

## **SUSTAINABLE RURAL DEVELOPMENT AND AGRICULTURAL RESTRUCTURING**

***Final Report***

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## 1. INTRODUCTION

This report presents the major findings of the project entitled ‘Sustainable Rural Development and Agricultural Restructuring in Poland’ (SURDAR) funded by the Department for International Development (Ref: 8097).<sup>1</sup> The research was motivated by the observation that systemic transition was evidently much deeper in the urban areas of the country than in the countryside. In particular, it appeared to be almost bypassing the enormous private, small scale farming sector that was one of the notable paradoxes of the country’s socialist experience. The situation appeared to be unsustainable, at least insofar as the sector represented a large drain on the national budget; it was socially inequitable and it also threatened to derail Poland’s ambitions to enter the EU. In the event, the accession referendum was to approve membership, although the eventual entry terms that the country’s negotiators secured were hardly consistent with accelerating a rural development and agricultural restructuring effort that was still insufficient or insufficiently effective. Unfortunately, the findings from the research undertaken under this project identified few reasons to suggest that this has changed or is about to change in the near future.

The next section considers the imprecision attached to the term rural and introduces the definition employed in Poland. It also provides an overview of the administrative delineation of the country’s space; notes the changes that were required in order for the country to comply with the *acquis communautaire* and presents some basic rural-urban development contrasts. This is followed in Section 3 by a review of the current agriculture sector within Poland and the challenges with which it is confronted. Section 4 then examines the evolution of agricultural and rural development policy,

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<sup>1</sup> All WP references in this document are to the SURDAR Working Papers that are appended to it.

both at a purely domestic level and as applied by the EU, and contemplates its potential to secure change in the years to come.

If sustainable development is to occur in agriculture and the rural areas of Poland, it is clear that it must operate through and have significant implications for the labour market. This issue and the work that was been undertaken on it are introduced in Section 5 of the report. This identifies not only the stagnant nature of the agricultural work force, but also the unemployment handicap confronting the country's rural areas. It also highlights the enormous gulf between the structure of Poland's labour market and those of the EU-15 Member States whose ranks the country has now joined and the length of time it would take, at current rates of progress, for it to approach the European average.

It was considered important that the project should consider not only the data maintained officially on agriculture and rural development, but should also undertake original survey work on these same topics. Section 6 presents a summary of the findings of the local development study that sought to elicit the views of gmina leaders on important topics in this area. The role of foreign direct investment (FDI) in growth and modernisation has occupied a prominent place in the literature on the transition economies and it is widely anticipated that the act of entering into the EU will serve to increase what has already been a considerable flow into the new Member States. In most cases, however, the external capital injections have been concentrated spatially and the rural areas of Poland have witnessed little benefit. A survey was therefore undertaken that sought to establish the perceptions of senior figures in past inward investor companies about five of the country's most rural and least developed

regions. An overview of the results of this exercise is presented in Section 7. A series of three case studies was employed to provide even further in-depth information about the issues addressed in the rest of the project and these are summarised in Section 8.

Section 9 of the report is devoted to a brief description of the overall typology of Polish development that follows from the findings of the research. This provides further confirmation of the ossified nature of development across Polish space, with rural areas and the eastern part of the country being evident laggards that await successful policy initiatives, if the disparities are to be overcome. A conclusion occupies Section 10. The report has four appendices covering, in turn: ongoing and further work associated with the project, the SURDAR Working Papers that have been produced as the work has proceeded, other publications emanating from it and, finally, presentations that have been made in its name. The Working Papers and other publications have been submitted along with this report.

## **2. RURALITY AND THE TERRITORIAL DELINEATION OF POLAND**

Ubiquitous as its usage may be in ordinary discourse, there is in fact no single, settled definition of the term rural, with those that have been adopted varying in terms of their coverage and attempted sophistication. Many are centred on some form of population threshold, whether in terms of the actual number of inhabitants within a particular area or in terms of the density of inhabitants per unit of area. In both cases, the ceilings are arbitrary, irrespective of how widely embraced any particular convention might be. An alternative approach is to define rural in terms of the activities pursued in particular areas, usually with an emphasis on agriculture. Once again, however, there is always a degree of arbitrariness regarding the margin

between where is rural and where is not. A third set of definitions place emphasis on accessibility and peripherality, but these again are relative concepts. The final practice highlighted here, which may or may not have roots in one of the preceding methods, relies on the use of administrative fiat. Conventions likewise differ as to whether what is not adjudged rural is classified as urban or whether there is some degree of gradation between the two.

The Polish definition of rural is administrative and, in common with most such classifications, rather circular. In particular, rural areas are actually defined as ‘territory situated outside town administrative boundaries’ (MARD, 2005:10). Under this convention, 38.2 per cent of the country’s population and 93.4 per cent of its land are classified as rural, with the unit of enumeration for such calculations being the *gmina*, the basic unit of local government in Poland and its NUTS 5 level spatial tier, as discussed more fully below. Their division is not, however, simply into urban and rural communities. Thus, while such are defined, there is an additional category of mixed urban and rural *gminas*. The practice in official Polish publications is to classify these sub-populations separately in computing urban and rural population totals. One possible objection to this procedure is that these mixed communities often have quite densely populated urban cores and their rural elements may therefore in reality be suburban in character. Such reasoning brings the focus back to the issue of whether peripherality should be a component element of definitions of rurality.

