per employee in Poland (2010) and the EU-15 (2007) (in thousand EUR)*



* data in PLN converted into EUR at the exchange rate of EUR 1 = PLN 4

Source: I. Szczepaniak – own calculations based on unpublished data of CSO and M. Wigier – own calculations based on Data & Trends of the European Food and Drink Industry, CIAA 2010, p. 7.

Investments conducted in the pre-accession period and the first years of membership in the EU have led to improved production efficiency, reductions in employment and labour productivity growth. Labour productivity measured by gross value added increased from around PLN 69 thousand⁷⁵ per employee in 2000 to PLN 100 thousand per employee in 2010. Despite visible progress in productivity growth in Poland, it was still an average of more than 40% lower than in the EU-15 (Figure 5.6).

The financial results of the food industry also significantly improved (compared to the pre-accession period). Temporary worsening of 2008 was a direct consequence of the global economic crisis. In 2010, the liquidity and the financing structure were safe again, and the profit of the whole sector and profitability ratios were close to the record level reached in 2009 (Table 5.3).

Table 5.3. Economic and financial indicators of the food industry

Description	2002	2003	2004	2005	2006	2007	2008	2009	2010
Gross margin (in percent)	3.03	2.58	4.77	4.41	4.76	5.25	3.44	5.51	5.57
Net margin (in percent)	1.99	1.56	3.87	3.54	3.86	4.25	2.64	4.67	4.66
Accumulation of capital (in percent)	5.47	5.11	7.18	7.05	7.19	7.28	5.61	7.64	7.68
Liquidity ratio (in percent)	1.19	1.19	1.22	1.27	1.30	1.30	1.23	1.33	1.33
Investment rate	1.15	1.36	1.68	1.37	1.49	1.49	1.58	1.20	1.19

Source: Calculations of IAFE-NRI (J. Drożdż) on the basis of unpublished CSO materials.

⁷⁵ In fixed prices of 2010.

The financial soundness of companies is also proven by growth in equity, growth of own funds on the market, and a large reduction in long-term debt. In 2010, none of the sectors of the food industry had a negative net profitability. The processing of animal products (2.72% in 2010) has been characterised by the lowest return on sales for years, whereas the highest – the production of substances (6.83%) and secondary food processing (5.65%). Improved liquidity of animal product processing and milling industry can be seen for several years (but it does not exceed 1%); financial liquidity of brewers and tobacco producers is still very low (less than 1%). Financial liquidity of concentrated food, soft drinks and spirits producers is deteriorating.

In the food industry the investment boom started in 2003 and it was related to the need to modernise and adjust the Polish food businesses to the sanitary, veterinary, animal welfare and environmental standards of the European Union. The investments made in the first period of membership in the EU enabled mandatory popularisation of quality management systems guaranteeing food security.

In 2008-2009 the investment expenditure were constrained, however, already in the next year first signs of the boom returning to this field were visible. They are particularly evident in the processing of animal products, such as fish, dairy and meat, the most resilient so far in terms of investment outlays (because of the crisis in investment activity in these sectors decreased from ca. 2.5% to 1.5%). In terms of investment activity, secondary processing also stands out (average about 2.0-2.5% per year). Owing to the investments made, the Polish food industry is counted among the most-modern in Europe and companies can efficiently compete with producers from other EU countries.

5.3. An influence of CAP tools on changes in the Polish food industry

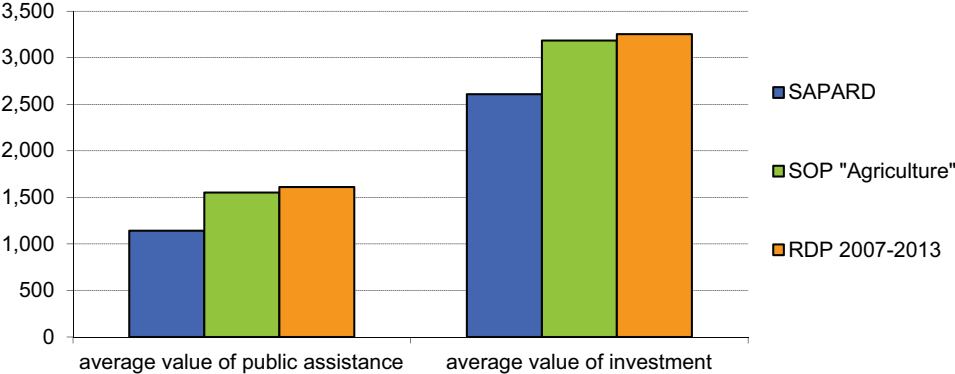
The success of Polish food producers on domestic and European markets was possible thanks to the privatisation of the processing sector, structural changes and modernising investments, and plants adapting to the veterinary and sanitary norms and standards of European Union. The total value of investments in 2000-2010 exceeded PLN 68.5 billion. However, the share of the EU assistance funds (co-financed from SAPARD, SOP “Agriculture”, and the RDP 2007-2013) in this amount was slight and totalled only PLN 3.8 billion⁷⁶ (i.e. ca. 6% of the total value of investments implemented in the food sector), and by the end of 2013 the value of payments will reach almost PLN 7 billion. The EU funds are still a kind of catalyst for investments. In order to obtain co-financing, an entrepreneur has to launch their own resources which, consequently, increases the final value of the investment by three-four times. The implemented programmes helped modernise processing plants, improve safety and quality of the produced food and increase in the value added and the innovative production. Poland from a net importer of agri-food products turned into their exporter.

⁷⁶ PLN 4.1 billion until October 2011.

The development of exports of agri-food products and high positive trade balance confirm high competitiveness of the Polish food producers on the foreign markets.

Almost all sectors of the food industry (including wholesale) benefited from the help of the public assistance in 2011, but the main beneficiaries were the meat, dairy, and fruit and vegetables industries (for which assistance started earlier, i.e. with the SAPARD programme). However, the value of co-financing in the entire 2002-2011 period was relatively low and it ranged on average from PLN 1 million to PLN 1.5 million per one investment project (Figure 5.7). Along with the start of other aid schemes, a stable and systematic growth in the value of investments was noted. An average value of grants was, however, several times lower than the limit indicated in the documents of the operational programmes. As for SAPARD programme, only 4.2% of companies received a grant amounting to more than PLN 5 million, and as many as 62.6% of projects concerned assistance, whose value ranged from PLN 125 thousand to PLN 1 million. Similarly, under SOP “Agriculture” the majority of projects (63.7%) received co-financing up to PLN 1 million and only 7% of projects received State aid exceeding PLN 5 million. Also for the RDP 2007-2013, the value of major projects, i.e. above PLN 5 million, failed to exceed 10%; others are rather small projects.

Figure 5.7. The average value of State aid and the average value of investments co-financed from EU funds per project (in thousand PLN)

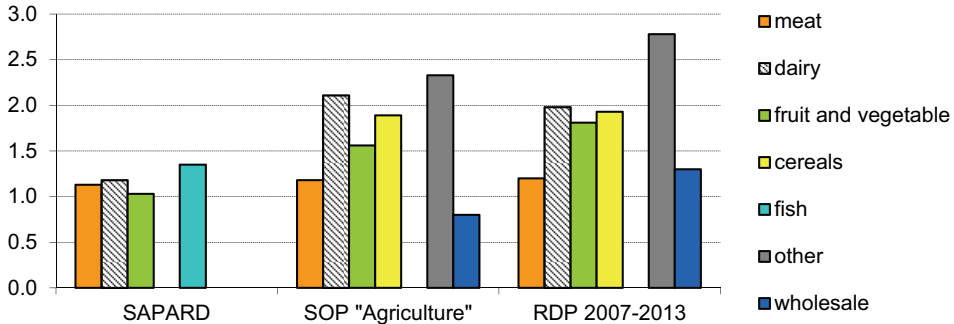


Source: Own calculation based on ARMA monitoring data.

According to ARMA data, from the launch of the SAPARD programme until the end of June 2011 almost 3.5 thousand investment projects were implemented in more than 2.1 thousand processing plants. Although at the beginning (SAPARD programme), the value of State aid was similar in all of the four supported branches, but already in the subsequent editions of the aid schemes, increasing diversity in the aid amount is visible (Figure 5.8). However, the value of investment in meat industry plants (where the sanitary and veterinary provisions are the strictest) remains almost the same. The aid effects as measured with the indicator of company’s survival on the

market are more than satisfactory. The majority of entities that benefited from the EU resources even under the SAPARD, still conduct production activity in 2010.

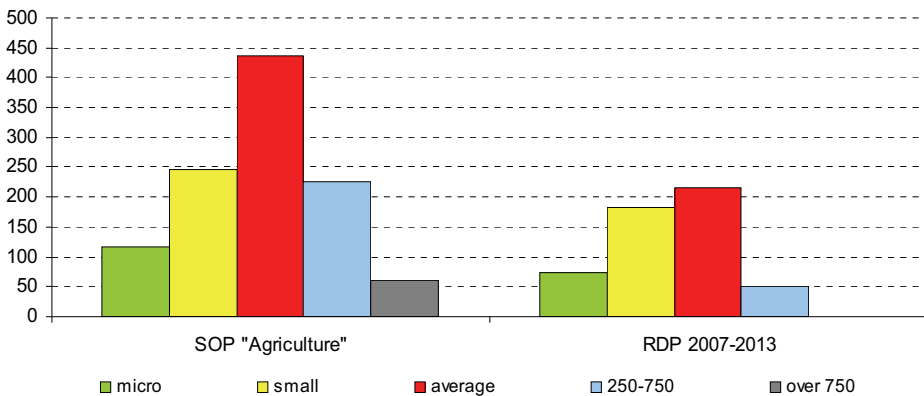
Figure 5.8. The average value of assistance in the projects carried out by sector (in million PLN)



Source: Own calculation based on ARMA monitoring data.

The structure of enterprises benefiting from investment aid is different from the structure of food industry in Poland. More than 40% of companies benefiting from the investment aid are medium-sized companies employing from 50 to 249 workers, whereas according to the CSO data the percentage of such companies in the country amounts to about 10%. These results are not, however, surprising because it is much easier to benefit from State aid to larger companies since they have greater economic potential, creditworthiness and greater human capital resources. But it should be emphasised that also small companies actively participated in the implementation of programmes co-financed from the EU resources (Figure 5.9). However, the investment implemented by such companies most commonly concerned purchase of means of transport and small production equipment.

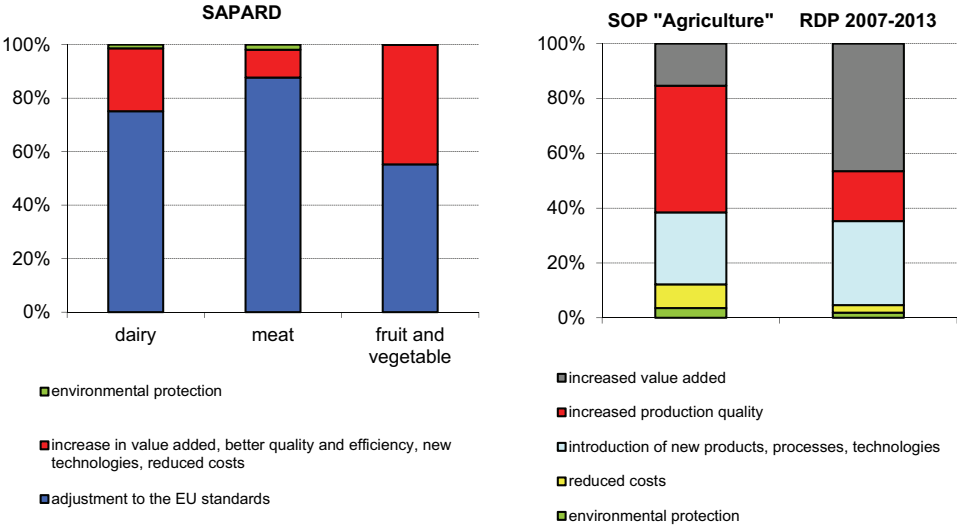
Figure 5.9. Number of companies using State aid by employment



Source: Own calculation based on ARMA monitoring data.

In 2002-2006 investments in food industry focused mainly on adjustments to the EU sanitary and veterinary requirements (Figure 5.10). In order to export to the EU markets a processing plant had to meet these requirements in advance. The adaptation period for plants producing for the domestic market expired at the end of 2006. The requirements caused that ca. 80% of the value of investments in the meat and dairy industries referred to such activities. In the fruit and vegetable industry nearly half of the investments made in the period concerned improvement of the quality and value added growth. In the next period (SOP “Agriculture”) the majority of investments (45% of their value) concerned improvement of the production quality and bringing new products to the market, and the resources available under the RDP 2007-2013 enabled to implement investments resulting, mainly, in increasing the value added (45% of the value) and bringing new products to the market. Such a change in the type of investments proves that processing plants give preference to measures that enhance their competitiveness. Environmental investments still have marginal character.

Figure 5.10. The structure of State aid by programmes and the investment goal (based on financial data, in percent)

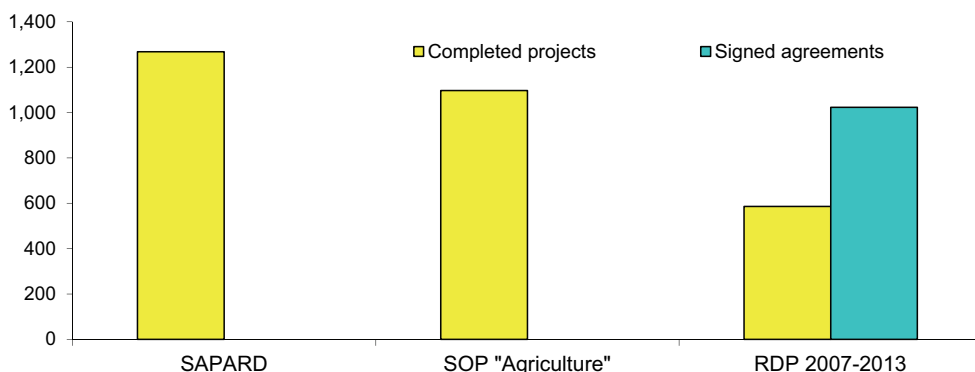


Source: Own calculation based on ARMA monitoring data.

Analysis of all projects shows that the conducted investments aimed primarily at: improvement of the sanitary and hygienic as well as veterinary conditions of production (23% of the total value), improvement of production quality (25%) and introduction of new or modernisation of the existing technologies (20%). Almost two third of all projects delivers one of the three objectives. The share of investment pertaining to the improvement of animal welfare is 1%, creation of new and rationalisation of the existing marketing outlets – 2% and reducing the negative impact on the environment – 4%.

While discussing the physical effects of aid programmes co-financed from EU funds it should be noted that the SAPARD programme was carried out in 791 production plants, i.e. in about 4% of existing plants in Poland at the time of our accession to the EU. Thanks to the programme, 581 companies implemented the HACCP system, including: 300 meat processing plants, 127 dairies, 102 processing plants, fruit and vegetable processing plants and 52 in fish processing establishments. The programmes of adjustments to the EU norms and standards were implemented in a total of 747 companies, including: 412 meat, 154 dairy, 130 fruit and vegetable and 51 fish. 320 raw milk transport trucks were purchased. One company implemented on average 1.5 projects, but there are also some rare examples of companies implementing more than three projects. Another program SOP “Agriculture” was implemented by 727 entities that carried out 1,097 investment projects (Figure 5.11). Nearly half of the beneficiaries of this programme previously benefited from SAPARD investment subsidies. Despite the fact that financial resources available under this programme were slightly higher, it was used by a smaller number of beneficiaries. This reflects the higher cost of investment projects implemented based on measures of SOP “Agriculture” rather than on the basis of the SAPARD programme. The type classification of investments in the SOP “Agriculture” was dominated by the purchase or installation of machinery for the processing of agricultural products (43.1% of the value) and the cost of buildings construction/renovation (25.4%). The share of other types of investments is minimal. As for RDP 2007-2013, at the end of the first half of 2011, the number of accepted applications (same as in previous years) was higher than the limit of available resources (122% of the limit). At that time, 1,065 contracts were signed with 877 entities for investments for the total value of more than PLN 4.5 billion and engaging ca. PLN 1.3 billion of subsidies for public funds (44% of the fund limit). Aid was paid to 522 entities, which implemented 586 investment projects of the total value of PLN 1.9 billion, which required payment of PLN 0.6 billion from the state funds.

