The Impact of SAPARD on the Behaviour of Farms and Food-Processing Enterprises in the Lodz Region

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ABSTRACT

The paper aims to improve our knowledge about the impact of a new instrument of the rural development policy on the behaviour of farms and food-processing enterprises in the Lodz region in Poland. It seeks to explore the characteristic features of the agricultural holdings and their owners as well as agricultural processing businesses applying for financial support in the framework of an EU pre-accession fund. The research concerns 42 SAPARD applications submitted by farmers and 34 SAPARD applications submitted by food-processing enterprises during the first year of the programme implementation.

Keywords: behaviour of farms, behaviour of food-processing enterprises, competitiveness, investments, market channel integration, Poland, SAPARD

1 INTRODUCTION

One of the most fundamental barriers to the modernisation of the Polish agri-food sector is the shortage of capital, which could serve to finance investments, although in certain branches of the food-processing industry Foreign Direct Investments have played a positive role in this regard (Senior Nello 2002: 12-13). Despite the progress already achieved, the food processing industry needs further improvements in its competitiveness, processing costs, product quality, hygienic and environmental standards in order to meet the requirements imposed by the EU membership. It is also important to overcome handicaps resulting from the awkward farm structure, including uneven farm raw material quality and delivery (Czyzewski et al. 2000: 162). The key to success lies in the adoption of a strategic approach, the condition sine qua non of which is the availability of capital to make the necessary investments. The SAPARD programme attempts to provide a solution. Indirectly, it encourages the beneficiaries to create marketing strategies (Day 1990), which are invaluable as far as raising their competitiveness (O'Donnell et al. 2002: 205-223) is concerned, especially taking into consideration the fact that mass production too often tends to prevail over targeting specific market segments (Viaene and Gellynck 1999: 126). The competitiveness should be understood as a sustainable ability to generate profits and to maintain one's position on the market (Martin et al. 1991: 1456-1464). The success of the SAPARD programme will depend to a large extent on the ability of all the interested parties to draw appropriate conclusions from their experiences by becoming 'learning organisations'. Everyone needs to learn quickly to adjust to the emerging circumstances. This is a sign of the entrepreneurship culture (Bygrave and Hofer 1991). It is also crucial that farmers understand the logic of the free market system and adopt a marketing approach to the management of their holdings. To put it crudely, they should become aware that one should sell to be able to produce, and not the other way round.

It ought to be emphasised that the policy of stimulating rural development should have a much broader scope than SAPARD measures which are being implemented in Poland. Many authors underline that the sectoral approach of supporting the agri-food system should be replaced by a horizontal, territorial-based policy of stimulating rural entrepreneurship (Bryden and Hart 2001, Leon 2000: 99-104). It is endorsed under SAPARD Measure 4
Diversification of economic activities in the rural areas), which started to be implemented with a 4-year delay despite the extremely high unemployment rate in Poland.

Close co-operation with the SAPARD Agency Regional Office has been established in order to collect and analyse invaluable original data, which include: 1) regarding farmers: the types and costs of investments submitted for co-financing, the beneficiaries' profile, based on their age, gender, level and type of education as well as the size of and employment in their agricultural holdings (Bryla 2004); 2) regarding food-processing businesses: their legal form, branch of activity, age of the firm or its owner, types and costs of investments submitted for co-financing, expected impact of SAPARD on the level of employment, production, productivity of labour, production capacity, suppliers, export behaviour, quality management systems, and contractual vertical market channel integration.

2 LOW PRODUCTIVITY OF POLISH AGRICULTURE AND FOOD PROCESSING INDUSTRY

It seems that greater importance should be attributed to the relative labour productivity in the agriculture of the Central and Eastern European Countries (CEECs) (measured as a ratio of the output value per person employed in agriculture to the value added per employee in other sectors of the economy) than to the absolute figures. It turns out that the competitiveness of Polish agriculture measured in this way is lower than in other EU new member states and worse by half than in the EU-15. It is the result of a huge covert unemployment in the primary sector of the Polish economy. According to Janusz Rowinski (1999), the results of the Polish agricultural census of 1996 indicate that a million farms have no or very few market connections. The low productivity of agricultural labour in Poland constitutes one of the major obstacles to its successful integration into the EU. One of the major problems of Polish agriculture is obsolete machinery and equipment. It is estimated that only every seventh Polish farm is equipped well enough, whereas in 1996 the average age of a tractor was 16 years.