Of the major international definitions, the simplest is that adopted by the OECD, which defines NUTS 5 level communities as rural if they possess population densities of less than 150 people per square kilometre. At higher levels of spatial aggregation,

OECD defines predominantly rural regions as those with over half of their population living in rural communities, significantly rural regions as those with fifteen to fifty per cent of their population in rural communities and predominantly urban regions as those having less than fifteen per cent of their population residing in rural communities (OECD, 1994). Using the basic definition, 35 per cent of Poland's population and 91.7 per cent of its land would be classified as rural (MARD 2005; WP1). The similarity of these figures to those obtained under the Polish administrative definition might lead one to question whether the differences between classifications are important. One immediate objection is that the comparison is between national aggregates, which can be misleading when the focus is on local areas. It is, for example, easy to find urban gminas that have lower population densities than rural ones (GUS, 2002), which immediately identifies the problem that any policy targeted towards rural – or, by extension, urban – areas can be misdirected. Consideration of the impacts of alternative definitions of rural in the case of Poland is extended in WPs 1, 3, and 8.

Another important limitation attaching to the Polish definition of rural relates to the possibility of aggregating upwards from the level of the gmina to other spatial units. This calls for a brief review of the territorial delineation of the country. Post-war Polish space was divided originally into 17 regions (voivodships), 330 counties (powiats), 704 cities and 2993 communities (gminas). Various changes to the structure were made in the years from 1955 until, in 1972, 2365 gminas were established and, in 1975, 49 voivodships replaced the old regions and cities and the powiats were abolished. In practice of course these local government units were simply administrative organs of the central communist apparatus. The 1992

constitutional amendment declared local self-rule to be the basic organizational form of public life in the community and provided for directly elected gmina councils whose members in turn elected delegates to the self-governing regional council.

The 1992 reforms were merely interim measures, however, with the gaze of most of the country's leaders firmly fixed on the EU. Membership, however, would require a modern system of local and regional government, with sub-national administrations that had real inputs to policy formulation and financial resources to act accordingly. In fact, one requirement of the accession negotiations was for new members to be in a position to participate in the Structural Funds programmes and Cohesion Fund actions from the date of entry (Chapter 21 of the Europe Agreement: 'Regional Policy and co-ordination of structural instruments'). This mandatory requirement is obviously central for poorer applicant countries and its fulfilment dictates that a NUTS consistent classification of their territorial organization be established, which was not the case with the prevailing local government structure in Poland. In particular, the country did not possess either a NUTS 2 or NUTS 3 compliant division of its space, at which level EU funding programmes operate. This prompted the need for a thoroughgoing and domestically highly controversial local government reorganization.

The ultimate result was enshrined in the 1998 Local Government Reform Act (Dziennik Ustaw, 1998) that came into effect on 1 January 1999. This created sixteen NUTS 2 regions (new voivodships), reintroduced 373 powiats (NUTS 4 tier), of which there were 373, including 65 cities with powiat status, and retained 2489 NUTS 5 level gminas. Given that the powiats were too small to operate as NUTS 3 level

entities; this necessitated the creation of 45 podregions (sub-regions) for statistical purposes. While there have been subsequent fine-tunings in the number of powiats and gminas – which explains why the number of observations varies slightly year-on-year in the work undertaken during the course of the project – this remains the structure in place today. However, this raises an issue for research focusing on the impact of rurality on various phenomena, insofar as data is often disaggregated only as far as the level of powiat, while the Polish definition of rural is located at the level of the gmina, with no guidance on aggregation to larger spatial units. A variety of devices have been employed during the course of the current project to deal with this complication, as for example in WPs 1, 3 and 8.

Notwithstanding the difficulties, Table 1 highlights some major differences between the designated rural and urban areas of Poland. From there, it is clear that many important quality of life indicators are markedly inferior in the countryside relative to the towns: for example, sanitation and water treatment, along with the coverage of the telephone system. On the other hand, crime levels are much lower in rural areas, while housing space is greater. There are also significant differences in the structures of population and the labour market. Residents in rural areas are older, while those in employment are twice as likely as those in urban localities to be working part-time.



*Table 1          Urban-Rural Contrasts*

	<b>URBAN</b>	<b>RURAL</b>
Percentage of the population connected to waste water treatment plants	84.2	16.5
Number of crimes per 10,000 population	806.5	120.4
Percentage of the population who are post-working age	4.7	15.5
Useable floor space per dwelling (m <sup>2</sup> )	61.1	84.5
Percentage of dwellings fitted with a toilet	94.2	73.1
Main telephone lines per 1,000 population	398.8	199.4
Percentage of paid employees working part-time	8.3	15.3

*Note:* All data are from GUS (2005) apart from that for part-time working which comes from GUS (2005a).