Figure 5.11. The number of investment projects by aid programs (in units)



Source: Own calculation based on ARMA monitoring data.

State aid played a significant, but less and less prominent role in the shaping of the pace and direction of investments in the food industry. Undoubtedly, it helped to strengthen the competitive position and increase export in the Polish food sector, mostly to the EU countries. The state, taking over the role of the regulator, led to forcing certain behaviours according to its intentions. It supported and to some extent showed directions of certain investments. However, the effect of substitution and income, generated by State aid programmes, leads to lowered efficiency. In terms of location of the enterprise (urban/rural areas) the distribution of enterprises which took advantage of aid was fairly even, thus it is impossible to demonstrate a straightforward impact on removing disproportions in development. It is natural that urban agglomerations are the basic outlet markets for food industry enterprises. Rural areas are being activated through access to labour markets and the purchase of agricultural raw materials. Beneficial effects of investment policies have been observed in areas such as improving the competitiveness of some entities in the agri-food sector, adjusting to EU sanitary and veterinary requirements, and support for structural transformations as well as environmental protection. However, State aid does not guarantee equality and social equity. The type of “environment” (urban or rural municipalities) is a factor that strongly differentiates projects in terms of the value of the investment and the amount of co-financing. Investments implemented in towns are definitely much greater than those implemented in rural areas. Engaging public funds in private activity gives rise to the “crowding out” effect.

6. Agricultural land as a production factor for non-agricultural sectors of Polish economy

6.1. Introduction

The distribution of land does not only take place as part of agricultural production. A limited supply of land results, however, in different sectors of the economy, such as agriculture, forestry, construction, energy, transport, communications and trade, competing for this production factor. In consequence, only the total supply of land remains constant. Increased demand in any of the branches produces a growth in the level of rents or land prices and, thereby, intersectoral transfers of this production factor if they are allowed by the law.

Transfer of land between different sectors of the economy is usually one-way. This means that the flow in the opposite direction is either impossible, or only possible in long-term at very high costs. A typical example of the above, is using agricultural land by newly created companies in non-agricultural sectors of the economy for the purpose of their business operations. Such transformation causes a permanent decrease in the acreage of land used for agricultural production. From the perspective of the land owners it may, however, be a positive phenomenon because it causes, first of all, an increase in prices of agricultural land and then their stabilisation at a level higher than the original one. The increase in land supply in non-agricultural sectors of the economy leads, in turn, to decreased land prices which may contribute to intensified development of non-agricultural sectors of the economy due to a lower price of the production factor.

In reference to the above, this study presents the results of research on relations between the changes in the area of agricultural land in Poland and the development of entrepreneurship in Poland in the 2003-2010 period. The aim of these studies was to prove that land resources are still an important production factor, not only in farming but also for non-agricultural sectors of the economy. An excessively developed system of agricultural land protection may, therefore, hinder the economic development of the country and limit the effects of the policy supporting the development of entrepreneurship in rural areas implemented by the European Union. In the study a method of descriptive analysis, comparative analysis and simple regression analysis was used. The empirical data were provided by the Central Statistical Office.

6.2. Land factor market

In the theory of economy, land is one of the three production factors. What differentiates it from labour and capital is mainly its constant supply which occurs even after a long time⁷⁷. This means that in case of land the increase of demand leads

⁷⁷ D. Begg, S. Fischer, R. Dornbusch, *Ekonomia*, Vol. 1, PWE, Warszawa 1993, p. 386.

only to increase of ground rent and consequently also to increase in the price of land. Here it should be stressed that demand for land is of derived demand (conditional) nature. The increase in demand for land is therefore caused by an increase in demand for various final goods which are created using this production factor and a corresponding increase in the price of these goods. In case of agricultural land the example for such situation is e.g. the increase in the price of wheat which leads to raising the rate of ground rent or land prices.

The issue of prices of agricultural land is very important in the context of introducing direct payments in 2004 and making intersectoral transfers of this production factor. The increase in real and nominal prices of arable land⁷⁸ in private trade should be primarily attributed to the negotiations conducted with regard to introducing direct payments to agricultural production (in the form of area payments) and their subsequent implementation. The additional profit from the land in the form of direct payments generates the increase in demand for land and in effect the rise in the price of this factor. A similar phenomenon creates a possibility of transfer of land to non-agricultural sectors of the economy, as making such transfer leads to the rise in the unit income from land, thereby causing an increase in demand and price. It should be noted, however, that the above relations between demand and the land prices occur with the assumption of a constant supply of land which does, indeed, take place when we consider the entire land resource in the national economy. If, on the other hand, individual branches of the economy are taken into account, the issue of making the supply of this factor more flexible will arise, because the transfers of land cause a change in the supply of land in different sectors. Looking at specific sectors, it is not only the demand for land that influences its prices but also its supply. The flow of land from farming to non-agricultural sectors of the economy causes therefore the decrease in land supply in farming which results in price increase in the farming sector. In turn, the increase in supply in non-farming economy sectors may cause the drop of prices of this production factor. The studies presented below show, however, that at the scale of the whole agricultural sector the decrease in land supply is relatively small. These relations may, nonetheless, become strongly visible at the local scale.

Taking into account the issue of distribution of land between different economy branches, one must refer more broadly to the income derived from this factor. The income derived from owning the production factor is defined in the economy as "rent". It should be, however, indicated that this term is used with regard to a factor which fulfils 2 conditions⁷⁹ that is:

- its supply is fixed,
- the assumption can be made that a given factor serves to produce only one product.

⁷⁸ A. Sikorska (ed.), *Rynek Ziemi Rolniczej*, no 14, „Analizy Rynkowe”, IERiGŻ-PIB, Warszawa 2011.

⁷⁹ P.A. Samuelson, W.D. Nordhaus, *Ekonomia 2*, PWN, Warszawa 1996, p. 71.

The land meets generally the above conditions and therefore in the conducted studies the theory of ground rent. According to this theory – the increase in prices of agricultural products and also in subsidies for a specific type of agricultural production, leads to the increase in demand for land and in effect to the increase in ground rent and price of land.

At the same time, the effect of the limited supply of land and derived demand for land manifested by the agricultural producers is a distribution of agricultural land between different types of crops. In extreme cases, the laws of the market operating with regard to land may result in land being acquired for agricultural purposes which was not used in farming before, such as forests or fallow land, or it can cause abandoning agricultural production. A similar situation occurs in case of transfer of land to non-agricultural sectors of the economy which constitute a competitive use of this production factor. Nonetheless, after the change in the manner of land management, the impact of the urban ground rent⁸⁰ becomes visible. Smith noticed that “The rent of a house may be distinguished into two parts, of which the one may very properly be called the building rent, the other is commonly called the ground rent”⁸¹. The urban ground rent according to Schimmel reflects the level of income gained not only by land, but also by the capital invested after the change of land management. The return on capital does not, however, comply with the definition of rent because the supply of this factor is flexible. But yet, the mechanisms defined by this term explain the differences in land prices between sectors. The owner, receiving a higher price for the land assigned for the sectors of the economy not related to agriculture or forestry, in this way takes over a part of the future return on capital which will be invested in a given area.

The intersectoral transfers resulting from the difference in prices and the operating market mechanism should lead to the land prices attaining the same level. The condition for the land prices attaining the same level in different economy sectors due to the transfers is, however, a lack of any restrictions of institutional nature. Elements of institutional environment such as the constitution, the existing law or specific attitudes and behaviours of local communities create certain rules which govern the intersectoral transfers. The existence of such elements is indispensable, though. If there were no such restrictions, the flow of land would cease only after the prices have become equal. The impact of demand and supply on intersectoral transfers does not, however, take into account the meaning of soil quality for the manner of its management which is important in case of agriculture, whereas in non-agricultural sectors of the economy it has no influence whatsoever on the future return on this production factor. In particular, the decisions of enterprises on the purchase of land for construction would be dictated mainly by the rule of maximising its utility. This means

⁸⁰ J. Schimmel, *Miejska renta gruntowa*, „Poznańskie Prace Ekonomiczne” 1933, No 19.

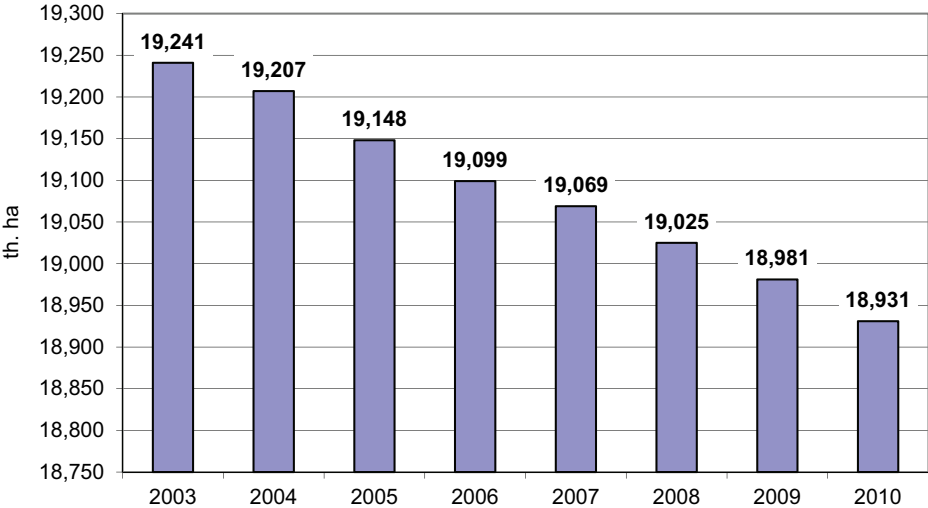
⁸¹ A. Smith, *Badania nad naturą i przyczynami bogactwa narodów*, Vol. 2, PWN, Warszawa 1954, p. 606.

taking into account primarily the price and advantages resulting from a convenient location with respect to urban agglomeration or the availability of broadly understood infrastructure. The quality of soils – unless it causes the rise in prices above the prices existing in the non-agricultural economy sector concerned – does not constitute an important argument for the above decisions.

6.3. Using agricultural land for non-agricultural purposes

The economic development of the country results in a continuous process of urbanisation and development of various industry branches, of services or infrastructure. In effect a gradual decrease of the acreage of land used for agricultural production takes place (Figure 6.1). In fact, in the 2003-2010 period, the area of land classified by the Central Statistical Office as agricultural land decreased by over 300 thousand ha. It must be noted, however, that some part of this land has been subject to afforestation or has been turned into fallow land. In the similar period the area of urbanised land increased by over 97 thousand ha. This increase results not only from the transfers of agricultural land, but also of forests and fallow lands. The share of land transferred to the sectors of the economy not related to agriculture or forestry is therefore ca. 33% of all agricultural land excluded from production.

Figure 6.1. The area of agricultural land in Poland in 2003-2010

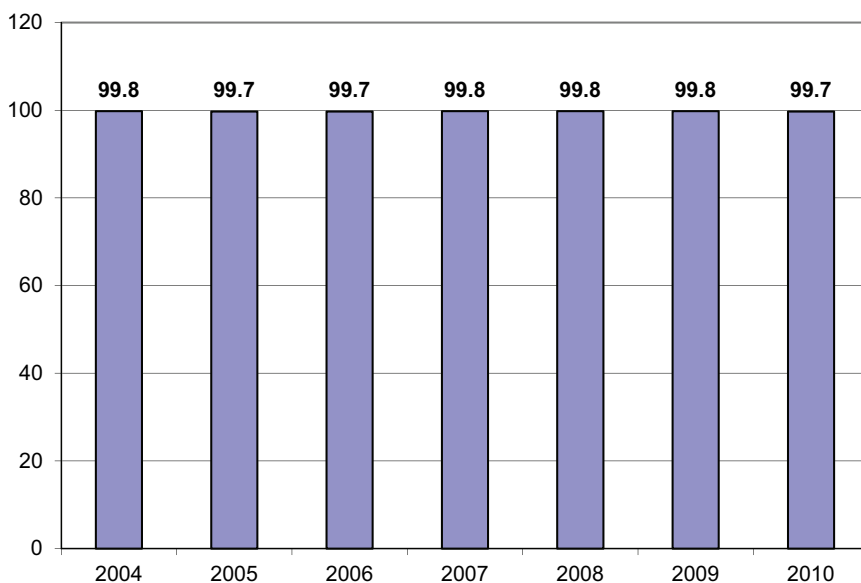


Source: Authors' own compilation based on the data of the Central Statistical Office.

The scale of exclusion of agricultural land from production in relative terms is quite small though (Figure 6.2). In the studied period their area diminished by ca. 0.2-0.3% a year. This means, however, restraining quite systematically the scale of land transfer from agriculture – measured in absolute values. Assuming that the trend

will stabilise, it can be noted that the agricultural sector should not be exposed to an excessive loss of the land production factor and, in effect, a large increase of its prices due to the diminished supply. But as far as the scale of intersectoral transfers should not influence the average land prices in the entire agricultural sector, a different situation may take place at the local scale, namely a large increase of the prices of agricultural land may take place in the areas undergoing urbanisation – even those which cannot be overtaken by the non-agricultural sectors of the economy because of legal restrictions. The situation where there exists a possibility of excluding a large acreage of agricultural land from agricultural production in favour of non-agricultural and non-forestry branches of economy may, however, be useful for economic growth. The reason is that it limits the increase of the land prices in these branches and, in consequence, it increases the attractiveness of a given area for investment. The indirect result of lower prices of the production factor may subsequently be higher competitiveness of the economic activity located in a given area.

Figure 6.2. Changes in the surface of agricultural area in Poland in 2003-2010 (previous year = 100)

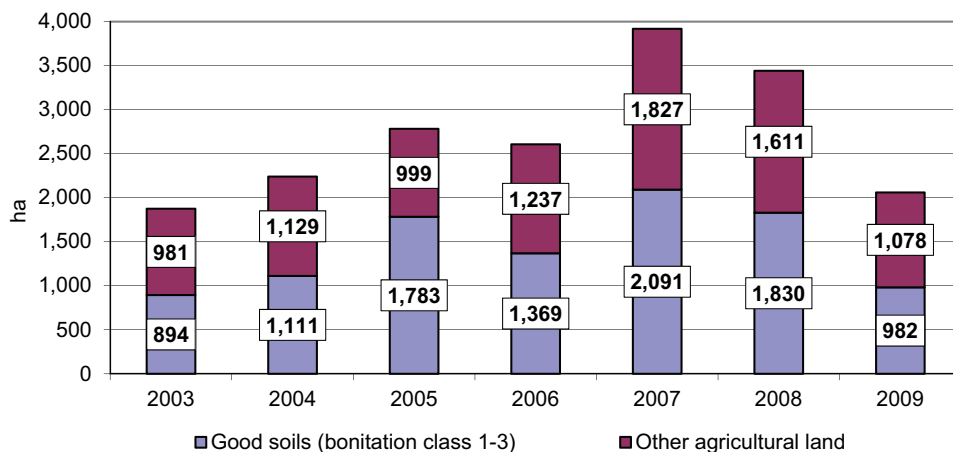


Source: Authors' own compilation based on the data of the Central Statistical Office.

A barrier for intersectoral transfer of agricultural land which is, at the same time, the barrier for the increase of the supply of land in non-agriculture sector of the economy are various legal solutions which regulate the management of this resource. In case of Poland, an especially strong influence on the market of land assigned for non-agriculture sectors of the economy have the Act of 3 February 1995 on the

protection of agricultural and forestry lands⁸² and the Act of 27 March 2003 on spatial planning and management⁸³. The first Act lays down the principle of using primarily the weakest soils that is soils of the lowest bonitation classes (5th and 6th class) of mineral origin for the purposes of non-agriculture sectors of the economy. The second Act, in turn, subjects the possibility of using agricultural land for non-agricultural and non-forest purposes to spatial planning policy conducted by the government authority which acts as the local territorial government.

Figure 6.3. The surface of agricultural land (except for soils of 5th and 6th bonitation class of soil mineral origin) excluded from agricultural production for non-agricultural sectors of the economy in 2003-2009 according to land quality



Source: Authors' own compilation based on the data of the Central Statistical Office.