Some experts see a chance in the development of the organic agriculture or the so-called ecological alternative, as it may be a way to ‘consume the rent of underdevelopment’ of the CEECs. Since the popularity of the organic food grows quickly in the European Union, which is accompanied by a fast expansion of areas granted a special certificate, the prospects for this kind of activity seem favourable. The increasing demand for organic products is stimulated by growing ecological consciousness of consumers and the rise in affluence of Western societies. Other reasons include higher quality and better taste of organic products and mere curiosity (Boltromiuk 1999: 40-51). We must not pretend, however, that organic farming will solve the problems of CEECs’ countryside in a miraculous way, because they stem to a large extent from the low productivity of production factors and from international circumstances. Although in the 1990s the number of organic farms in Poland increased six-fold, the scale of the phenomenon remains rather marginal because of insufficient profits. A significant barrier to their development is posed by weak distribution networks and processing industry for organic products.

To some extent, the low land productivity in the CEECs is a consequence of the production structure and the farm structure. Generally, the number of livestock per ha is lower than in the EU. Horticulture and viticulture are not so well developed. However, the yields per ha for the traditional crops are also significantly smaller than in the EU in most cases, which is due to many causes, including a lower use of external inputs like fertilisers and crop protection chemicals etc. The generally low productivity of factors in the agriculture of the CEECs is the result, inter alia, of their disadvantageous farm structures. During the period of the centrally planned economy, most of these countries had a low share of private holdings in their farm structures, ranging from zero in the Czech Republic to 13% in Bulgaria, with the
notable exceptions of Poland (77%) and Slovenia (92%) (European Commission 1998: 19). The common feature of the CEECs that used to have a collectivised agriculture is that the dualistic character of their farm structures, consisting, on the one hand, of huge co-operatives and state holdings, and, on the other hand, of very small private farms or plots, is becoming outdated. This favourable trend is likely to continue, thanks to which the efficiency of the primary sector in these countries will grow. The great farms will reach a size allowing for a more sound management, whereas the small ones will increase their area so that they can take advantage of the economies of scale. However, the latter will produce mainly for their own needs and the local markets, which will prevent them from reaping substantial benefits from the integration with the EU, given their reluctance to form producer groups and co-operatives based on new principles.

In Poland, where the processes of collectivisation have never been strong, private farms occupy 83.7% of the agricultural area. Their average size is 7 ha, which is 38% of the EU average (Ministry of Agriculture 2000: 12-15). It should be noted, however, that the regional differences in my country are considerable (from 3 ha in the South to 16 ha in the Northeast). During the 1990s, Poland has undergone a process of polarisation of its individual farm structure. If we take a longer time horizon, we will realise that much faster had structural changes been taking place in the EU-15 countries than in Poland. Since 1960, the average size of an agricultural holding in the EU-15 has increased by 4/5, whereas in Poland not even by 1/5 (Kolodziej 2000). Therefore, either the CAP contributed to structural adjustments or the Polish economic system prevented them or – which is most probable – both factors played a role, together with the crucial impact of the sustained and dynamic development of the service sector in Western Europe. A structural reform of the agricultural sector in Poland is necessary to raise its productivity, irrespective of the EU integration.

It should be emphasised that the economic success of a given farm is not unequivocally determined by its size. Some experts claim that it is the quality of labour that is decisive (Makarski 1999). Nevertheless, the production units should adapt their strategy to their area conditions. Smaller farms should adopt a strategy of differentiation, the example of which may be the production of local speciality articles, organic agriculture, agri-tourism. The main condition of success of such a strategy is the right recognition of market niches and placing there one’s product, for which a minimum of marketing knowledge and a well-developed system of agricultural counselling are indispensable (Zrobek 2000: 136-148). Bigger agricultural holdings may also use strategies aiming at reducing unit costs. It is estimated that in the Polish conditions it applies to about 15-20% of farms, which are capable of exploiting the economy of scale, whereas it concerns about a half of the EU-15 farms (Pulinski 2000: 130).

Moreover, it should be underlined that all CEECs’ farms that wish to preserve or acquire a market character must create sufficiently strong links with the processing industry. Thanks to it, the standardisation of agricultural products and their appropriate quality would be ensured on the one hand, and the certainty of the outlet on the other. Vertical integration in the agro-food sector would contribute to the reduction of transaction costs, and thus increase the efficiency of the entire system. Finally, to face foreign competition, which is bound to increase after the accession, a concentration of enterprises is needed in certain branches (e.g. milk co-operatives), which will enable, inter alia, a better conduct of advertising and promotion activities. It may already be observed that as far as East-West agricultural trade is concerned, non-price competitiveness like economies of scale, technology gaps and strategies of product differentiation are gaining importance (Berkum 1999: 267).