### **3.          AGRICULTURE**

As noted above, the rural concept is, under certain definitions, captured by land use, in particular by the importance of agriculture and related activities within local areas, and it is evident that, in Poland, sustainable rural development will not be truly possible until agricultural restructuring has been completed. Unfortunately, sixteen years after the transition began and following accession to the EU, that process must still be regarded as in its infancy, a point that several of the project's outputs make clear in greater detail (Ingham and Ingham, 2005; Ingham and Ingham, 2004; WP2; WP5; WP6; WP10). What follows summarises relevant historical developments and outlines the current structure of the sector.

In 1946, two-thirds of the country's land was devoted to agriculture, 56.5 per cent of the working population found employment there and 47.1 per cent of the total population depended on farming for their main source of income (GUS, 1989). The first Six-Year Plan of 1950 called for the forced collectivization of agriculture, but this was met by resistance from the peasants that would be affected and in 1956 Gomulka reversed most of the collectivization that had been achieved. At the time, mid-sized farms between five and fifteen acres predominated in the private sector, but the ensuing years witnessed such holdings being split repeatedly until, in 1986, nearly sixty per cent of private farms were less than five hectares. What is more, the holdings of many individual farmers were often dispersed over large distances while, at the same time, government policy deprived large parts of the sector of the resources, such as tractors, that might have assisted with some degree of modernization. The peasant farm, producing largely for domestic purposes, therefore remained a paradoxical feature of the Polish socialist era. However, industrialization provided many private farmers – about one-fifth according to one estimate (Curtis, 1992) – with off-farm employment with which to supplement their agricultural incomes.

By the end of the communist era, Poland still had over two million farms, more than five million farmers – almost three-in-ten of the workforce – and a dual system of agricultural production. Sixty per cent of land was still devoted to agriculture and while 19 per cent of farmland was in the hands of large state enterprises, whose average size was 3,140 hectares, the rest was in private holdings. The latter had an average size of 6.6 hectares, although most, as noted above, were less than five hectares. Furthermore, eighty-five per cent of farmers were in the private sector

(Ingham and Ingham, 2004). If the structure of the sector was unusual for a CEE economy, the fact that it exhibited low productivity for both capital and labour was not. Poland therefore entered the transition era facing two very different challenges: to restructure its state industries, on the one hand, and to modernise its private agricultural sector, on the other.

One of the stylised facts of economic development is the inverse relationship that exists between the significance of agriculture and growth and it might therefore be expected that with real GDP growth to 2003 of over fifty per cent since 1990 (GUS, 2004, 2001), there would be some reduction in the size of the farming sector. In fact, as Table 2 highlights, there is no evidence that this has taken place, at least with regard to the private sector. Nevertheless, the state's involvement in farming has effectively ceased, with the remaining state agriculture confined to experimental undertakings. Furthermore, while there have emerged a relatively small number of large, intensive holdings in the north and west of the country, a more or less unchanged proportion are still less than five hectares (GUS, 2004). At the same time, the registered unemployment rate in 2003 stood at 19.2 per cent (GUS, 2005b), while the employment rate had fallen to just 51 per cent (Ingham et al., 2005), which was lower than any of the states in what was to become the EU-25 and woefully short of the seventy per cent target set in the European Employment Strategy (*ibid.*). This makes the country's growth performance look all the more remarkable, but also raises a number of further questions that were addressed during the course of the research.

Table 2      *Agricultural Employment 1988*

	<b>AGRICULTURAL EMPLOYMENT</b>		<b>% CHANGE</b>
	1988	2003	
Private sector	4213254	4194788	-0.4
Public sector	920456	14879	-98.4
Total	5133800	4209667	-18.0

*Sources:* GUS (2004; 1990)

In the first place, there are issues regarding the nature of the correlation between agricultural employment and the unemployment rate. These are best addressed with disaggregated data and are covered in the labour market section below. Second, to what extent are the net flows revealed in the national employment masking gross flows into and out of farming? Third, what has happened in the areas in which state farming was important? The latter two issues are also examined in the labour market section of this report. Finally, what has been the policy response to the stagnation in private agriculture? This forms the subject matter of the next section, along with the question of rural development policy in general, although certain other features of the prevailing agricultural situation are considered first.

While the share of agriculture in Poland's employment total represents one aspect of the restructuring problem confronting the country, its share in national output constitutes another. Thus, the sector contributed twelve per cent to GDP in 1989 (Ingham and Ingham, 2005), which fell to just 2.6 per cent in 2003 (GUS, 2004). This is one reflection of the finding that Poland achieves only 21 per cent of the EU average gross product (net of fodder costs) per hectare of utilised agricultural land for

crops and 38 per cent for livestock (Ingham and Ingham, 2004; Pouliquen, 2001).

Low productivity on the farms goes hand-in-hand with the low educational attainment of the agricultural workforce: a feature that attracted criticism from the European Commission in the run-up to accession (Ingham and Ingham, 2004; CEC, 2001). At the same time, the index of the relation between the price of output sold by the private farms to the cost of goods and services purchased by them based on 1990= 00 had fallen to 63.9 in 2003 (GUS, 2004) and the real value of investment outlays in agriculture based on the same year had dropped to just 32 (*ibid.*).