Thus, the above-mentioned Acts limit the supply of land in non-agricultural sectors of the economy – thereby leading to an increase in the price of this factor. Nonetheless, their basic task is to protect the areas of the highest agricultural utility and biological value. They do not entirely restrict the access of non-agricultural sectors of the economy to the areas valuable for farming and natural environment (Figure 6.3). In 2003-2009 these lands constituted almost 20% of the surface area by which the surface of urbanised areas grew. At the local level (gminas), this may, however, signify the exclusion from agricultural production an entire acreage of good soils, as well as soils of lower value of organic origin. This process has its justification in the advantages of agglomeration which are achieved in non-agricultural sectors of the economy. In addition, with regard to the entire land resource available in agriculture, these losses seem to be quite small. Moreover, no results of scientific research prove a statistically significant relation between the decrease in supply of agricultural

⁸² Dz.U. of 1995 No. 16, item 78, as amended.

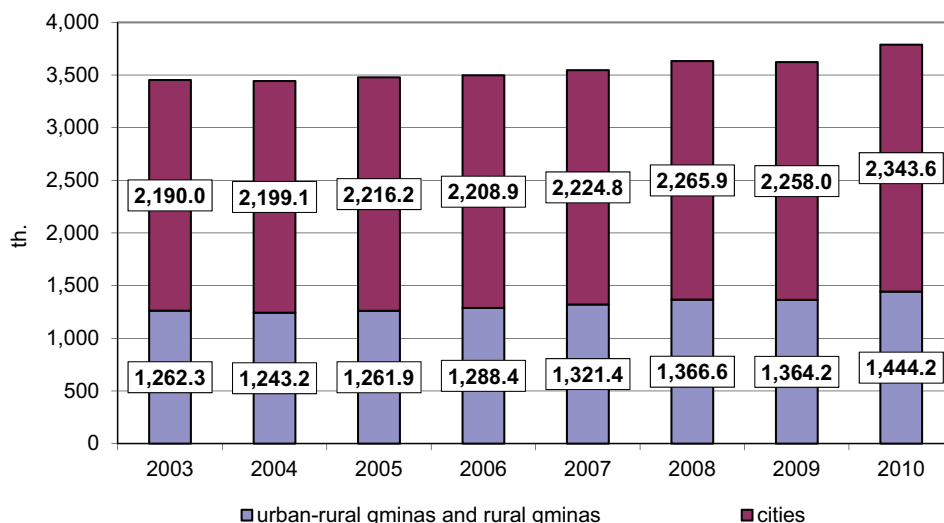
⁸³ Dz.U. of 2003 No. 80, item 717, as amended.

products and the transfer of areas of higher agricultural utility to non-agricultural sectors of the economy. The balance of profit and loss resulting from these transfers seems to speak in favour of a relative freedom of land transfers with simultaneous monitoring of the processes taking place. A question arises, however, concerning the justification of the involvement in the protection of agricultural land of so many public sector institutions which generate transaction costs both for the private, and the public sector. Since it seems that it is mainly geographical location and not quality that determines transfers of agricultural land. Lowering of transaction costs may, in turn, have beneficial impact on the development of non-agricultural economic activity.

6.4. The development of non-agricultural economic activity and the demand for agricultural land

In the examined period a gradual decrease in the area of agricultural land was accompanied by a systematic growth in the number of economic entities of the private sector (Figure 6.4). The growing trend collapsed only in 2009, which was to a large extent a result of the financial crisis in Europe. The collapse was compensated in 2010, as the number of entities of the private sector grew by over 335 thousand entities, that is by 9.7%, in 2003-2010. The conducted studies also show that over 60% of economic entities conducted their business activity in the cities. Nonetheless, the relative growth of the number of entities was much higher in the rural areas. The number of economic entities in the rural and urban-rural gminas increased in the examined period by 14.4%, while in the cities this increase was only at the level of 7%.

Figure 6.4. The number of economic entities of the private sector registered in the REGON (National Business Registry Number) system in 2003-2010



Source: Authors' own compilation based on the data of the Central Statistical Office.

The higher growth rate of the number of economic entities in the rural areas and a trend consisting in the decrease of the surface of agricultural land, occurring in the corresponding period, lead to an assumption that agricultural land in Poland is still important as a production factor for non-agricultural sectors of the economy. In this context, restricting the possibility to make intersectoral transfers of land may be a serious obstacle for the development of non-agricultural economic activity. A negative impact of the limited availability of land may manifest itself in a slowed down growth rate of the number of economic entities – to cite only this example. Another result may be decreased efficiency of using different structural, regional or Common Agricultural Policy instruments supporting the development of entrepreneurship. The example here may be a system of grants for microenterprises under the Rural Development Programme or instruments for supporting entrepreneurship under Regional Operational Programmes.

In order to justify the above assumption it is necessary to prove the existence of statistically significant relation between the changes in the surface of agricultural land and the changes in the number of economic entities. The conducted correlation and regression analysis has confirmed that such relations do indeed exist (Figure 6.5). The correlation ratio between the surface of agricultural land and the number of economic entities of the private sector has attained the value of -0.95 in 2003-2010 and was statistically significant at a 0.95 confidence level. This means that a strong negative correlation exists between the analysed characteristics. In other words, the increase in the number of economic entities is very strongly related with the decrease in the surface of agricultural area. Assuming, in turn, that the decrease in the surface of agricultural area is a result of the development of extra-agricultural economic activity, the following model can be constructed showing simple regression between these variables:

$$y = 21,896,034 - 0.79x$$

where:

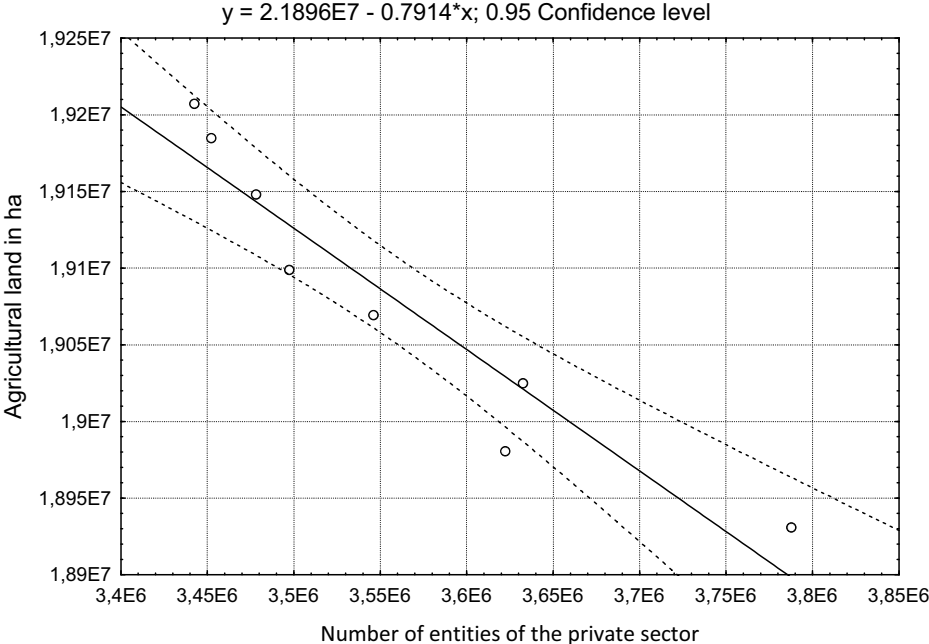
y – agricultural land surface in ha,

x – number of economic entities in the private sector.

The obtained regression model is characterised with a high alignment with empirical data. The determination coefficient has attained the value of 0.90 and the adjusted determination coefficient: 0.88. This proves the existence of cause-effect relation between the development of economic activity and changes in the agricultural land resources. In addition, it results from the above regression model that emergence of an additional private sector entity caused a decrease in the surface of agricultural land by 0.79 ha. The development of non-agricultural economic activity depends therefore on the availability of the production factor which is land, because it is evident that relatively large surface of agricultural land is indispensable in order for one additional private sector entity to be created. This leads to a situation where the policy of supporting the development of economic activity requires some coordination with the national land planning policy. The reason is that the lack of this production

factor may cause inefficiency of the instruments applied as part of regional or structural policy to stimulate the creation of new enterprises.

Figure 6.5. Spread of the number of economic entities in the private sector with respect to the surface of agricultural land and a simple regression chart for the 2003-2010 period



Source: Authors' own compilation based on the data of the Central Statistical Office.

The development of non-agricultural economic activity is strongly related not only to the changes of the entire acreage of agricultural land, but also to the changes in specific types of such agricultural land, especially the surface of arable land (Figure 6.6). The conducted statistical analysis has shown that the correlation coefficient between the surface of arable land and the number of private sector entities in 2003-2010 attained the value of -0.96. This means a very strong negative correlation between these characteristics. Therefore, the increase in the number of economic entities is very strongly related to the decrease in the surface of agricultural land. As results from the conducted regression analysis this dependence may be presented as the following model:

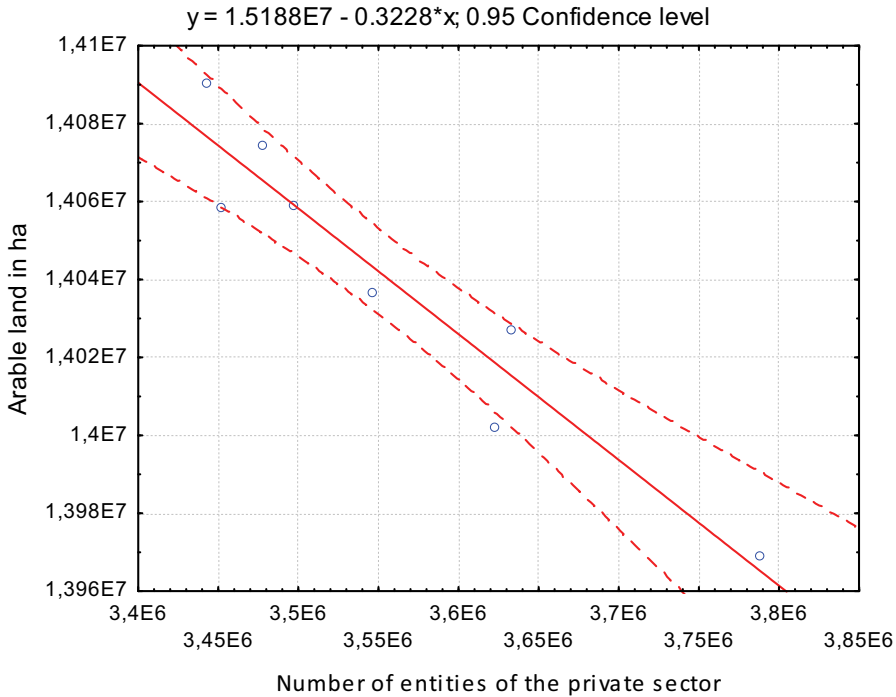
$$y = 15,188,153 - 0.32x$$

where:

y – arable land surface in ha,

x – number of economic entities in the private sector.

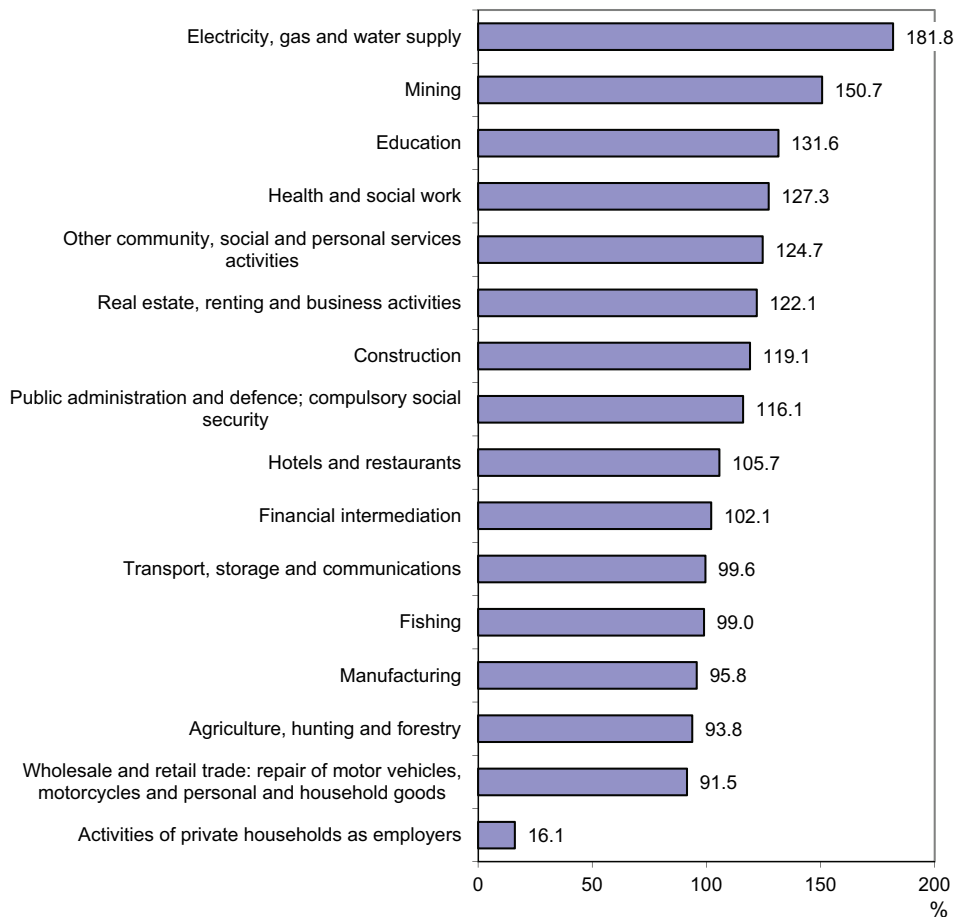
Figure 6.6. Spread of the number of economic entities in the private sector with respect to the surface of arable land and a simple regression chart for the 2003-2010 period



Source: Authors' own compilation based on the data of the Central Statistical Office.

The determination coefficient in the conducted regression analysis amounted to 0.91 which means a good alignment of the model to empirical data. As results from the model, emergence of one additional private sector entity causes a reduction of the surface of agricultural land by 0.32 ha. Average demand for arable land on the part of economic entities is therefore much smaller than the demand for agricultural land. This difference may result from using different kinds of agricultural land including e.g. land which remains within agricultural holding area or land which is subject to construction development classified as agricultural land. In this context, this difference may also demonstrate rational behaviour of entities when it comes to acquiring the production factor from agriculture and rational nature of conducted spatial policy. Intersectoral transfers of land should not, therefore, have a strong impact on availability of this factor for crop cultivation and, in result, on the production volume. However, in order to fully confirm this assumption more detailed studies are needed leading to statistical verification. The results of the current research are only an argument speaking in favour of the above hypothesis and not a proof of its veracity.