The situation of Polish food-processing enterprises had an important influence on the competitiveness of Polish farms, as it determined the ability to respond to the demand for high value-added products and the export opportunities. The low efficiency of the factories resulted from their outdated technology as well as generally poor management skills. The industry was
highly fragmented, which aggravated their chances to implement rapid modernisation strategies. At the end of 1990s, the average efficiency of Polish food industry was 2/3 below the EU average. This comparison was made on the basis of an index constructed with the use of three indicators: the efficiency of labour, the share of exports in total sales, and the quality of the production potential (Urban 1999: 16-17). In addition to the demand pressures, Polish food-processing industry, especially the dairy and meat sectors, was confronted with the necessity to adjust to the transformation of its legal environment due to the introduction of highly demanding EU quality standards in the sanitary, veterinary and ecological domains. There was a need to start the implementation of the HACCP quality management system. The adjustments to be made were often very expensive, which justified some form of state intervention to help the firms concerned. It was the role of SAPARD. The emergence of export opportunities both within the enlarged EU and beyond constituted another important factor in the decision-making process regarding technology investments in Polish food-processing enterprises.

3 SAPARD BENEFICIARIES PROFILE AND STRATEGIES

3.1 Farmers

Regarding the programme implementation process, it is worth noting that while the structure of applications submitted by the food-processing enterprises is roughly consistent with the expected allocation of the SAPARD funds, farmers have shown their vivid interest in the scheme of the diversification of agricultural production, which was assumed to take only up to 10% of the available funds. The research study shows that 70% of the SAPARD funds requested by farmers concern the agricultural diversification scheme. Furthermore, this scheme accounted for 85% of all SAPARD applications made by Polish farmers.

There exist strong correlations between the number of SAPARD applications by farmers across regions and the number of farmers assessing their holdings as having potential for further development, and the number of farms producing mainly for the market. It is significant that these correlations are much stronger than those between the number of SAPARD applications and the overall number of farms, if we ignore their development potential. Therefore, one may infer that SAPARD benefits mainly the best performing, optimistic and dynamic farmers.

It seems interesting to verify whether the profile of the actual beneficiaries of the programme resembles the characteristics of the average farmer. Therefore, some comparisons need to be made, especially regarding the holding size and such socio-demographic features, as age and the education level of the farmer.

According to the results of the research carried out by the Author, the average size of the agricultural holding of farmers applying for SAPARD in the Lodz region was 23 ha, and the median was 18 ha. ¾ of the applicants’ farms had more than 12 ha. The milk-producing holdings applying for SAPARD had as much as 39.1 ha on average, for pork and poultry producers it was 12.2, and for applicants aiming to diversify their production patterns, the average farm size reached 20.2 ha. This is significantly above the corresponding levels for all the farms located in this area. The agricultural census of 2002 showed that over 60% of agricultural holdings in the Lodz voivodship had less than 5 ha, and less than 6% had more than 15 ha (Main Statistical Office 2003).

The average age of the employed persons in the real beneficiaries’ holdings was 38, and the applicants themselves were 42 years old on average. The programme requirements set
the maximum age of applicants at 50, which was quite a serious restriction. Because of their age many Polish farmers may not pass their holding on to their inheritors (they are too young to be granted agricultural retirement pension in Poland), but their being over 50 eliminated them from participation in SAPARD. Some young farmers, in turn, were not able for the same reason to prove sufficiently long experience in managing a farm on their own (European Commission 2003: 50).

As far as the education level is concerned, out of the 42 applicants under study, 23 had secondary education, 8 graduated from a university or another higher-education institution, 7 had only vocational training, 3 completed their education at the primary level, and for 1 farmer no data was available. This structure of the educational background of SAPARD applicants was largely incompatible with the proportions observed in the entire farming population in the Lodz region or in Poland. The 2002 census painted not a very bright picture in this regard: 42% of Polish farmers had only primary education or even incomplete primary education, 36% ended their education with a vocational training immediately after the primary school, 19% had secondary education, and a mere 1.4% boosted a higher-education diploma. Therefore, the average SAPARD applicant is much better educated than the average Polish farmer.