In view of observations such as these, which are developed in greater detail in Ingham and Ingham (2005; 2004), the observation of one respected analyst that “considering the many areas covered by economic and political transformation in Poland, the changes in agriculture have been the widest and essentially the deepest ..... we have said good-bye to the Polish peasant .... The social category of the peasantry, for whom farming was a way of life, is gone for good” (Hunek, 2000) is incredible. The failure to set in train a process of serious restructuring in the agricultural sector remains a blight on what many see as a remarkable transformation; perhaps the biggest challenge for what remains at best a piecemeal rural development effort and a threat to the social and economic cohesion combined with fiscal discipline demanded by EU membership.

#### **4. AGRICULTURAL AND RURAL DEVELOPMENT POLICY**

Notwithstanding the rather negative tone of many of the conclusions associated with the current project, it would be incorrect to infer from this that there has been no agricultural policy in the years from 1989. This section is therefore devoted to an outline of

the major initiatives that have been introduced in this area during the past fifteen years and are proposed or in place for the years to come. The first two sub-sections outline past policy developments, with an attempt made, albeit imperfect, to separate them into domestic programmes and those whose roots have lain outside Poland. The resulting division cannot be exact insofar as the country, in common with other transition states, has relied on external funding and support to execute policy in a large number of fields. This is followed by a discussion of the recent statistical manipulations undertaken by the Polish authorities, an examination of current and future policies and, finally, a brief overview of the potential of tourism to foster rural development and diversification.

#### *Developments in Domestic Policy*

As early as 1990, the Ministry of Agriculture published a 'Strategy for Rural Areas and Agriculture', which was drawn up by Polish and EU experts and supported by funding from the World Bank. This document identified the following objectives:

- The growth of employment and mobility in rural areas.
- Prompt privatization of state farms and the establishment of small production units.
- Enhanced initiatives and the generation of alternative jobs.
- The provision of a social safety net.

As stressed repeatedly throughout the work of the project, the second of these aims has largely been accomplished, as has the fourth, albeit imperfectly.

The main institutions charged with giving effect to the Strategy operated under the control of the Ministry of Agriculture, of which two merit particular mention. The

first was the Agricultural Property Agency of the State Treasury (APAST), which was established in 1992 and was responsible for the privatisation and re-parcelling of state farms. The intention was that this would be self-financing through the sale or lease of state land. Originally, it attempted to do this in large sized lots, although eventually lack of demand forced it to relax this policy. It was also the agency designated to run the EU funded Unemployed Animation Fund, about which more is said below.

The second was the Agency for Restructuring and Modernisation of Agriculture (ARMA), founded in 1994. Since its inception, this has been involved in the provision of interest subsidies, providing co-finance for rural infrastructure projects and funding training and education for adults and youths. It is now also a paying agency; that is, EU funds are channelled through it. Between 1995 and 2001 it distributed 209.94 million PLN from the central government Labour Fund to schemes aimed at helping the unemployed living in rural and urban/rural communities. MARD (2004) claimed that this initiative had created 19,710 jobs. In addition, the Agency advanced 443.74 million PLN of credit over the period 1996-2001, which had supposedly led to another 17,750 jobs (*ibid.*). However, there is no evidence that either of these job creation estimates had taken account of deadweight losses.

The Coherent Structural Policy for Rural Areas and Agriculture (MARD, 1999) recognised the limited success of previous interventions and stated that the following factors had hindered development in the rural areas: insufficient technical, social and cultural infrastructures; low skills and education levels; limited access to services and poor conditions for business; low levels of economic and social activity and hidden unemployment; low incomes, and weak institutions and organizations to support

development. In response to these shortcomings, MARD formulated three policy objectives:

- Shaping working and living conditions of the rural population in a way that corresponds to appropriate civilised standards and allows the residents to achieve their goals.
- The restructuring of the agricultural sector, enabling the adjustment of agriculture to the changing economic and social situation.
- Ensuring sustainable development conditions in rural areas, protection of the natural environment and of the rural cultural heritage.

The document also determined the utilisation of pre-accession funds under the SAPARD Programme and set the guidelines for the actions being prepared for implementation during the current programming period.

In order to kick-start its new rural development programme, Poland also attracted €118 million from the World Bank to co-finance projects totalling €300 million. The money was to be spent on:

- Granting micro-loans to create new jobs.
- Financing programmes for the reorientation/retraining of the workforce.
- Financing school education in rural areas.
- Co-financing the construction of rural infrastructure.
- Co-financing the creation of local and regional administrations.

No evaluation of the effectiveness of this intervention has been made publicly available. However, it might be noted that the European Commission (CEC, 2002) bemoaned the fact that the Polish government had reversed many of the features of a



1999 educational reform programme that would have operated to the benefit of rural youth.

In terms of support for agriculture funded from Poland's own central government budget, the farmers' pension and social assistance scheme (KRUS) has been the major drain as Table 3 illustrates. Thus, while agricultural support in 2003 accounted for 2.22 per cent of the national budget, this figure rose to 10.39 per cent once KRUS was included.