Figure 6.7. Changes in the number of private sector entities in different sections of the Polish Classification of Activities, in 2003-2009 (year 2003 = 100)

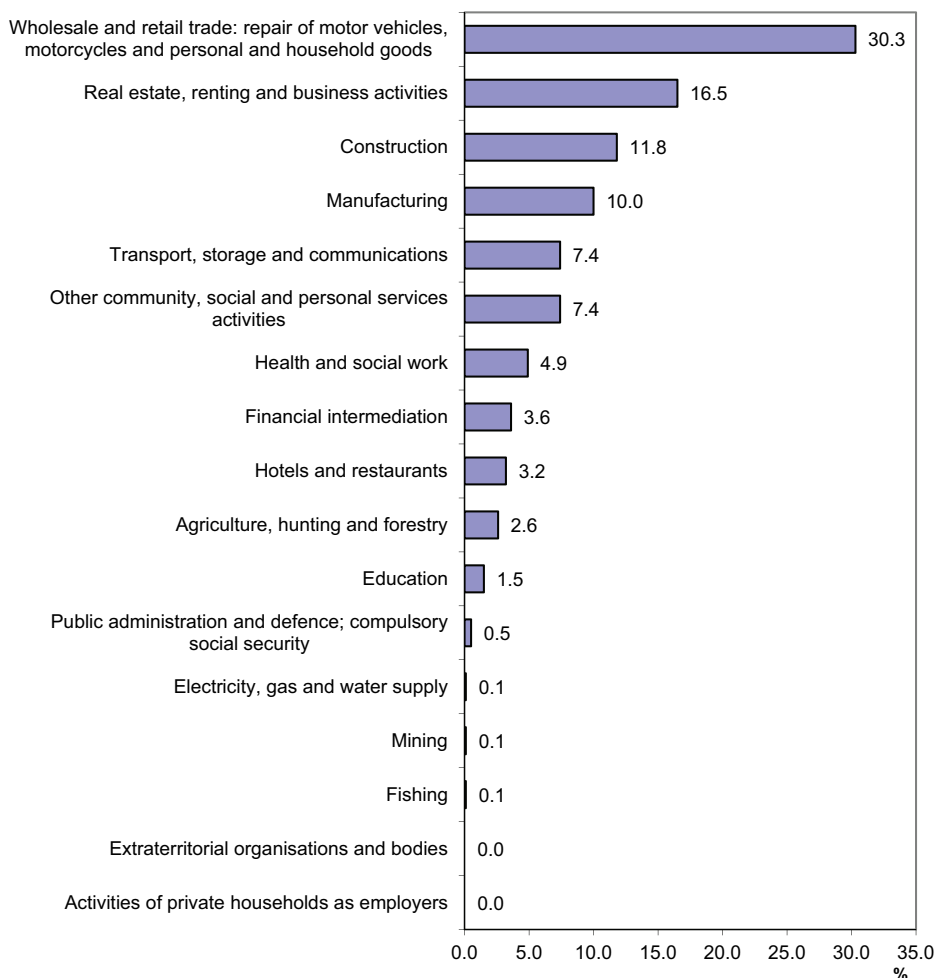


Source: Authors' own compilation based on the data of the Central Statistical Office.

The present and the future scale of land transfers related to the development of non-agricultural economic activity is connected to the changes taking place in different sectors of the national economy (Figure 6.7) and to its structure (Figure 6.8). A significant land absorption of economic entities created in the examined period may have resulted from the type of activity they conducted. In this period the number of entities operating in the field of energy, water and gas supply, as well as in mining, construction and tourism grew significantly. The entities operating in these sectors of the economy may show a significant demand for land. At the same time, these entities may not always use the resources of this production factor which remain in other sectors of the economy because of other entities withdrawing from the market, such as land remaining under control of manufacturing industry, transport or warehouse and storage industry. Intersectoral transfers of land in this context could generate

excessively high costs related not only to the price of the factor, but also to its adaptation to specific needs of a given sector. Additional costs do not exist in case of agricultural land, the advantage of which is also its lower price. A high average demand of some entities for land may also result from the existing geodetic division of land and from sizes of agricultural plots and not from the actual needs of an enterprise, as the transferred geodetic plots have their specific sizes and their division may generate significant costs. In effect, it leads to the surplus of the land factor in a given sector of the economy.

Figure 6.8. The share of different types of activities⁸⁴ in general number of private sector entities in 2009



Source: Authors' own compilation based on the data of the Central Statistical Office.

⁸⁴ Polish Classification of Activities – applied until 2009.

The specificity of the dynamically developing sectors of the economy and the legal framework may thus lead to increased scale of excluding agricultural land from production. Analysing, in turn, the existing sector structure (Figure 6.8) one can assume a gradual decrease in the absolute level of agricultural land transfer to non-agricultural sectors of the economy related to the increase in the number of entities. Currently, enterprises operating in retail and wholesale trade, construction, manufacturing industry or warehouse and storage industry make up a quite significant share of the general number of entities. The increase in the number of entities in these sectors should not, therefore, be very high. A fall in the number of entities in some of them may even be expected, which will largely decrease the demand for land. A large potential for the increase in the number of enterprises exists in sectors which have a smaller need for land such as sectors of financial intermediation activities, education or activities of private households as employers of domestic personnel.

The conducted studies show that in the long-term perspective the average demand for land of a newly created economic entity should decrease. In effect, the scale of intersectoral land transfers due to the development of non-agricultural sectors should also diminish. This trend should be visible in the entire Polish economy. The above changes may take place slightly differently at a local scale, in urban and rural areas or because of implementation of the financial support for the development of entrepreneurship.

The relation between the changes in the number of entities in different sectors of the economy and the change in the surface of agricultural and arable land are confirmed by the conducted correlation analysis (Table 6.1). In most of the cases a strong negative correlation was noted. This means that the increase in the number of entities in the majority of economic sectors is accompanied by a decrease in the acreage of agricultural land. Whereas the changes in the number of entities registered in the REGON system in such sections of economic activity as agriculture, hunting and forestry, fishing, financial intermediation or activities of private households as employers are very dimly related to the changes of land surface. In other words, the need for land of these sectors was scarce. The situation was slightly different in case of entities operating in the field of manufacturing industry and wholesale and retail trade. In these sections in the examined period the drop in the number of entities was observed accompanied by an increase in demand for agricultural land. Such a trend may be explained to a certain extent by the existing processes of concentration of production, related to the small entities withdrawing from the market, in case of industrial manufacturing, and by the changes in the size structure of the entities operating in trade sector. However, due to a potential long duration of such processes they should not have in a longer perspective a very strong impact on the changes in agricultural land.

Table 6.1. Coefficients of correlation between the number of private sector entities and the surface of agricultural land and arable land in 2003-2009

Section of Polish Classification of Activities	Agricultural land	Arable land
Agriculture, hunting and forestry	-0.30 ^a	-0.57 ^a
Fishing	0.66 ^a	0.61 ^a
Mining	-0.96	-0.92
Industrial manufacturing	0.89	0.81
Electricity, gas and water supply	-0.92	-0.91
Construction	-0.94	-0.93
Wholesale and retail trade and repair of motor vehicles and motorcycles and household or personal goods	0.97	0.91
Hotels and restaurants	-0.75	-0.71 ^a
Transport, storage and communications	-0.32 ^a	-0.57 ^a
Financial intermediation	-0.63 ^a	-0.51 ^a
Real estate, renting and business activities	-0.97	-0.86
Public administration and defence; compulsory social security	-0.94	-0.79
Education	-0.98	-0.90
Health and social work	-0.97	-0.88
Other community, social and personal services activities	-0.98	-0.87
Activities of private households as employers	0.86	0.73 ^a
Extraterritorial organisations and bodies	-0.94	-0.83

^a statistically insignificant coefficients at the level of $\alpha = 0.95$

Source: Authors' own compilation based on the data of the Central Statistical Office.

The conducted studies also show that economic entities have a tendency to concentrate which is a result of the benefit derived from agglomeration. This causes a fast development of non-agricultural economic activity in the areas of large urban agglomerations and in the surrounding territorial units. This, in turn, generates the increase in the demand for land, the supply of which is significantly reduced in these areas. An important issue is also a more dynamic development of economic activity in rural areas compared to urban areas. The maintenance of this trend may lead to the increased demand for agricultural land. The presence of land within non-agricultural sectors of the economy in rural areas is relatively much lower than in urbanised areas. The possibilities of transfer of this production factor between non-agricultural sectors of the economy are therefore limited. Considering the development of non-agricultural economic activity in rural areas one should also take into account potential changes in the Common Agricultural Policy after 2013. One of the proposed changes is introducing financial support for young farmers taking up economic activity outside farming. Introducing this instrument may significantly contribute to maintaining the higher growth rate in the number of economic entities in rural areas. The effect will be, in turn, the increase in demand for land.

7. The evaluation of chances to achieve long-term goals of agriculture and rural areas development based on the new CAP instruments for the period until 2020

The current debate about the shape of the Common Agricultural Policy (CAP) after 2013 is closely linked to the ongoing negotiations on the size and structure of the EU budget in the framework of the new financial perspective for 2014-2020. All agricultural decisions are influenced by the level of funds allocated for the implementation of the EU agricultural policy. For many years we have seen a clear downward trend in the size of the agricultural budget. The pressure to reduce spending on the agricultural sector is very strong and leads to a gradual reduction of the agricultural budget (in the past 25 years the share of agricultural expenditure in the EU GDP has fallen from 75% to 41%)⁸⁵. It forces the adjustment of the CAP shape to the current needs and budget of the European Union (EU); however, it adversely affects the formulation and achievement of its long-term goals.

7.1. The evolution of objectives and instruments of the Common Agricultural Policy

The objectives of the EU agricultural policy were formulated in the Rome Treaty in 1957 and have been repeated in unchanged form in subsequent treaties, including the one currently in force. In accordance with Article 33(1) of the Treaty establishing the European Community, the objectives of the CAP are to increase agricultural productivity, ensuring a fair standard of living to the rural community, stabilising markets, guaranteeing security of supply and optimal food prices for consumers.

These objectives resulted from the need to ensure an adequate supply of food and income support to farmers after World War II. Despite the changes in the intra-EU and international conditions, the targets have not evolved, only instruments used in the CAP changed.

The essence of the problem regarding the objectives of the CAP is that they are set out in the Rome Treaty in an equal manner, without specifying which of them are priorities. Some are incompatible with each other or overlap. This makes it impossible to carry out a proper evaluation of funds spent under the CAP, and fosters overlapping of the policy instruments used. The ambiguity of the objectives, the European Court found already in 1967, "... are potentially contradictory and fundamentally disparate, therefore, cannot be achieved at the same time ..."⁸⁶. If one used SMART method⁸⁷,

⁸⁵ European Commission, *CAP-post 2013: key graphs and figures. Graph 1, 2010 Financial Report*, 2011, http://ec.europa.eu/agriculture/cap-post-2013/graphs/graph1_en.pdf (accessed on 03.10.2012).

⁸⁶ Case no 5/67, *Beus v. Hauptzollamt Munchen*, ECR 1967, 83.

⁸⁷ *Specific, Measurable, Acceptable, Realistic, Time-bound.*

a commonly used method in the management to assess the correctness of the defined goals, one could see that the CAP objectives do not meet the criteria of the above-mentioned method⁸⁸. According to the judgement of the Court, it is at the discretion of the Communities to select the temporary priority objective, depending on the needs of the economy⁸⁹.

The lack of clearly defined objectives of the CAP is not an exception in the EU public policies, where the political and technical problems are solved using available (“at our disposal”) instruments. The question whether they are the best possible instruments for the implementation of the set goals is of secondary importance. By analysing the evolution of the CAP it can be said that it is the instruments used that have changed this policy, so this policy should be judged by its instruments. According to Lascoumes and Le Gales, each instrument is a condensed form of social knowledge and ways of experiencing it. In addition, no instrument is neutral, as it creates specific effects, independent of the undertaken goals and thus shapes public policy according to its own logic⁹⁰. In the case of the CAP, a good example can be instruments supporting agricultural markets, which in the 1980s resulted in overproduction of various agricultural products and undue pressure on the Community budget.

Figure 7.1 shows the evolution of the EU agricultural policy instruments in the period from 1980 to 2010. There are noticeable changes in instruments used at the time, from the support for agricultural markets (export subsidies and other market-based instruments) to the direct support to farmers (direct payments, rural development).

It is interesting what may be the cause for the delegitimisation of specific instruments used in the CAP and the introduction of new ones. According to Lascoumes and Le Gales⁹¹, the more the public policy is defined by its instruments, the higher the risk of conflict arising between different interests, actors and institutions. Most often it is the strongest actors who influence the choice of instruments. Grant⁹² ranked the numerous instruments of the 50-year old agricultural policy in the following three groups:

- instruments eliminated from the CAP (e.g., target price, budget stabilisers, the support for butter processing);

⁸⁸ An interesting analysis of the CAP objectives on the basis of the SMART method was carried out by FAPA (A. Chlebicka, J. Fałkowski, T. Wołek, *Ocena poprawności sposobu zdefiniowania celów Wspólnej Polityki Rolnej*, FAPA, Warszawa, listopad 2008).

⁸⁹ Case no 5/73, *Balkan-Import-Export-GmbH v Hauptzollamt Berlin-Packhof*, ECR 1973, 1091.

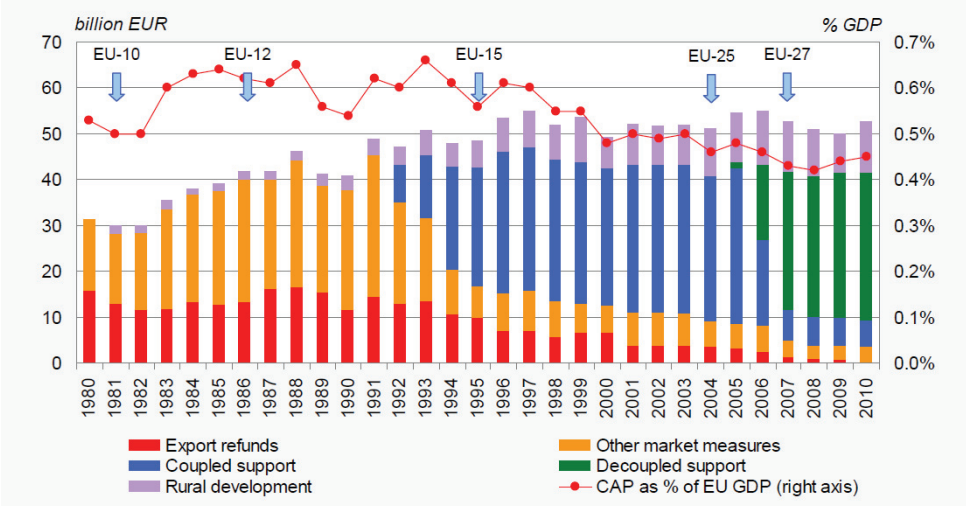
⁹⁰ P. Lascoumes, P. Gales, *Introduction: Understanding Public Policy through Its Instruments – From the Nature of Instruments to the Sociology of Public Policy Instrumentation*, “Governance, An international Journal of Policy, Administration and Institutions”, Vol. 20, No. 1, January 2007, pp. 1-21.

⁹¹ *Ibidem*.

⁹² W. Grant, *Policy Instruments in the Common Agricultural Policy*, “West European Policies” 2010, Vol. 33(1), pp. 22-38.

- instruments that are still present, but will soon be probably removed from the agricultural policy (such as production quotas, intervention, export subsidies);
- relatively new instruments that will shape the future of the CAP (e.g. decoupling, cross-compliance, financial discipline mechanism).

Figure 7.1. The evolution of instruments of the Common Agricultural Policy



Source: European Commission, CAP-post 2013: key graphs and figures. Graph 2, 2010 Financial Report, 2011, http://ec.europa.eu/agriculture/cap-post-2013/graphs/graph2_en.pdf (accessed on 03.10.2012).

The CAP history shows how significant an impact the Member States had on its shape, as they led to the introduction of a number of different instruments changing eventually the “common” agricultural policy into a menu. In this way the countries are able to use the instruments that best suit their needs. A side effect of this process is hidden renationalisation, adversely affecting the level playing field between states.

The CAP example clearly illustrates that the European Union policy-making model is antiquated and archaic. Although attempts are being made to reform the agricultural policy, old tools are still used for new challenges. The new solutions are being introduced with difficulty. This applies particularly to those that are important in the decision making process at an early stage.

The path dependence theory is often mentioned among a number of concepts that explain poor adaptability of the EU agricultural policy to modern challenges. The problems of the CAP traditionalism are thus seen as a result of historical problems leading to the closing of this policy in the current structures that do not encourage innovation. The theory mentioned has its roots in evolutionary economics and became very popular in the social sciences. Its meaning can be summed up in the following words: “that what has happened at an earlier point in time will affect the possible

outcomes of a sequence of events occurring at a later point in time⁹³. According to the analysis of the reference books conducted by Gwosdz⁹⁴, the essence of the path dependence process consists in unforeseen events in the early stages of the process combined with the cumulative effects of these events resulting in path dependence.

The European economic literature contains several discussions on the CAP as a classic example of path dependence theory⁹⁵. Authors often stress that only superficial change in this policy is accepted by the decision makers. However, new proposals, even those supported by good analysis, are systematically ignored. Some justify this situation on the basis of rational choice theory⁹⁶.

A perspective on the CAP in terms of its evolution, and especially the instruments used, allows us to understand what factors and processes have led to the current shape of this policy. In this way we gain a basis for actions that may allow for real reform of the CAP and mark a departure from the existing path dependence.