Regarding the destination of the SAPARD-supported investments, it might be interesting to look at the following data. The structure of the value of investments for milk producers applying for SAPARD was the following: 22.4% for buying machines to produce and store fodder, 20.9% for animal waste management equipment, only 2.2% for machines to freeze milk, 21.7% for the extension of buildings, 9.7% for the modernisation of buildings, 12.5% for purchasing animals, and for 10.5% of the investment value the data were incomplete. If we take those SAPARD applicants who specialise in pork or poultry production, 62.8% of the total investment value is earmarked for new machines and equipment, 11.2% for waste management, and 26.0% for the modernisation of buildings. As far as the most popular SAPARD measure among farmers in the Lodz region is concerned, i.e. agricultural production diversification, it is worth noting that farmers plan to spend 91.3% of the funds on the development of horticulture, 6.8% on other kinds of plant production, only 0.2% on animal production, and 1.7% on the equipment used for the preparation of products for sale.

Only 23.43% of the total costs of investments in farms and 21.76% in food-processing enterprises were covered by bank loans. It is worth noting that over half of applicants in both categories did not use a bank loan at all. The proportion of the costs of the construction and modernisation of buildings in total investment value was extremely different for farmers than for food-processing enterprises in the Lodz region. Further research seems necessary to explain this curious discrepancy in the preferences of farmers and enterprises regarding their investment plans.

3.2 Food-processing enterprises

The SAPARD programme in the analysed food-processing firms will result in a growth of permanent employment (from 160.2 to 168.9 employees on average), value of production (from 41.4 to 49.7 million zlotys), and productivity of labour (from 411.7 to 439.5 thousand zlotys per capita). The median expected change of the quantity of raw materials used is 10.4%. The share of production sold on foreign EU markets will increase from 0.9% to 8.0% on average (graph 1). Therefore, the SAPARD programme contributes not only to product innovations, but also market innovations, whereas the expected impact of SAPARD on the level of polluting emissions is insignificant.
Through measure 1, which is addressed to the food-processing industry, the SAPARD programme contributes to the development of backward contractual market channel integration (graph 2). The establishment of a system of long-term contracts between the food-processing enterprises and farmers has clear advantages for both sides. It contributes to the stability of production on the part of farmers and to a consistent quality of the raw materials for the industry, which, unfortunately, is very often lacking any quality management system. For instance, only 4 enterprises under study had HACCP, whereas 22 declared that it was being implemented. The proliferation of long-term contracts will facilitate the introduction of a quality management system and increase the chances of both parties to survive on the highly competitive Single European Market. Besides, it is beneficial all over the world (Stewart 2001, Requier-Desjardins et al. 2003: 49-67). Nevertheless, one should not neglect potential threats posed by the contractual system, including overintensification of the agricultural production methods with an excessive use of chemicals and monoculture as well as possible abuse of the monopsonistic position by the food processor (Vanclay 2003: 86). According to Boehlje (1999), the agri-food sector in the midst of a profound structural change based on: a) the transition from economic stages co-ordinated primarily by markets to tightly aligned food supply or value chains co-ordinated by negotiated linkages and b) the implementation of biological manufacturing and process control technology throughout the entire chain, enabling it to increasingly function as an assembly line. Despite the tacit recognition of the importance of the downstream food sector for the reform process in agriculture, comparatively little analysis has been afforded to the linkages between the up- and downstream sectors of the agro-food chain in the transition economies (McCorriston and Sheldon 1999: 315).

4 CONCLUSION

The SAPARD programme facilitated the adoption of bold investment decisions to modernise Polish farms and food-processing enterprises, which are strongly affected by the changes stemming from the European integration. It helped to raise the efficiency of this sector by the introduction of modern technological solutions and the strategic orientation of managers. It played an important role in the process of adjusting the production units to the EU standards. SAPARD applicants in the Lodz region expect to increase their export capabilities and improve the quality of their raw materials thanks to the backward contractual market channel integration. However, it should be emphasised that the scope of the programme was rather limited and the beneficiaries profile showed that it was usually the best educated farmers having relatively big holdings who decided to apply for this kind of investment support.

It should be underlined that the SAPARD programme had a double objective. On the one hand, it aimed to improve the situation of the agri-food sector in Poland in the wake of the accession to the European Union. On the other hand, it served as a preparatory ground for the institutions which would be responsible for managing the EU structural funds inflow in future as well as for the potential beneficiaries of these programmes. The latter objective is often forgotten, although it seems much more important from the strategic point of view.

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Graph 1. The impact of SAPARD on the export behaviour of food-processing enterprises

Source: own research

Graph 2. The impact of SAPARD on the backward contractual market channel integration

Source: own research
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