*Table 3 Polish Central Government Assistance to Agriculture (PLN Million)*

	<b>2001</b>	<b>2002</b>	<b>2003</b>
Agricultural support	4,005	3,886	4,321
KRUS	15,822	15,390	15,690

*Source:* MARD (2004) Agriculture and Food Economy in Poland

#### *Developments in EU Policy*

Between 1996 and 1999 the EU financed the so-called Unemployed Animation Fund, which was managed by APAST. Under this scheme, 3,600 jobs were created and 165 new businesses started at a cost of €3.8 million. A Supplementary Fund established in the wake of the main scheme generated a further 420 jobs at a cost of 1.6 million PLN. Any evaluation of such interventions must however be coloured by the fact that the numbers of placements that are claimed to have been made are minute in comparison to the size of the underlying problem.

The two most important EU financial instruments directed at agriculture and rural development were PHARE (Poland, Hungary Aid for Restructuring Economies) and SAPARD (Special Accession Programme for Agriculture and Rural Development). It should be noted, however, that in its later years PHARE was very much concerned with administrative capacity building. SAPARD was administered through ARMA and its sixteen regional offices and some 600 staff. The allocations received by Poland under these two pre-accession programmes are detailed in Table 4, from which it is clear that SAPARD was much the more significant.

*Table 4 PHARE and SAPARD Allocations: Poland*

YEAR	SAPARD	PHARE
	€ Million	
2000	171.57	38.81
2001	175.06	32.92
2002	179.87	34.73
2003	182.91	42.51
Total	708.16	148.97

*Source:* MARD (2005)

The effectiveness of the SAPARD programme was outlined in the mid-term evaluation submitted to the Commission (MARD, 2005a). The findings were as follows:

- Although it was not intentional, larger enterprises had benefited most.
- On average, agricultural incomes rose by 20%.

- No evidence could be found to suggest that there had been any reduction in unemployment.
- There had been improvements in food quality and greater compliance with EU standards.
- Animal welfare had not improved significantly.
- More effort was required in the environment arena.

The evaluation came to two major conclusions. First, planning problems were identified insofar as thirty months had elapsed between the approval of the SAPARD Programme and its actual start. Defining procedures, establishing the institutional architecture and building up the capacity of the SAPARD Agency had proved to be a much harder challenge than expected. As the evaluation noted, such problems were likely to be even more significant in putting into place the apparatus for dealing with the Structural Funds. Second, Poland's agricultural and food industry is dualistic.

There are farms and processing plants that are potentially very competitive and which tended to absorb most of the SAPARD Programme allocations, both because of their size and their ability to seek assistance. However, a large number of small enterprises also exist and these are mainly managed by older, traditional farmers. The challenge for any assistance programme is that of how to change this feature of rurality from a liability into an asset, which in effect was a reiteration of the problems identified by the 1990 Strategy.

Notwithstanding the evaluation, there are strong grounds for further criticism of the performance of SAPARD. First, the programme was biased towards agriculture to the detriment of general rural development. Second, in spite of the fact that only two per cent of students in higher education establishments come from the rural areas and that

58 per cent of farmers have neither secondary school education nor any formal agriculture training (Ingham and Ingham, 2004), less than five per cent of these funds were devoted to education programmes. This is despite the fact that the evidence suggests that both human and physical capital investments are necessary to promote economic growth (Kilkenny, 1998). Even Polish analysts were disappointed that the Commission declined to support programmes to educate rural youths under the initiative (FAPA/SAEPR, 2000). In addition, the eventual compromise reached over the level and distribution of post-accession agricultural subsidies further threatens to retard restructuring in the sector, with the adopted approach providing incentives for a greater number of people to stay in farming (Ingham and Ingham, *op. cit.*).

### *Statistical Sophistry*

It has long been recognised that many peasant farms in Poland produce primarily for domestic consumption, with the market being only a secondary concern. Indeed, this was to a large extent their only option under the constraints imposed by the erstwhile system. In certain circles, the individuals involved have become known as ‘hobby’ farmers (Hunek, 2000). It has been shown that those involved exist mainly through combining their farm activities not with off-farm second jobs, but by absorbing state transfers of one form or another, most notably through KRUS (Ingham and Ingham, 2005; 2004). This has both relatively lax qualification criteria and relatively generous benefits. The situation has led to multiple counts of the true agricultural employment total, although two have received the most attention, with Ingham and Ingham (2004) providing discussion of some of the others.

The first is the official estimate of agricultural employment, published annually by GUS, which is based on extrapolations from agricultural and population censuses. These have returned the more or less unchanging figure of over four million highlighted earlier that amounts to more than one-quarter of those in employment. The second is the count derived from the Labour Force Survey, which has typically been about 1.5 million lower, or around eighteen per cent of those in work. The major cause of the discrepancy lies in the fact that the LFS allocates workers to the labour market state from which they derive most of their income, thereby rendering many benefit-dependent farmers inactive, even if they devote many hours per week to their plots. However, from 2002 onwards, the authorities began producing two estimates of agricultural employment: variant A derived on the usual basis and still exceeding four million and variant B, which excludes those private farmers with holdings of less than one hectare producing “only or mainly for their own needs” (GUS, 2004), those with holdings of more than one hectare producing only for their own needs and unpaid family workers, which yields a figure of about 2.19 million. This amounts to about seventeen per cent of those in the suitably amended national employment total and serves to reduce the significance of farming even more than does application of the LFS conventions. The bases for the current estimates, whether variant A or B, are data drawn from the 2002 Housing and Population Census and the 2002 Agricultural Census, which were conducted simultaneously.