7.2. Objectives and instruments of the agricultural policy in the current proposal of the European Commission

Negotiations on the size and structure of the EU budget

One of the basic factors hindering the process of shaping the CAP in line with the actual EU challenges and needs consists in basing it on the Member States' contributions in relation to their Gross National Income. This results in a situation when each country – under the fair return principle (*juste retour*) – aims at maximum return of resources paid to the common budget. Consequently each negotiations, and following EU actions, are a resultant of the game of interests played between Member States. The establishment of two groups of states – net contributors and beneficiaries,

⁹³ W. Sewell, *Three Temporalities: Toward an Eventful Sociology*, [in:] T. McDonald, *The Historic Turn in Human Sciences*, University of Michigan Press, Ann Arbor 1996, pp. 245-280.

⁹⁴ K. Gwosdz, *Pozytywne i negatywne ścieżki (virtuous and vicious paths) – próba zastosowania teorii zależności od ścieżki (path dependency) do wybranych miast konurbacji górnośląskiej*, [in:] I. Sagan, M. Czepczyński (ed.), *Wymiar i współczesne interpretacje regionu*, Uniwersytet Gdański, Gdańsk–Poznań 2003, pp. 227-238.

⁹⁵ For example: R. Ackrill, A. Kay, *Historical-Institutionalist Perspectives on the Development of the EU Budget System*, "Journal of European Public Policy" 2006, Vol. 13, Issue 1, pp. 113-133; A. Kay, *Path Dependency and the CAP*, "Journal of European Public Policy" 2003, Vol. 10, Issue 3, pp. 405-420; P. Nedergaard, *Market failures and government failures: A theoretical model of the Common Agricultural Policy*, Paper for the EUSA Ninth Biennial International Conference, March 31-April 2, 2005, Austin, Texas, USA.

⁹⁶ Rational choice theory – often equated with public choice theory, adapted for an analysis in political science from neoclassical economics. Its purpose is to explain the results of the collective actions by reference to the motivation of the actions of individuals (J.S. Coleman, *A Rational Choice Perspective on Economic Sociology*, [in:] N.J. Smelser, R. Swedberg (ed.), *The handbook of economic sociology*, Princeton University Press, Russell Sage Foundation, New York 1994).

impinges upon the effective spending of public resources in the EU, namely concentration of resources where they are most needed and maximising value added.

Now, the negotiations on the new financial perspective, which will decide on the size and structure of the EU budget for 2014-2020, are coming to an end. So far, the programming period had its macro-objective. From the proposal drawn up by the European Commission⁹⁷ one can conclude that the next perspective will be subject to the two following objectives:

- The EU's place in the world.

The "Europe 2020" Strategy is to address the widespread belief on the declining political and economic role of the EU in the world, as the Strategy points to the need for smart, sustainable, inclusive growth. However, the concern is the standing of each of the aforementioned elements in the EU policy pursued on the basis of the future EU budget. It may be projected that the growing unemployment will contribute to greater concentration on social issues at the expense of infrastructural development.

- Tackling the economic crisis.

The prolonging economic crisis in the EU may strengthen the pressure on more effective spending of the EU resources. This, in turn, implies the concentration of resources on investments, which cannot be funded by private investors, and more stringent procedures of awarding resources and controlling their spending⁹⁸.

The net contributors use the economic crisis in the EU in their next attempt to reduce expenditure on traditional policies, such as the CAP and the Cohesion Policy. Just like during the negotiations on the last financial perspective, also now they have drawn up a common position⁹⁹, in which the call for reducing the general envelope of the EU resources is now hidden under the slogan of higher quality spending. The signatories to the non-paper opt for allocating greater amount of the EU resources for innovative and "high-tech" projects, i.e. projects that will ensure value added and enhance the EU's competitiveness on the international arena. This so-called "Friends of Better Spending" group is opposed by "Friends of Cohesion Policy" group (composed mainly of new Member States), which justifies the need to maintain the current level of traditional EU policies financing in order to eliminate the socio-economic gaps between the countries. However, it should be expected that the casting

⁹⁷ European Commission, *A Budget For Europe 2020 - Part I - Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Part II - Policy Fiches*, COM(2011) 500 I, II final, Brussels, 29.06.2011.

⁹⁸ P. Zerka, *Cyfrowy reset, wieloletnie ramy finansowe UE (2014-20) a rozwój gospodarki cyfrowej w Polsce*, DemosEuropa, wrzesień 2012, http://www.demoservices.home.pl/www/files/Demos_Cyfrowy_reset.pdf (accessed on 12.10.2012).

⁹⁹ A non-paper of 29 May 2012 signed by Austria, the Czech Republic, Germany, Finland, the Netherlands, Sweden and the United Kingdom (EurActiv.com, 31 May 2012), <http://www.euractiv.com/specialreport-budget/countries-plead-slim-eu-budget-news-513055> (accessed on 11.10.2012).

vote in the final stage of negotiations on the EU budget will belong to Germany (greatest contributor to the EU budget) and France (greatest CAP beneficiary)¹⁰⁰.

The European Parliament (EP) has adopted a very active role in the debate on the next financial perspective. In its document¹⁰¹ it points to the need to increase the EU budget by 5% thereby enabling the implementation of the most vital EU priorities. According to the EP, the EU budget should be treated as an investment budget, especially at the times of the economic crisis. Especially interesting is the EP's support for the reform of own resources of the EU budget, namely the proposal to introduce a financial transaction tax and new form of VAT, which would help to finance the EU expenditure in ca. 40%¹⁰². Implementation of these changes would provide an enormous opportunity to make the EU budget independent from the Member States' contributions and depart from the fair return principle (*juste retour*).

New shape of CAP after 2013

One might expect that the economic crisis and the weakening position of the EU on the international arena will provide a good opportunity to carry out actual reforms of the EU policies, including changes to the Common Agricultural Policy. Unfortunately, the proposal of the European Commission¹⁰³ focuses mainly on justifications for keeping the current agricultural budget and explains of the reasons thereof to the taxpayers, rather than actually increasing the efficiency of the agricultural policy. The document identifies a number of vital challenges facing the EU agriculture in the coming years. However, the suggested changes fail to answer to these challenges. The CAP instruments, basically, remained unchanged apart from minor modifications. The aim is to keep the instruments that help the Member States to recover the resources they have paid to the EU budget.

The greatest controversies in the negotiation package concerning the agricultural budget for the next financial perspective arise in relation to the direct payments treated as a simple mechanism for resources re-distribution between Member States¹⁰⁴. At the times of ever increasing pressures to reduce the EU budget,

¹⁰⁰ On 10.10.2012 the representatives of both these countries signed a common position on the need to maintain the current level of CAP funding after 2013, <http://www.euractiv.com/cap/france-germany-agree-keep-eu-far-news-515325> (accessed on 11.10.2012).

¹⁰¹ European Commission, *Draft Interim Report in the interests of achieving a positive outcome of the Multiannual Financial Framework 2014-2020 approval procedure*, COM(2012)0388-2011/0177(APP), 26.09.2012.

¹⁰² A. Matthews, *How much progress has been made on agreeing the 2014-2020 MFF*, August 9, 2012, <http://www.euractiv.com/specialreport-budget/countries-plead-slim-eu-budget-news-513055> (accessed on 11.10.2012).

¹⁰³ European Commission, *Legal proposals for the CAP after 2013*, Brussels, 12.10.2011, http://ec.europa.eu/agriculture/cap-post-2013/legal-proposals/index_en.htm.

¹⁰⁴ More on the issue in: R. Grochowska, *Is the Common Agricultural Policy still common? Effects of reallocation of direct payments to Member States*, [in:] *Proposals for CAP 2013+*

attempts at keeping the envelope of resources for direct payments at as high level as possible, need to be expected. Already now, there appear calls for including the so-called crisis reserve for agriculture into the first pillar, which under the initial proposal of the Commission was to function outside the general budget. Such a solution is justified with the possibility to transfer resources between the payments and market support instruments freely, if it is necessary to apply the financial discipline. Moreover, a reduction of the envelope of resources allocated to the second CAP pillar is expected (ca. 9%)¹⁰⁵.

The level of direct payments between Member States will not be equalised. The present rules of their distribution favour the unequal competitive conditions. In 2010, the share of EU-15 in the envelope of direct payments amounted to 86.33%, while EU-12 it accounted only for 13.76%¹⁰⁶. Only the Baltic States and Romania can count on a slight increase in the national envelope of payments in the future financial perspective. In the case of Poland, the change in the envelope of direct payments will be minimal, since the current Polish rate is almost equal to the average rate for the entire EU-27 estimated by the European Commission at 267 EUR/ha¹⁰⁷.

What is important, the Commission undertakes another attempt at unification of the direct payments system across the entire EU through the obligation to introduce the regional model by all countries until 2019. This, however, encounters a significant opposition. Such a solution would allow for unification of the payments' rates at least within one country, but this re-distribution might also cause weakening of some sectors and types of holdings. This should explain why the Commission proposes to introduce in the new Basic Payment Scheme, apart from the basic and environmental rates, significant simplifications for the Member States opting for the need to restore the support schemes for defined sectors and types of agricultural production experiencing difficulties or particularly important due to economic and/or social reasons.

Pursuant to the proposal for a Regulation establishing rules for direct payments to farmers under support schemes within the framework of the Common Agricultural Policy¹⁰⁸ it was assumed that the coupled support should not exceed 5% of the annual national ceiling. However, the proposal provides also for legal opportunities to apply

and competitiveness of food sector and rural areas, series "Multi-annual Programme 2011-2014", no 61.1, IAFE-NRI, Warsaw 2012, pp. 60-69.

¹⁰⁵ A. Matthews, *MFF baton passes to Van Rompuy: further cuts proposed compared to Commission proposal*, November 15, 2012, <http://capreform.eu/mff-baton-passes-to-van-rompuy-further-cuts-proposed-compared-to-commission-proposal/> (accessed on 16.11.2012).

¹⁰⁶ V. Zahrnt, *Financing the Common Agricultural Policy: Which member states pay for the waste of the public money?*, ECIPE, 2011, <http://www.reformthecap.eu/sites/default/files/CAP%20net%20payers%20ECIPE.pdf> (accessed on 12.06.2012).

¹⁰⁷ European Commission, *Impact Assessment Report, Annex 3a-d*, 2011, http://ec.europa.eu/agriculture/analysis/perspec/cap-2020/impact-assessment/annex3a-d_en.pdf (accessed on 25.10.2012).

¹⁰⁸ *Regulation...*, http://ec.europa.eu/agriculture/cap-post-2013/legal-proposals/com625/625_en.pdf (accessed on 25.10.2012).

to the Commission to use up to 10% of the national envelope for the new Member States and those countries from the EU-15, which exceeded 5% or 10% of their envelope for this type of payments, at least, in a one year in the 2010-2013 period. The possibility of using the coupled payments currently referring to cattle, sheep, goats, rice and cotton, was extended in the Commission's proposal to most types of agricultural production. On the other hand, the social support, which many Member States applied for under Article 68 of the Council Regulation (EC) No 73/2009, has been abolished.

It needs be to emphasised that the possibility to extend the scope of application of coupled payments included in the new proposal for CAP reform is a step back as compared to the current process of CAP changes. Although these payments are not accepted by the World Trade Organisation they are applied by many non-EU countries.

Apart from allocating a defined envelope of direct payments to coupled payments, the Commission also provides an opportunity to the Member States to use a slight amount from their national envelopes available under the first CAP pillar for payments supporting farmers on less favoured areas (LFA) – up to 5%, young farmers – up to 2% and small agricultural holdings – up to 10%. Thus it is easy to see an attempt at assigning some part of the payments' envelope to precisely defined objectives or beneficiaries, which experts have postulated for many years. According to the OECD studies, targeting a specific policy at the implementation of clearly defined objectives and application of instruments defined thereunder, ensures effectiveness of a given policy and its low costs¹⁰⁹.

In this scope the Commission will have to face the challenge of introducing the upper limits of payments per one agricultural holding (above EUR 150,000). The Commission has reiterated its proposal to reduce the payments per one agricultural holding since 1992, but so far, the countries having large agricultural holdings (Germany, the United Kingdom, later on also Slovakia) rejected effectively. The compulsory modulation (year-to-year decrease in the level of direct payments to agricultural holdings by an agreed percent and using the resources obtained for the objective of the second CAP pillar) introduced in 2003 was a step in the right direction. Unfortunately, this mechanism in the future CAP appeared only in a partial form. The Commission even proposes a contrary solution, namely transfer of up to 5% of the national envelope of resources from the second to the first CAP pillar, and some EU countries and institutions even opt for increasing the transfer to 15%.

The Commission's proposal on the shape of CAP after 2013 points to consistent reduction of the traditional support instruments for the agricultural markets. This aims at keeping only a "safety net", which will be launched in case of emergency. The new solutions cover support in case of distortions on agricultural markets caused by loss of consumer trust, outbreak of an animal disease or price volatility, which are to function as additional support to the market management package available under the second

¹⁰⁹ C. Moreddu, *Effective Targeting of Agricultural Policies. Best Practices for Policy Design and Implementation*, OECD, May 2007.

pillar. Moreover, significant pressure is exercised on enhancing the standing of producers in the food chain through promotion of written contracts and increased importance of producer organisations. The direction of changes seems to be right, since quick response to crisis situations is becoming the greatest challenge of the modern world. As regards agriculture, this mainly concerns price fluctuations of agricultural products on the global markets and the natural disasters. Thus, the agricultural policy should have instruments that, on the one hand, help farmers to flexibly adapt to the market situation and, on the other, enable the EU or national institutions to intervene quickly.

Poland's dilemmas in the financial negotiations for 2014-2020

The calls for increasing the envelope of direct payments for our country seem rather unreal, since Poland's freedom for manoeuvre in this regard is rather limited. The agreement concluded on 9 October 2012 between France and Germany will probably result in "freezing" the agricultural budget for 2014-2020 at the nominal level of 2013. Similar agreement has been signed by these countries in 2002. In the document they also reject all further reductions in direct payments. If the proposal of the European Commission to level the payments received by Member States is implemented, France will lose 1.5% and Germany 2.3% of their envelope of payments by 2020¹¹⁰. Thus these countries will drive at minimising their losses in national envelopes. At this background Poland cannot expect an increase in its envelope, but rather the opposite – a slight decrease, if it fails to negotiate an exclusion of the countries receiving an average EU rate of payments per ha from these reductions.

A significant decrease in the agricultural budget seems rather unlikely. At the times of the economic crisis all Member States are interested in keeping the balance between contributions to/payments from the EU budget, the so-called net balance. The direct payments enable to "recover" resources paid to the EU budget. Hence the attempts at decreasing the agricultural budget and VAT threats argued by some net contributors (mainly the UK) should be treated as negotiating strategies aimed at keeping the rebates (enabling to lower the level of payments to the EU budget). If it becomes necessary to reduce the agricultural budget, this will take place at the expense of the second CAP pillar, which had already happened during the last financial negotiations of 2005.

Bearing in mind the efforts, mainly of the net contributors, to keep the equilibrium of the balances of payments, it is hard to expect that the level of payments received by the Polish farmers will be equalised with that of other countries. According to the estimations of the European Commission, this would require redistribution, between Member States, of EUR 4.5 billion under the entire envelope of payments EUR 42.8 billion, which is "unacceptable in political terms". Considering

¹¹⁰ "Agra Europe", No. 2536, October 16, 2012.

countries, which receive below 90% of the EU average, requires to re-distribute only EUR 738 million of payments¹¹¹. Hence levelling payments across the entire EU should be treated solely as a bargaining counter in the negotiations, which can be exchanged e.g. for prolonging the application of SAPS.

Poland may have greater opportunities to negotiate the size and shape of the second than first CAP pillar. The second pillar is subject to co-financing from the national budget and, as such, it excites less interest among the Member States. Gaining resources for farmers is not as easy as for the direct payments, hence the envelope of the second pillar is not always used in 100%. Undoubtedly, controversies arise as to the efficiency of the instruments used under this pillar, which *de facto* support agriculture and not rural areas. For instance, the report of the Commission has showed that the rural development programmes in different Member States failed to support the creation of jobs in rural areas¹¹². Thus a dilemma, whether we should treat the second CAP pillar as an indirect source of support for farmers (e.g. LFA payments) and drive at introduction of simple instruments enabling to fully use the EU resources, or should we treat it as a tool actually supporting rural development.