Discounting those who farm largely for their own needs, who may of course work many hours per week in so doing, the Censuses actually arrive at a figure of 3.39 million agricultural workers. From this figure, the authorities then subtract 1.19 million unpaid family workers, a figure that is about forty per cent higher than the

LFS estimates, to arrive at the variant B figure that they now prefer to highlight. All told, 8.4 million people were reported as living on Polish farms, their economic activity rate was 58.3 per cent, the employment rate was 49.8 per cent and, of the latter, 48.1 per cent were adjudged to be working exclusively or primarily on their own farms. Of the economically active, 14.1 per cent were classified as unemployed. As noted in Section 9 below, the assumptions underlying these aggregates are currently under review and the sensitivity of the resulting estimates to plausible amendments in them is being explored. Nevertheless, certain aspects of the results as officially reported do merit note.

The first is the large variation in all of the percentages across regions of the country. For example, the unemployment rate is much lower in Podlaskie than in Lubelskie, while the activity and employment rates are much higher and the percentage allocated to farming is also much greater. Furthermore, deflating annual work units (AWUs – effectively full-time equivalents) by reported employment totals again gives a much higher figure for Podlaskie than Lubelskie. All of these observations appear to be driven by farm size within different areas and strengthen the case for experimenting with the underlying assumptions. A similar story emerges in the case of the major income source of farm households, with an evident trade-off between those having agriculture as their primary means of support and those living mainly from benefits of one form or another. Finally, it might be noted that the Censuses report even lower educational attainment levels for farming households than other estimates would suggest. Although the data vary much less across voivodships than do the variables discussed above, it is notable that over half of those attached to farms in Podlaskie have no more than primary education. This once again highlights the very

disappointing progress to date in addressing the fundamentals of agricultural restructuring.

All of the attempts to reduce the statistical importance of agriculture in Poland, perhaps in an attempt to emphasise the modern face of the country, are problematic. In the first place, no effort is made to eliminate the hidden unemployed from other sectors of activity. Second, they effectively sanction the continuance of a sub-class of benefit dependants, which is hardly consistent with an active rural development policy. The corollary of this is that large numbers are to all intents and purposes excluded from the labour market at a time when a major thrust of EU policy is for inclusion and active policy endeavour (Ingham *et al.*, 2005; Ingham and Ingham, 2003). Third, it serves to reduce the employment rate to just fifty per cent using LFS figures (GUS, 2004a), while it appears to raise the unemployment rate under the conventions of the 2002 Censuses, both of which fly in the face of the precepts of the Lisbon and European Employment Strategies (Ingham *et al.*, *op cit.*). Capture in this particular trap is most definitely not a viable solution to Poland's agri-rural difficulties.

### *Current and future policy*

Polish agricultural and rural development policy currently covers:

1. Price support and market stabilisation.
2. Subsidies to agricultural production and intervention credits.
3. Structural policy for rural areas and agriculture.

The thinking within MARD is that 'rural development is closely related to the situation in agriculture' (MARD, 2005: 77), a truth reiterated in most of this project's

outputs. This is reflected in the clear bias in expenditure towards agriculture, although most of this is geared simply towards modifying rather than altering dramatically the prevailing *status quo*, which is actually what is required. However, current support amounts to an annual spend per farmer of €390 compared to an EU average of €6,500. Likewise, in 2003, the Producer Subsidy Equivalent (PSE), which is the percentage of produced value accounted for by subsidy, was only nine per cent in Poland, compared to 27 per cent in Hungary and the Czech Republic and 37 per cent in the EU. Much of the difference is of course accounted for by the sheer numbers over which any budget has to be spread.

Contemporary Polish policy is driven by the National Development Plan 2004-2006 (Dziennik Ustaw, 2004), which was drawn up specifically to determine Poland's strategy during the early years of accession. Under this Plan sit a number of sector operational programmes of which Restructuring and Modernisation of the Food Sector and Rural Development Programme 2004-2006 (MARD, 2004), along with its complement document (MARD, 2004a), is the one that is relevant for current purposes. In addition, the Ministry of Agriculture has also written an 'operational paper' or rural development plan (MARD, 2005). The broad aims prescribed in the Sectoral Plan are:

- Investment in agricultural holdings.
- Setting up young farmers.
- Vocational training.
- Support for agricultural advisory services.
- Water resources management.
- Land re-parcelling.



- Rural renewal and the preservation of heritage.
- Infrastructure related to agriculture.
- Diversification of agricultural activities and activities related to agriculture.
- Improving the processing and marketing of agricultural products.
- Restoring damage in forests.
- A pilot LEADER+ programme.
- Technical assistance.