Poland benefits considerably both from the CAP and the Cohesion Policy, and therefore there appears a problem – which of these policies should become our priority in the financial negotiations. It seems rather pointless to present the issue in terms of: either the payments or the cohesion funds. Further support of Poland for the Cohesion Policy will certainly depend on the shape of this policy after 2013. Poland belongs to the so-called “Friends of Cohesion Policy” group. On the other side, there is the “Friends of Better Spending” group. Therefore it is important, which of these two priorities will be chosen and implemented in the future Cohesion Policy.

7.3. The expected results in the light of the possibilities to achieve long-term objectives

Given the former CAP evolution and the ongoing financial negotiations one can consider the following question – to what extent the suggested changes in CAP respond to the current (crisis) needs of Member States and to what extent they provide a guarantee of the development of agriculture in the EU in the long run?

From the proposals of the European Commission it clearly follows that the direct payments will remain the key instrument of CAP after 2013. But for many years now they have failed at compensating the drop in market prices. Their continuation is explained with the need to support the agricultural incomes and the need to compensate farmers for providing public goods to the EU community.

¹¹¹ A. Matthews, *Post-2013 EU Common Agricultural Policy*, Trade and Development, Issue Paper 2011, No 39, ICTSD Programme on Agricultural Trade and Sustainable Development, October.

¹¹² “Agra Europe”, No. 2517, June 5, 2012.

Thus the new CAP reform fails to respond to the existing reservations put forward in relation to direct payments:

- how can they support the agricultural incomes if they are not distributed according to their level?
- how can they compensate for provision of public goods if they are only indirectly linked to the cross-compliance requirements and they are not dependent on the additional costs incurred on account of meeting these requirements?

Income issues

Ensuring profitability of agricultural holdings is the predominating objective of agricultural policies of many countries. It is interesting that in the entire CAP implementation period the terms “fair standard of living” and “agricultural communities” have not been clarified. The European Court of Auditors stated in its Special Report¹¹³ that in order to estimate the CAP efficiency it is necessary to precisely determine its income objective.

According to Czekaj and Gradziuk¹¹⁴, in 1990-2007 the agricultural incomes in the EU-15 countries were on average by 2-3 times lower than the household incomes, what is more, the household incomes increased in the entire period and were subject to smaller fluctuations than the agricultural incomes.

Nevertheless, it needs to be stressed that the agricultural incomes do not reflect the full income situation of agricultural households, since the income from agricultural activity constitutes only a part of the disposable incomes of agricultural households. In a household obtaining income from many sources – and agricultural holdings usually are such households, the drop in income from agricultural activity does not have to mean a drop in the disposable income of a household¹¹⁵. In the majority of Member States disposable incomes of agricultural households are equal or even higher than the disposable incomes of households not related to agriculture¹¹⁶. Non-agricultural sources of income in agricultural households show an increasing tendency among the smallest and largest agricultural holdings. This process is especially typical of densely populated areas where a well-developed transport network facilitates access to non-agricultural

¹¹³ European Court of Auditors, *Special Report No 14/2003 on the measurement of farm incomes by the Commission Article 33(1)(b) of the EC Treaty, together with the Commission's replies*, OJ C 45, 20.02.2004, pp. 1-26.

¹¹⁴ T. Czekaj, K. Gradziuk, *Analiza dochodowości gospodarstw rolnych na tle gospodarstw domowych w kontekście efektywności Wspólnej Polityki Rolnej UE*, ekspertyza wykonana na zlecenie UKIE, Warszawa 2009.

¹¹⁵ *Agricultural support, farm land values and sectoral adjustment; the implications for policy reform*, OECD, Paris 2007.

¹¹⁶ B.H. de Frahan et al., *Farm household incomes and reforming CAP*, Paper presented at the 109th Seminar of the EAAE in Viterbo, Italy, 20-21 November 2008.

jobs¹¹⁷. Thus it should be assumed that, currently, the greatest problem faced by agricultural holdings is not the level of obtained incomes, but lack of their stability.

According to the European Commission the incomes obtained by farmers are lower than the incomes in other sectors of the economy. The calculations take into account only the incomes from agricultural activity and not the general income of a household. Therefore the arguments presented by the Commission for the need to support agricultural incomes raises many questions. It is not the EU agricultural policy that can solve the problem of the existing disparity between incomes in agriculture and other sectors of the economy, but the properly run fiscal and monetary policies in individual Member States. Economic growth guarantees income growth. Therefore the issues of profitability of agriculture should be analysed in a definitely broader context than the sectoral one.

In order to increase the efficiency of CAP in a long-term perspective the direct payments should gradually lose its importance. They should be replaced by such forms of support for farmers that would be targeted at clearly defined beneficiaries using precisely determined programmes (targeting policy). This will ensure greater efficiency of the EU and national resources spending, and implementation of the expected objectives. Some steps made in this direction are visible in the Commission's proposal on the possibilities of allocating some part of the payments envelope by Member States to the support for young farmers, small agricultural holdings, etc. However, too little attention is paid to instruments stabilising the agricultural incomes and used for the purposes of risk management – both the risk related to price fluctuations on agricultural markets and climate risks. The package of instruments so far functioning under the first CAP pillar was moved to the second pillar, and thus it will require co-financing from the national budgets.

Provision of public goods

The issues of providing public goods by agriculture appeared in the CAP debate quite recently in the context of environmental public goods. The issue gradually entered the mainstream policy and was extended to other public goods. At present, this concept is used very broadly and refers to different types of public benefits following from agriculture, thereby justifying the public support provided to agriculture.

The new challenges related to food and energy security or adaptation to climate change can be included in the category of public goods of supra-generational character¹¹⁸. Therefore, supporting the pro-developmental role of CAP in the long-term

¹¹⁷ *The role of agriculture and farm household diversification in the rural economy: evidence and initial Policy implications*, OECD, Paris 2009.

¹¹⁸ Some of the indicated goods correspond rather to the definition of the common-pool resources. However, in both cases it is necessary to tackle the market failure, which requires adequate response from the Member States. Lack of State support for this type of goods leads

perspective requires a clear recognition for public goods in the structure of support for agriculture. Unfortunately, the actions and programmes available under the second CAP pillar, often identified with public goods, are mainly used for the purpose of supporting different groups of farmers constituting an additional – to payments under the first CAP pillar – source of income. Hence it is crucial to change the line of thinking about the areas that should be considered to increase the efficiency of public goods production in agriculture. The multi-functionality paradigm, although legitimate in the descriptive dimension, is focused on differentiated objectives and, as such, does not favour provision of the goods that could contribute to the long-term economic growth in the EU to the greatest extent. So far, the EU institutions and Member States have not attempted to establish a catalogue of public goods and criteria used for their valuation¹¹⁹.

The proposal of the European Commission to link the provision of public goods with direct payments by their greening under the first CAP pillar, constitutes a step going in the right direction. On the one hand, it departs from the payments determined on the basis of historic production, on the other, it legitimises the maintenance of payments at the times of strong pressures to reduce the agricultural budget. Greening of the first CAP pillar may testify to some determination of the Commission to prioritise the environmental issues in the EU, as it is entirely funded from the EU budget (first pillar), and not the national budgets (second pillar). Moreover, it is also to ensure uniform criteria and rules of its application across the entire EU, which is significant in the situation when GAEC (Good Agricultural and Environmental Conditions – one of the cross-compliance elements) have different scope of complication in different Member States.

It should also be noted to the advantage of the Commission's proposal that CAP greening complies with the general global trend aiming at promotion of "green growth". Hence for politicians and business this attractive concept can be a source of economic growth and new jobs. That is why many countries have considered "green growth" as their priority, at the same time, putting a strong emphasis on sustainable development and promotion of eco-innovations and low-carbon technologies. It is believed that agriculture has an important role to play in this field, especially in the context of depletion of natural resources and further destruction of the environment. Increase in the greenhouse gas emission, soil degradation, decline in biodiversity, reduced water resources are only some examples following, *inter alia*, from inappropriate agricultural policies ignoring these problems. International organisations¹²⁰ call for

to depletion of limited resources and consequently to a crisis. The State can support public goods under different policies, thereby spreading the costs of subsidies for various social groups.

¹¹⁹ R. Grochowska, K. Kosior, *Jak odbudować legitymizację Wspólnej Polityki Rolnej?*, „Studia Europejskie” 2010, No 1(53), Centrum Europejskie UW, Warszawa, pp. 67-90.

¹²⁰ *International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) Report*, 2010, [http://www.agassessment.org/reports/IAASTD/EN/Agriculture%20at%20a%20Crossroads_Global%20Report%20\(English\).pdf](http://www.agassessment.org/reports/IAASTD/EN/Agriculture%20at%20a%20Crossroads_Global%20Report%20(English).pdf); *The Green Economy*

significant changes in agricultural policies. The last proposals of the European Commission are thus compliant with the “green vision” of global development presented, for that matter, during the Rio+20¹²¹ conference and may be favourably treated on the international forum (e.g. World Trade Organisation)¹²².

But “greening” also has some drawbacks. The Commission’s proposal lacks any clear separation between the regular, compulsory agricultural practices, and practices going beyond the obligations, thereby implicating costs for the farmers and resulting in possible claims for payments from the EU budget for provision of public goods. Another paradox is the fact that agriculture to date is not subject to the “polluter pays” principle, which is binding in other sectors of the economy. Hence agriculture is not held responsible for the effects of environmental pollution or excessive use of its resources. Only recently solutions aimed in this direction are being introduced to the EU legislation. For instance, Water Framework Directive¹²³ clearly indicates that the costs of avoiding water pollution are attributable to the farmers.

The difficulties in top-down valuation of public goods at the EU level speak in favour of the solution to define these goods on the local level depending on the local conditions. Therefore, the payment of a similar rate per hectare to all farmers should be treated as another method of direct payments distribution between farmers. The policy of providing public goods should be differentiated depending on costs incurred on a given area and only then the resources would go where they are actually needed and help in the implementation of defined objectives. The best place for this type of instruments under the CAP is the second pillar. Despite many reservations to this pillar, it is its very nature that corresponds best to the targeted policy, which supports strictly defined areas of actions and groups of farmers.

The debate on the green payments focuses not only on the concept of public goods in the EU policy, but also the impact of this instrument on the development perspectives of the EU agriculture in the coming years. Analyses show¹²⁴ that greening can cause a drop in agricultural production in the EU, especially cereals production.

Report, UNEP, 2011, http://www.unep.org/greeneconomy/Portals/88/documents/ger/ger_final_dec_2011/Green%20EconomyReport_Final_Dec2011.pdf (accessed on 21.11.2012).

¹²¹ “Rio+20” is a an abbreviation from the United Nations Conference on Sustainable Development, which was held between 20 and 22 June 2012 in Rio de Janeiro – twenty years after the memorable Earth Summit of 1992.

¹²² A. Jambor, *What Rio+20 has for the CAP?*, June 18, 2012, <http://capreform.eu/what-rio20-has-for-the-cap/> (accessed on 18.11.2012).

¹²³ Water Framework Directive – Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.

¹²⁴ For example: European Commission, *Impact Assessment Report, Annex 2d*, 2011, http://ec.europa.eu/agriculture/analysis/perspec/cap-2020/impact-assessment/annex2d_en.pdf (accessed on 18.11.2012); H. Van Zeijts et al., *Greening the Common Agricultural Policy: impacts on farmland biodiversity on an EU scale*, “Policy Studies” 2011, PBL Netherlands Environmental Assessment Agency.

This follows from: the requirement to maintain the permanent grasslands at the current level, compulsory ecological set-aside of 7% of agricultural holdings, need for crop diversification and prohibition to use monoculture (three compulsory elements of greening). Additionally, redistribution of payments between agricultural holdings to level the payments in a given country (regional model) may reduce the level of support in more productive regions. This will benefit holdings in more disadvantaged farming conditions, i.e. of lower production potential. On the other hand, extending the coupled payments to all sectors may prompt farmers to return to the agricultural activities for which they receive payments, without considering the market needs. However, some positive aspects of the Commission's proposal in long-term perspective are visible in the requirements regarding the use of more sustainable agricultural practices. But now it is difficult to assess the significance of this impact.

The Commission's proposal seems to underestimate the repeatedly raised problem of the decrease in the competitiveness of the EU agriculture on the world market due to CAP changes after 2013. It should be concluded, that the EU has set its priority of actions rather on the climate and environmental issues, which is evidenced, for example, in the EU position on the reduction of greenhouse gas emission or the use of bio-fuels. It is widely believed, however, that the need to comply with constantly increasing environmental requirements causes an increase in the costs of agricultural production, which, in turn, undermines the position of the EU farmers as compared to those from non-EU countries. On the other hand, the EU actions may be treated as a deliberative vision of the EU agriculture in 20-30 years, which will compete in the world based on the quality of its food products and – what may be crucial at the times of depletion of natural resources – preserve the access to the non-degraded environment.

It should be, however, highlighted that a real key to increasing the competitiveness of the EU agriculture is to invest in innovations on the basis of research and development, education and training, efficient farm advisory system, service institutions efficiently acting for agriculture, continuation of structural changes and well-functioning land market with low land prices¹²⁵. Since only good public policy is able to ensure stable, even development of innovations in agriculture, as there are often risky undertakings, which the private business is afraid to take. Therefore, a cohesive development strategy for different socio-economic areas, which will reconcile these issues, is needed straightaway.

¹²⁵ S. Tangermann, *Direct payments in the CAP post 2013*, Note, European Parliament, Directorate General for Internal Policies, January 2011.

7.4. Potential sources of conflict between the mutually contradictory objectives and instruments of the future agricultural policy

Potential conflicts may be expected under the proposed CAP reforms after 2013, which will be triggered by adoption of contradictory objectives and thereby improperly selected instruments for their implementation.

Food security vs. competitiveness

One of the challenges that has gained significant recognition in the EU over the last few years is the need to maintain food security. The Commission arguments the need to support agriculture with the fact that reduction or elimination of resources will cause a drop in food production in the coming years, although the forecasts both of the European Commission and OECD or FAO point to a slight increase in food production in the European Union.

Yet another inconsistency in the proposal of CAP changes should be emphasised. The direct payments are to be awarded only to “active farmers” pursuing agricultural activity. Hence this form of support aims at boosting production. Whereas according to the World Trade Organisation the payments should be neutral to production having “no or at most minimal effects on production” (WTO, 1995, para 6 of Green Box). Similar contradiction is visible in case of greening. The requirement to maintain the permanent grasslands is related to keeping livestock on them, while crop diversification means the need to farm crops for the purpose of production. Therefore greening criteria encourage production and deny the meaning of decoupling, which is against the WTO rules.

One might ask: whether it is at all necessary to boost food production with the use of direct payments? The OECD and FAO forecasts¹²⁶ point to a constant increase in food prices in the next years, thereby the market itself will encourage farmers to increase production. Payments may only disturb these relations, since farmers will start to produce goods for which they will receive payments (return of coupled payments). Thus this is an artificial method of sustaining the competitiveness of the EU agriculture which make the farmers more dependent on public support.

On the other hand the myth that the food production increase in the EU will alleviate the hunger in the world, should only be treated as a manifestation of eurocentricity stemming from the old days. Europe is not able to provide food for the whole world, especially in competition with Asia and South America. It is also important to note that provision of food by large exporters ensures benefits to them alone, while it destroys the local production and opportunities of growth of agricultural income in the developing countries. It is not food production on a global scale that can solve the problem of world hunger, but the development of local agriculture in poorer regions.

¹²⁶ *Agricultural Outlook 2011-2020*, OECD Publishing and FAO, 2011.

Small/large agricultural holdings vs. competitiveness

Considering the issues of competitiveness of the EU agriculture, it should also be noted that the Commission has put forward a proposal aimed at supporting small agricultural holdings in the EU (the size of holdings has not been determined). This is argued by the need for keeping competitiveness and vitality of rural areas. However, it is difficult to expect small agricultural holdings, which most often are subsistence holdings, to suddenly change their economic status due to the support. One can rather expect the opposite, namely inhibition of structural changes on rural areas and drop in competitiveness of the agricultural sector as a whole, which is contrary to the long-term objectives of the European Commission.

The support scheme for small holdings may be to some extent justified with the possibility to reduce transaction costs of awarding direct payments per agricultural holding, especially for the administration. The situation could be also tackled by maximum simplification of procedures for the small holdings. However, the current proposals drive at removal of control in respect to cross-compliance and greening. This raises a question: whether this is not in conflict with the priorities set by the Commission in the field of environmental objectives and compensation for provision of public goods? The proposal is especially controversial if we consider the fact that in the EU it is the small agricultural holdings that are in the majority.

Doubts also arise in connection to the proposal concerning the establishment of the limit of direct payments per an agricultural holding. There is a risk that in order to obtain payments large, effective holdings will be divided into smaller ones. This may adversely affect the structural changes on rural areas, and especially the land market (increase in land purchase and rent amounts).

Environmental and climate challenges vs. competitiveness

Taking into account of a number of instruments under the CAP, which relate to the environmental protection, one can consider what new is brought in by greening that is not provided by the present set of instruments. Is it to be a super version of cross-compliance? But then, it would be enough to modify this one instrument so as not to create new ones. If the aim was to transfer the requirements connected to agri-environmental programmes from the second pillar to the first one, then it would be a doubtful solution as the second pillar would be subject to completely different rules (both in terms of the decision-making process and financing). It would result in additional difficulties for farmers and the administration. Under the first pillar there are no contracts and the payments are made on a yearly basis, whereas the agri-environmental programmes in the second pillar rely on multi-annual contracts.

The European Commission assumes that greening pertains to such challenges as fight against climate change, which is a global problem. Therefore uniform criteria under the first CAP pillar for the entire EU might be justified. It needs to be, however,

stressed that some farmers will be good at satisfying the requirements related to carbon dioxide sequestration, thereby contributing to the reduction of greenhouse gas emission, while others at preserving biodiversity. In such case, it seems clear that the requirements should not be uniform and applicable EU-wide, but they need to be differentiated depending on the regional specificity. Thus these instruments should be placed in the second CAP pillar, which is better targeted at defined programmes with locally defined needs. However, the Commission, in its proposal of CAP changes after 2013, departs from such a solution.

It is true that the existing second CAP pillar gives rise to many controversies. It is accused of too large a gap between the assumed objectives and achieved results. According to the European Court of Auditors, 58% out of 160 programmes checked in 2011 showed one or more irregularities, among which the most significant concerned support transfer to beneficiaries not entitled thereto. Similar reservations concerned agri-environmental programmes¹²⁷.

However, it is very likely that the reduction of resources for the environmental issues at the expense of the second CAP pillar will result in something contrary to what has been assumed, since farmers may tend to avoid the meeting of “greening” requirements under the first pillar. Much depends on the exactness of the control which will actually precondition the future of greening. So far, the Commission’s proposal has kept the balance between the first and the second CAP pillar by introducing similar instruments under both of them, which poses a risk of double financing.

Until 2003, the CAP evolution seemed cohesive and logical. Although direct payments gained the greatest significance, while in the beginning they were to be temporary and compensate for a drop in agricultural income following from a reduction in intervention prices on agricultural markets in the 1990’s, gradually greater importance was assigned to other instruments aimed at structural changes in the rural areas. In 2003 the EU expenditure for the second pillar amounted to 11% of all CAP expenditure, in 2006 – 19%, and at the end of 2013 their share should amount to 24%¹²⁸.

What is more, the last proposal of the European Commission changes the former – rather clear – two-pillar structure of CAP. This was first attempted in the decisions made under the so-called “Health Check” of the CAP reform in 2008, when the economic crisis began (e.g. amendment of Article 69 of the Council Regulation No 1782/2003 or the introduction of support for the dairy sector in the second pillar). Currently, this trend continues giving the impression that the CAP future is subordinated to the short-term interests of the Member States. Many instruments so far functioning under the second CAP pillar are moved to the first one (on the pretext of

¹²⁷ “Agra Europe”, No. 2540, November 13, 2012.

¹²⁸ S.H. Gay et al., *Recent evolution of the EU Common Agricultural Policy (CAP): state of play and environmental potential*, Paper prepared within the EU project SSPE-CT-2004-5036604, FAL & IEEP, March 2005, http://www.ieep.eu/assets/224/WP6D4B_CAP.pdf (accessed on 06.05.2012).

greening of payments). At the times of growing deficiencies in public finances such solutions are extremely favourable for many countries as they reduce the expenditure on agriculture from the national budgets.

In the current proposal of the European Commission the environmental public goods are placed under the second CAP pillar. Two out of the six mentioned priorities refer directly to environmental protection. Indeed a requirement has been introduced to allocate 25% of the second pillar expenditure to land management and actions aimed at tackling the climate change. At the same time, it has been made possible to move some part of resources from the second to the first pillar in order to increase the envelope of direct payments. This inconsistency in the Commission's proposal raises a question: what are the actual priorities – the fight against the climate change or budgets of the Member States?

8. Summary

The economic integration of post-war Europe gradually covered more sections of the economy, including agriculture. Member States giving up, for the Community, a part of their national sovereignty, have created conditions for the development of the CAP. Over the years economic situation of the Member States of the Community changed, as well as their socio-economic problems, and objectives and priorities of the agricultural policy evolved. The present shape of the rural and agricultural development policy is the result of nearly sixty years of changes in the CAP, which consisted in constant alignment between market policy and structural imbalances and the gradual development of regional policy with regard to rural areas. The ongoing discussion around the future shape of the EU agricultural policy is still open. Poland should take a position in it by exposing its national interest, which is not always concurrent with the development trends of the EU structural policy.

8.1. Transformations in Polish agriculture and in rural areas

After several years of membership and after the first experiences gathered therefrom, Poland can attempt to make a preliminary assessment of the effects of the CAP. However, the assessment of existing solutions is disrupted by the unexpected developments in the market situation and hindered due to a short period of functioning of these solutions. Undoubtedly, the EU membership has had a positive impact both in the macroeconomic dimension of agriculture, and on agriculture itself. However, the increase of income for consumers did not fully translate into increased demand for food, whose growth rate is still relatively low.

In the context of relatively stable domestic demand, foreign trade of agri-food products plays the role of a factor balancing the markets. After entering the huge EU market, exports of these products increased to a much greater extent than imports. As a result, Poland has become a net exporter of food. Much of the increase in the food industry production is intended for export, which has a beneficial influence on the economic climate in many agricultural markets, through effective management of surpluses.

Polish agriculture has a low share in GDP and value added. However, at the same time, its share in employment is disproportionately higher, which partially proves low labour productivity. Despite some improvements, after the entry to the EU, the situation in this regard has improved only slightly. This can be evidenced by official statistics on employment in agriculture, which is still the reservoir of hidden unemployment.

The pace of changes in the agrarian structure accelerated after 2004, but it is still slower than earlier expected. The Polish agriculture, after more than 20 years of transformation, including a few years in the EU, is characterised by a strong polarization of the agrarian structure. A group of market holdings emerged, which are

strong economically and able to compete within the EU. Market orientation of agricultural producers increased.

The progressive decapitalization of fixed assets of agricultural holdings is a major problem. The size of the investment, after the entry into the EU, has increased noticeably, but their value still does not exceed the value of depreciation of fixed assets. The investments were mainly in machinery and to a much lesser extent in buildings and structures. However, there is a group of agricultural holdings which radically differs from the average picture in this respect. About 150-250 thousand agricultural holdings are able to increase their fixed assets.

Accession to the EU had no significant impact on the general structure of agricultural production. There were no significant changes in proportions between animal and plant production. Greater shifts occurred within these categories. It is obvious that changes in agriculture do not only result from covering Poland by the CAP, but also largely from change in market conditions.

The impact of individual CAP instruments is different. It ranges from the greatest impact – that of direct payments – to the slight significance of programmes supporting semi-subsistence farms or structural pension having only a minimal coverage. The direct payments introduced in the 1990s are now the main instrument of support to the agricultural sector in the EU. Since 2003, they have been gradually separated from production. Since production decisions of farmers are not dependent on the received support, or its large part does not depend on the production decisions, we witness an improvement in market orientation of agriculture and its competitiveness. No doubts should be voiced with respect to the agricultural income support function, which secures (in the long-term) economic efficiency and structural changes in agriculture. In the 2007-2009 period, an average of ca. 30% of agricultural income came from direct payments.

Combination of direct payments and cross compliance requirements causes that this form of support plays the key role in providing basic public goods through sustainable agricultural land management (maintaining environmental quality of the landscape, biodiversity, access to water, climate stability and air quality) or public goods not related to the environment (activity in rural areas). Currently, the level of direct payments reflects not only the historical level of production of supported activities, but also, to some extent, the differences in the economic situation of individual Member States.

A serious question to reflect upon is the distribution of payments between large and small holdings. Now, we have to deal with a small group of large holdings, which receive very large support. In 2009, 0.5% of the beneficiaries received more than EUR 100,000, and payments for them represented 16% of all direct payments paid. At the same time, 80% of the beneficiaries received below EUR 5,000 (20% of all direct support).

Granted support increases farmers' income, and it is impossible to convince them to change their decisions taken in relation to their holdings. Level of support for

large holdings (despite the modulation mechanism) seems to be too high to be treated only as income support. This is even justified in the theory of economics. Namely, large producers benefit more from the economy of scale than small producers and, therefore, the level of support must be proportional to the size of a farm. Meanwhile, small producers who may have great influence on the activity of rural areas, especially in Poland with its fragmented agrarian structure, and on other public goods may need greater support. In addition, there appears to be a serious disparity between the large administrative burden of support availability in relation to money received.

The age structure of beneficiaries of direct payments, both in the EU and in Poland, is not favourable. The owners of holdings, below 40 years of age, represent only a small proportion of the agricultural population using the agricultural land entitled to payments. As yet, there is no effective approach to solve this problem. Another pending issue is the fact that many of the beneficiaries do not seem to carry out any agricultural activity or carry it out to a very limited extent. This, in turn, should not give them the right to the use the support as “active farmers”. Receiving coupled support in certain sectors or regions of the EU is rationally justified on economic, social or environmental grounds. For example, maintenance of this form of support in livestock production, which in some areas was at stake in the case of decoupled payments.

Foreign trade regulations and market regulations seek to increase the competitiveness of the EU agriculture. In the case of the Polish agricultural sector, the greatest impact on the sector was exercised by removal of administrative and customs barriers to trade after entry to the EU. The importance of export refunds in recent years is negligible, but before, for example in the sugar market, there was no doubt that it was the main tool activating exports to third countries.

Market regulations of the EU, despite the many beneficial changes, have been subjected to strict tests as progressive destabilization of world agricultural markets continued in recent years. In addition, with subsequent EU enlargements, the geography of the various agricultural markets changed. Most of these regulations were designed and implemented to protect the markets from the effects of surplus production and excessive falls in prices. In such conditions, they proved to be an effective solution. However, conversely, they do not work at all. What is more, some solutions, such as production quotas, additionally deteriorate the bad situation in the current climate.

8.2. Food industry

The period of Poland’s membership in the EU is related to recovery in production, investment and trade on the food market. Between 2003 and 2010 industrial food production developed at an average rate of 4.6% per year (6.3% until 2007); 5% annually (6.3% until 2007). In total, throughout the 2003-2011 period, it increased by about 56%. This growth rate is slightly higher than the GDP increase (growth by nearly 50%), and almost twice as fast as that of commodity production of

agriculture, 2.5 times greater than the increase in the consumption of food, beverages and tobacco products and 30% smaller than the growth rate for industrial production in Poland (up by nearly 82%). Faster development of other branches of the economy caused that the share of food sector in the industry and the overall economy slightly decreased. At the same time, the growth rate of the value of food industry sales in Poland was among the highest in the EU (0.7% per year in the EU-27 countries).

In 2003-2007, the systematic improvement of performance and financial standing was recorded for most enterprises in the food industry. Small and short-term deterioration was recorded in the first year of global economic crisis (in 2008). It was, however, short lived and temporary, because there was a marked improvement in the next year – 2009, up to a level not seen throughout the transition. General economic performance for several years has been good, and the financial standing has been secure and does not present risks for the continuation and development of economic activities in the production of food, beverages and tobacco products. Such risks are not created by little stability in profitability of certain industries either, because these were short-term and accidental phenomena, arising from external circumstances.

The processes of globalisation and integration have influenced the change of trends in the entity structure development of the food industry. Concentration of production processes returned to the sector, which replaced the tendency for fragmentation of processing occurring throughout the transition period. In 2010, almost 16 thousand companies were active, i.e. down by more than 18% than in 2003. Large companies, however, represent only 1.8% of all food companies, with little increase in their number in 2003-2010 (from 270 to 281). The number of medium-sized companies is 1,178 (about 77 entities less than in 2003), which represents almost 7.4% of all food companies. In the group of small companies, a decline was recorded between 2003 and 2009 in the number of entities by 13.7% (from 5353 to 4622), but in 2010, the number of these companies increased by more than 8% (to 5009); these companies represent more than 31% of the total number of enterprises. The number of micro companies shrinks fastest, because in 2003-2010 it decreased by as much as 1/4 (from 12.6 to 9.5 thousand), but they represent almost 60% of the total number of enterprises.

An important role in the transition process of the food industry has been played by support of investment with public funds from the EU budget and national resources. In the SAPARD programme, it was targeted at industries that should be adapted to the EU sanitary, veterinary, environmental protection standards and those pertaining to proper treatment of animals. Therefore, mainly sensitive sectors were supported, in which the following industries were included: meat, poultry, dairy, and fish by granting them transitional periods. In the next two programming periods (2004-2006 and 2007-2013), access to State aid was already very extensive. It was possible to apply for support for enterprises in industries processing products, contained in Annex 1 to the Treaty establishing the European Community (in 2007-2013, also wholesale). It therefore concerned most industries and entities assigned to the category of micro, small and

medium-sized enterprises, and medium-large companies, that is, with fewer than 750 employees or with annual turnover not higher than EUR 200 million.

Owing to the State aid, in a relatively short period (just a few years), in virtually all sectors of the food industry, we managed to record considerable progress, as the Polish enterprises are currently some of the most modern in the Community. The total investment in the sector, in 2000-2011, was equal to PLN 68.6 billion, with most investments made by the meat industry (15.3%) and the dairy industry including ice cream (12.9%).

Public funds undoubtedly stimulate investment by reducing the costs borne by the investor. Investment State aid was more often used by medium-sized and large companies (ca. 50% of enterprises). State aid was sought least often by micro-enterprises (2%), small (7.5%) and medium-sized companies (more than 30%). With an increase in the size of the enterprises (measured by the number of workers) the frequency of using the aid increased. Although the public resources are a change stimulator, in the whole food industry investments, they represent only an additional source of financing. Development of the most important agri-food industries, supported by external resources, was and is a necessary condition of sustainable development of food economy.

8.3. Land market

The land is an important production factor not only for agriculture, but also for non-agricultural sectors of the economy. The literature of the subject emphasises also the possibilities of generating higher profits from this factor in non-agricultural sectors of the economy. This causes an increase in demand and, consequently, higher land prices and greater scale of transfer to these sectors. On this account, legal restrictions are being introduced related to the possibility of converting arable land into non-agricultural lands. These restrictions are, on the one hand, favourable because they contribute to the conservation of the environmental values of the land, as well as maintenance of the resources of this production factor in agriculture, however, on the other hand, they can be a barrier to the development of non-agricultural activity. They also cause higher prices of this factor in non-agricultural sectors.

The efficiency of instruments supporting non-agricultural economic activity applied under the CAP will hence depend on the adjustment of other instruments, as e.g. the aforementioned spatial policy. The authorities competent for land economy should analyse at the planning stage the likely areas of public support for non-agricultural sectors of the economy and confront them with the local economy structure and changes occurring therein. Thus the public support will result in accelerating the development of specific activities on a local scale. Whereas from the studies it follows that individual activities are characterised by different demand for land. This, in turn, causes the need to adjust the spatial policy to the potential directions of the local economy development, as a result of applying the support instruments.