In the light of the direction provided by the Sectoral Plan, the Rural Development Plan identified the following specific objectives:

- Early retirement.
- Support for agriculture holdings in less favoured areas.
- Support for agri-environmental schemes.
- Afforestation of agricultural land.
- Support for adjusting agricultural holdings to EU standards.
- Support for agricultural producers' groups.
- Complements to direct payments.

The EU is contributing 80 per cent of the total to be spent on these policies, with the monies coming from the European Agricultural Guidance and Guarantee Fund (EAGGF), which is one of the Structural Funds. The planned expenditures for the period 2004-2006 are provided in Table 5, along with MARD's estimates of their impacts in the years to 2008.

Table 5 *Rural Development Expenditures 2004-2006*

<b>MEASURE</b>	<b>€ MILLION</b>	<b>COVERAGE 2004-2008</b>
Early retirement	640.5	52,400 persons
Support for semi-subsistence farmers	376.3	126,000 s.s. farmers
Support to producer groups	25.4	172
Support for less favoured areas	976.8	9,386,427 hectares
Agri-environmental improvements & animal welfare	348.9	1,236,000 hectares
Afforestation	101.8	47,000 hectares
Meeting EU standards	243.4	66,500 beneficiaries
Technical assistance	34.0	n.a.
Complements to direct payments	705.3	n.a.
Other projects	140.0	n.a.

*Source:* MARD (2005)

It is at first sight striking that early retirement is afforded the third highest allocation under the budget. What is more, the provisions under the scheme are very generous: dependent upon circumstances (farmer or farmer plus farming spouse and the amount of land given up) the beneficiaries receive between 210% and 440% of the minimum national pension. Currently this equates to a monthly salary of between 1,181 PLN and 2,475 PLN. In fact, however, the scheme accounts for less than one-fifth of total expenditure, farmers do not have to relinquish all of their land and the number of intended beneficiaries only amounts to just over one per cent of the farming workforce when this is defined in its widest sense. Rapid restructuring is therefore once again forestalled.

At the same time, it is of some note that MARD (2005) explicitly recognises that modernising agriculture may mean that labour intensive farming is replaced by capital intensive methods and that, as a result, employment will decline. It is further aware that such a development would be detrimental to Poland's chances of achieving the targets set in European Employment Strategy as part of the wider Lisbon Agenda, although this hope is in any event forlorn (Ingham, Ingham, Bıçak and Altınay, 2005). More disingenuously, they believe that any displaced labour will be sufficiently low cost that there will be other employers prepared to hire any workers displaced by machines. This ignores the fact that it is unit labour cost rather than simply wages that matter (FDI, WP), that the educational levels of most farm workers are extremely low (WP2; WP5; WP8; Ingham and Ingham, 2005; Ingham and Ingham, 2004) and that precious little restructuring of Poland's rural labour markets has yet transpired (WP9).

### *Agri-tourism*

Tourism is often cited as a suitable vehicle for the diversification of farms, in particular, and rural areas, in general. MARD (2005) emits mixed signals about the sector in Poland's rural areas. On the one hand, it claims that there is probably a reasonable amount of accommodation available, with the problem being that it is unrecorded. On the other hand, it also states that less than one per cent of agricultural holdings have any involvement in tourism. In an attempt to gauge more about the industry's potential to drive development, an analysis of relevant data from the 2002 SADB was undertaken. Basic information on the number of beds and tourists, split according to type of gmina for the year 2002, is presented in Table 6. The averaged data for the three groups of communities shows clearly how the urban areas dominate

the trade. Furthermore, there is a distinct hierarchy running from rural areas through to purely urban centres in the proportion of tourists accounted for by foreign visitors.

*Table 6          Tourism Activity in Poland: 2002*

	<b>RURAL</b>	<b>MIXED</b>	<b>URBAN</b>
Number of beds	131	225	867
Number of tourists	1,612	4,351	29,861
Number of foreign tourists	119	599	8,521

*Source:* SADB 2002.

Of course, averages can conceal wide variations and an attempt was therefore made to identify any rural communities that were in fact successfully exploiting the potential that tourism can offer. This entailed the conduct of a cluster analysis encompassing four variables: the three identified in Table 6, plus a measure of clean air, a feature that is often cited as one of the advantages possessed by Poland's rural areas. This latter was proxied inversely by the volume of pollutant particulate emissions in the air. All variables were deflated by gmina area and standardised to lie in the [0,1] range.

The cluster analysis generated a five group solution and in Table 7, which summarises the findings, high values of beds, tourists and foreign tourists were taken as good indicators of tourism potential, whereas a high value for pollution was taken as a bad one. Each cluster is ranked on the included measures, with a rank of 1 being awarded to the best performing group through to one of 5 to the worst.