The need to make the spatial policy more flexible may relate to a greater extent to rural than urbanised areas. Hence in the last years the growth rate in the number of economic entities was higher there. Moreover, one of the main objectives of the CAP 2020 is diversification of economic activities in rural areas. The implementation of this objective may thus result in growth in the demand for agricultural land in the non-agricultural sectors. Nonetheless, this will largely depend on the value of amounts allocated to the support of entrepreneurship development on rural areas and the type of actions taken in this scope on the national level.

8.4. Future objectives of the CAP

The proposal of the European Commission concerning the shape of the CAP after 2013, above all, responds to the current problems of the Member States linked to the economic crisis. This is why it lacks significant changes and contains many contradictions and inconsistencies. Undoubtedly, the Commission properly identifies the challenges facing the EU agriculture in the coming years. The proposed instruments are not adjusted to meet these challenges, though. Instead of increasing the efficiency of the used instruments and spent the EU resources we see attempts at justifying the maintenance of direct payments at the current level.

Increase in the productivity and competitiveness of the agricultural sector, environmental protection and improvement of the efficiency and effectiveness of the instruments of the CAP are the objectives, which are compliant with the Polish agricultural policy objectives in the budget perspective until 2020. Such vaguely worded objectives pose no threat to the Polish interests and the *raison d'état* in the area of agriculture and rural development, in the medium and long-term.

These objectives are to be achieved, *inter alia*, by:

- development and dissemination of farm advisory system, that would be helpful in the creation and transfer of innovation in rural development projects,
- support for activities of farmers in improving the efficiency of the use of available resources, product development and marketing,
- launching instruments that reduce the risk of agricultural activities and preventing the emergence of such risks,
- increasing areas used for agriculture where manufacturing techniques are implemented fostering environmental protection,
- targeting direct payments at objectives which are more in support of pro-environment activities,
- reducing the disparities in the amounts of direct payments between Member States and farmers.

The manner of achieving these objectives is therefore also properly defined in terms of the Polish interests. One can, of course, wonder whether or not we should devote a bit more attention to objectives improving the “cohesion” of rural areas, but

in principle, it is rather a matter of instruments used (for achieving the aforementioned purposes). Certainly Member States should have the freedom to decide, which long-term objectives and measures are most important to achieve.

These objectives are to be achieved based on three scenarios:

- adjustment – giving more weight to those instruments of the CAP that are now well rated, while at the same time, redefining or improving the functioning of the others, without introducing essential changes to the existing policy,
- integration – redefining CAP support towards those activities which better integrate the various objectives of this policy with other policies, including those resulting from new challenges, while at the same time changing the structural policy itself,
- refocus – focussing CAP on instruments related to the challenges resulting from climate and environment change, without the application of instruments of a market nature, with parallel solving of problems of rural areas through other policies.

Referring to the scenarios and their impact on the attainment of global objectives, we should assume that:

- adjustment scenario will have: a positive, but not too significant impact on productivity growth and competitiveness of the agricultural sector; a low impact on improving environmental protection and little impact on improving the efficiency and effectiveness of the CAP instruments,
- integration scenario will have: small impact in the short-term and growing impact in the long run on productivity growth and competitiveness of the agricultural sector, positive impact on the improvement of environmental protection and a positive impact on improving the efficiency and effectiveness of the CAP instruments. Generally, this should lead to increasing in the importance of instruments of a structural nature and those related to rural development and reducing the importance of the instruments directly affecting revenue or supporting investments of a production nature (market factors will be decisive for this type of investment activities to a greater extent),
- refocus scenario will have: a large impact on the growth (and in any event on changes in terms of) productivity and competitiveness of the agricultural sector, a positive impact on the improvement of environmental protection, a positive impact on improving the efficiency and effectiveness of the CAP instruments. This model will generally result in market facilitation of agriculture and agricultural policy, a significant reduction in budget expenditure for the CAP, focus on activities of a pro-environment nature.

8.5. Question of future development of rural areas

Rural development policy should continue to take into account issues related to the development of basic services for the rural economy and population and the

creation of new jobs in non-agricultural sectors of the economy. In Poland, about 25% of rural gminas still have poorly developed technical infrastructure and a low level of development of non-agricultural economic activities. This, in turn, will create a barrier to absorption of labour released from agriculture as a result of measures to improve the competitiveness of agricultural holdings, which should lead to an increase in labour productivity. The lack of a well developed technical infrastructure can also contribute to the deterioration of environmental quality and can offset the positive effects in the form of its improvement, which will be achieved from the use of pro-environmental policy instruments for rural development. Consequently, the use of the environment's assets for the development of non-agricultural economic activities will also be limited – e.g. different forms of tourism.

For further development of infrastructure and the creation of new jobs in rural areas it would be beneficial to apply the integration scenario of rural development policy. Under this scenario, infrastructure investments and supporting entrepreneurship would happen on the basis of Poland's partnership contract prepared as part of the Common Strategic Reference Framework. In the case of infrastructure, this would enable the use of the so-called bottom-up approach. In other words, infrastructure investments of self-governments would result from the priorities contained in development strategies and investment plans, rather than from allocation of funds, specified under an axis of a programme. Combining resources from the various funds under the aforementioned contracts would also increase the scale of infrastructure investment and investment in those elements of technical infrastructure, which have not yet been supported under the RDP.

Integration scenario can also be beneficial for creating new jobs in rural areas. So far, support under the RDP was only targeted at micro-enterprises. However, achieving sustainable development of rural areas requires a harmonious development of all types of enterprises. In addition, job creation for the rural population does not have to be limited to the territory of a gmina meeting certain criteria. Jobs for rural population are very often offered by enterprises established in powiat or voivodeship towns/cities. It must therefore be possible to use resources intended for creating jobs for the rural population to support enterprises carrying out or taking up economic activity in major cities. The efficiency of the use of resources in this way may be much greater, especially if one takes into account the greater competitiveness of enterprises operating in urban centres, which stems from their location. However, this kind of approach to creating jobs for the rural population should be the result of local and regional development strategies. Integration scenario of rural development policy should, nonetheless, encourage the use of this kind of solutions.

Integration scenario should provide fairly large freedom in the allocation of funds for direct and indirect instruments to support entrepreneurship and within these groups. In practice, there is a fairly wide range of these instruments:

- Direct: grants or subsidies for current activities or investment, subsidised loans and credits, loan guarantees, guarantees for the providers of venture capital funds, public venture capital funds, advisory and training services,
- Indirect: administrative solutions – leading to a reduction in bureaucracy, social and health insurance scheme, unemployment benefits, social and technical infrastructure and spatial planning.

The use of different instruments may, however, bring different effects in terms of sustainability of economic processes in progress. Therefore, maintaining support, e.g. to infrastructure investments, gains in importance. Between the level of infrastructure, and the level of development of economic activities, there is statistically a significant positive correlation. This means that the better developed the infrastructure, the more companies working in the area. In addition, this pattern has persisted for many years. A different influence on the development of economic activities can, however, be exercised by the system of grants for enterprises. A greater number of jobs can be maintained, in this case, only during the period to which the entrepreneur was obliged under an agreement. It seems therefore much more reasonable to use the funds of the rural development policy for financing such instruments as, for example, subsidising loans and credits or creating guarantee funds. This will enable a significant increase in the number of potential beneficiaries. In some cases it is reasonable, however, to leave the systems of grants. These should include: support for innovative projects, support for the implementation of environment-friendly technologies, support for the activities undertaken by individuals exposed to exclusion: young people, the unemployed, women, people approaching retirement age.

In the case of this scenario, it would be important, however, to make a general division of resources between agriculture and other sectors of the economy. A radical reduction of transfers to agriculture – e.g. as a result of a significant reduction of direct payments – would negatively affect the other sectors of the local and even regional economy. This would reduce local demand, which, in turn, would reduce the opportunities to create additional jobs by companies that manufacture products and services for the local market.

Both the adjustment scenario and the refocus scenario for rural development policy will have a much weaker effect on the harmonious development of rural areas. In the first case, i.e. adjustment scenario, funding will continue to be made under a specified axis of a programme, which will definitely reduce the possibility of the policy impact on job creation. At the same time, local and regional development priorities will be taken into account to a much lesser extent. As for the refocus scenario, local demand may be reduced as a result of ending income support of farmers. This scenario may also lead to ceasing agricultural production on the poorest soils, which may lead to the deterioration of environmental quality and reducing the possibilities of the use of certain areas for the purposes of developing non-agricultural sectors of the economy, such as rural tourism. At the same time, this scenario may

result in increasing the outflow of rural population, which in demographic terms means a depopulation of rural areas, and in economic terms – reduced demand. In this case, development opportunities for the non-agricultural sectors of local economy will also be negligible.

8.6. Direct payments

The direct payments introduced in the 1990s are now the main instrument to support the agricultural sector in the EU. Since 2003, they have been gradually decoupled. Since production decisions made by farmers are not dependent on the received support (or its large part), market orientation of agriculture improves as well as its competitiveness, irrespective of production decisions. No doubts should be voiced with respect to the agricultural income support function, which secures, in the long-term, the economic efficiency and structural changes in agriculture. In the 2007-2009 period, about 30% of agricultural income came from direct payments (40% represented all support allocated to the sector).

Furthermore, the combination of direct payments and cross compliance requirements causes that this form of support plays the key role in providing basic public goods through sustainable agricultural land management (maintaining environmental quality of the landscape, biodiversity, access to water, climate stability and air quality) or public goods not related to the environment (activity in rural areas).

Currently, the level of direct payments reflects not only the historical level of production of supported activities, but also to some extent the differences in the economic situation of individual Member States.

A serious question to consider is the distribution of payments between large and small holdings. Now we have to deal with a small group of large holdings, which receive very large support. In 2010, 0.5% of the beneficiaries received more than EUR 100,000, and payments for them represented 16% of all direct payments paid. At the same time, 80% of the beneficiaries received below EUR 5,000 (20% of all direct support).

Level of support for large holdings (despite the modulation mechanism) seems to be too high to be treated only as income support. This is even justified in the theory of economics. Namely, large producers benefit more from the economies of scale than small producers and, therefore, the level of support must be proportional to the size of a holding. Whereas, small producers, who can have a large impact on the activity of rural areas and other public goods may need more support, and in addition there appears to be a large disparity between the large administrative burden of support availability in relation to money received. Also, the age structure of beneficiaries of direct payments in the EU is not favourable. The owners of holdings below 40 years of age represent only 14% of the agricultural population of the EU-27 and have at their disposal only 20% of agricultural land entitled to payments. As yet, there is no effective approach to solve this problem.

The next thing is the fact that many beneficiaries seem not to carry out or carry out very limited agricultural activity, which should not give them the right to receive support as “active farmers”. Receiving coupled support in certain sectors or regions of the EU is rationally justified on economic, social or environmental grounds. For example, maintenance of this form of support in livestock production, which in some areas was at stake in the case of decoupled payments. Currently, direct payments are concentrated in areas of high agricultural production, which is due to the historical criteria, and this does not fully (or does not at all) take into account the environmental and climate objectives besides those specified in cross compliance requirements.

The above comments represent a starting point for discussions about the shape of direct payments after future reforms. What is important, we should realize that we are dealing with two levels of criteria for the allocation of financial support under the CAP: community and national. The first of these, apart from being unambiguous, should be closely linked to the objectives of the CAP and be based on them. Along with the debate at the EU level, the EU Member States have their own considerations and promote them so that the proposed changes are beneficial from their point of view. The assumptions and criteria proposed by the Polish party should reflect the Polish agri-food sector development strategy, its strong and weak areas. Thus it seems of paramount importance to identify such opportunities for direct payments.

Polish environmental and socio-economic conditions of the agricultural sector are radically different from those in the EU-15 and also, though to a lesser degree, than those in most countries of the EU-12. Poland should, first of all, choose options that take into account these specificities. In the current shape, meeting only the requirements of cross compliance and modulation does not reflect the condition of our agriculture. Introducing solutions that take into account Polish natural assets and related opportunities to deliver public goods, while taking into account the agrarian structure of the Polish agriculture creates great potential for increasing the financial allocation for the long-term development of the sector. Small holdings in Poland represent a particularly large proportion in the agrarian structure. The vast majority of them uses traditional methods of production on the areas which are valuable from the perspective of the natural heritage. The potential of these manufacturers as “suppliers” of environmental public goods, or as factors of activation of rural areas is very large. However, they are weaker economically and therefore need more support to confirm this potential. However, such a unilateral approach, in the medium and long-term, will result in a reduction in the competitiveness of agriculture as a whole. Therefore, at the same time, support should be given to agricultural production.

In practice, the choice here is limited to a pragmatic approach (limited changes to the current system) and an objective approach (fixed rate modified by objective-based criteria: economic, environmental). The option of an equal rate for the whole EU cannot possibly be pushed through. The national envelopes of France or Germany, with this option, would decrease to about a dozen percent compared to the current situation.

It is fair, however, to say that many analyses show that maintaining the current status would have the most beneficial impact on average incomes in agriculture. However, in the long term, the role of small holdings would be sidelined, especially when it comes to the security of public goods and the environment.

Objective-based options involving mainly environmental objectives or their combination with the pragmatic approach, seem to be a better solution which would ensure a rise in the national envelope in 2020 in relation to the current system.

8.7. Final conclusions

European agricultural policy has supported and supports the market processes occurring in the food economy and in rural areas. Without it, structural transformations would be much slower. The objective of the policy, which was originally aimed at building an economically strong agricultural holdings, changed over time as a result of changing socio-economic conditions and was supplemented by other objectives, such as protection of the environment and the cultural heritage in villages, production of safe food, or multifunctional development of rural areas. Agricultural policy of the EU is flexible and adapted to the economic, social and cultural differences of its Member States. However, it does not lead to the unification of the agricultural holding model in Europe. European agriculture and villages remain colourful and varied, and, at the same time, competitive against each other, which proves that the market also has room for Polish agriculture. Conclusions for Poland, arising from the experience of the European structural policy, prove that financial resources from the EU funds, supplemented by own resources, will enable to establish a modern agricultural sector and improve living conditions in rural areas. Action in this regard was started successfully by SAPARD programme, and continued in the RDP 2004-2006 and SOP “Agriculture”, and currently in the RDP 2007-2013.

The best mechanism for increasing the effectiveness of management is the market mechanism. It is responsible for the pro-effective selection of economic entities by awarding strong producers who lower the costs and are flexible in adapting to new market conditions. In its essence, the market has, however, certain weaknesses. Governments try to apply an intervention policy that prevents the development of crises. However, such a policy is usually implemented with some delay in relation to the market effects that have already arisen, which sometimes augments unfavourable macroeconomic phenomena. It also disturbs the logic of market functioning, as it gives rise to inevitable contradictions in regulatory mechanisms, weakens the motivation of market actors to engage in effective action, most often only generating adaptability effects manifested in the pressure on further interventions, more and more favourable to those actors, or finally, generates high costs of intervention, borne by the consumer and the tax-payer. The global experiences prove that the market and the state have to co-exist and state intervention should be always limited to market support and should not replace the market. Intervention policy should also be of ex-ante type rather than

of ex-post type, because the state should anticipate and take pre-emptive action, rather than limit its role to that a “fireman extinguishing fire”.

In the future, the priority of State aid granted for the agricultural sector should still be investment and development activities. Reconstruction of agriculture should be supported, by maintaining its dual model based on holdings that produce goods, are competitive, provide a living for their owners and on smaller holdings with diversified sources of income. The overarching objective should be to improve the competitive position of the agri-food sector and rural development. The condition for more dynamic structural changes in rural areas is fast economic growth.

Further strengthening of the role of direct payments in the set of CAP instruments will not ensure the development of the EU agriculture in the long run. It only makes farmers dependent on State aid. Moreover, it makes CAP an increasingly expensive policy and less and less efficient in achieving long-term objectives. The growing economic and financial instability in the EU and other regions of the world will exercise a strong pressure on reducing the EU budget.

The recognition of public goods, especially the environmental ones, in the structure of support for agriculture seems to be a step in the right direction. However, it still needs to be elaborated. At the times of depletion of natural resources, it provides further possibilities of sustainable development of the EU agriculture and competition in the world in 20-30 years based on the quality of its food products. Moreover, it targets the support at programmes and beneficiaries depending on local needs, which will be more and more important under the conditions of constantly decreasing resources for agriculture at the EU and national level.

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