Table 7 *Tourism Potential: Summary of Cluster Analysis*

CLUSTER	BEDS	TOURISTS	FOREIGN TOURISTS	AIR EMISSIONS	TOTAL SCORE	RANK
1 N=45	3	3	2	3	11	3
2 N=2401	5	5	5	1	16	4
3 N=22	4	4	4	5	17	5
4 N=5	1	1	3	2	7	1
5 N=5	2	2	1	4	9	2

Overall, Cluster 4 emerges as the best performing and two of its five members are rural gminas. However, four of the five are Baltic beach resorts, while the fifth – Łębork – is listed as such by the Polish tourist authorities, even though it is not directly on the coast, and it is also a town of historic interest possessing a lake. The major failing of the group is to be found in its currently limited appeal to foreign visitors, which could be a marketing failure. The second best cluster, which scores relatively badly in terms of air quality, comprises the major cities of Warsaw, Kraków and Gdańsk, along with the Mazurian lake resort of Mrągowo, and Kołobrzeg, which is the largest Baltic holiday resort in the country. All of these gminas are urban. Gminas in the group ranked third – Cluster 1 – fare relatively well in terms of foreign tourists, but are placed only third best on all other indicators. Eleven of the 45 gminas in this cluster are in Dolnośląskie and, given that this voivodship shares a border with Germany, it might be surmised that this is the home country of most of the foreign visitors to the area. Two of the gminas in this cluster are rural, but these are both located in Zachodniopomorskie, another region that abuts Germany.

The group with the lowest overall ranking, Cluster 3, comprises those gminas that have few tourists, little accommodation and which also suffer the poorest air quality. Only one gmina in this group is rural; Kleszczów in Łódzkie. By far the largest grouping, with 2,401 members (96.9% of all gminas), is Cluster 2 and from the Table it is clear that the localities contained within it have the lowest provision of accommodation and the lowest number of tourists, both in general and from abroad. What they do have is the purest air but, at least until now, this does not appear to have been sufficient to generate a viable tourist industry.

The exercise suggests that tourism currently does not hold the key to the development of the majority of rural gminas. This, however, may well expose a strategic failing, insofar as the sector has received too little emphasis or funding in rural development policy. Nevertheless, it must be borne in mind that the majority of rural communities in the agricultural heartlands do not offer easy access to major conurbations, a constraint that experience in the Cohesion countries (Greece, Ireland, Portugal and Spain) suggests will take many years to overcome. Not unexpectedly, the relatively advantaged cities of Warsaw and Kraków emerged as major tourism hubs, as did large and small resorts on the Baltic coast and one gmina in the Mazurian Lake District.

## **5. THE LABOUR MARKET**

It is clear that any successful attempts to promote rural development and sustainable agricultural restructuring must in large part operate through and have significant implications for the labour market. This much is evident from the fact that, even under LFS principles, 42 per cent of all rural workers were still engaged in farming in 2004 (GUS, 2004a). Including those who draw at least some of their income from

agriculture increases this figure to almost two-thirds (Ingham and Ingham, 2004).

What is more, the poorest regions of the country are amongst the most rural, whether this is measured using Polish administrative definitions or simple population densities (WP3; WP7). However, one point needs to be stressed at the outset: while agriculture houses a significant proportion of the working population, it is not a significant employer of wage labour. Thus, according to the LFS for the second quarter of 2004, while private farming accounted for more than 2.3 million workers, only 139,000 of those were paid employees, with the rest being either self-employed or unpaid family workers.

### *Unemployment*

Poland has the highest unemployment rate, the second greatest proportion of long-term unemployment and the highest rate of youth unemployment in the EU-25 (Ingham, Ingham, Bıçak and Altınay, 2005). What is more, the difference between urban and rural unemployment rates as measured by the LFS has narrowed markedly, while the overdue restructuring of agriculture will inevitably increase further the overt labour market slack in rural areas. A number of the project papers therefore sought to analyse aspects of registered unemployment at the level of the powiat – the lowest level of spatial disaggregation for which data are made available – and to examine the impact of farming and various measures of rurality upon them.

WP3 reported the results of a multivariate cross-section analysis for June 2002 that examined the behaviour of the following four dimensions of unemployment:

- The unemployment rate.
- The proportion of females in unemployment stocks.

- The proportion of young people (< 25 years of age) in unemployment stocks.
- The proportion of long-term unemployed (> 12 months) in unemployment stocks.

Among the major findings of the work was that *ceteris paribus* the unemployment rate is lower, the more important is agriculture within an area. This was the anticipated and much remarked farming as a buffer-zone effect. However, having accounted for the size of the agricultural sector, rurality, as captured by a simple population density measure, served to increase the jobless rate. As expected, higher levels of per capita investment serve to reduce jobless rates, as do increases in business activity, measured through REGON (the government's business register) registrations. With the latter disaggregated by company type, there was also confirmation of the favourable impact of FDI on local labour markets, which was another vindication of the additional study of that phenomenon described below.

In the case of female unemployment, women weigh less heavily in the overall jobless pool the greater is the importance of agriculture and the more numerous are firms with foreign capital participation. The first of these findings is presumably a reflection of the family centred nature of much Polish farming and the fact that owners or dependents of those holding agricultural real estate in excess of two hectares are not eligible to register as unemployed (GUS, 2005b), while the second would be consistent with gender-blind hiring policies in foreign firms. There was an independent and detrimental impact of rurality on female unemployment. This was interpreted as being consistent with women having more restricted travel-to-work areas than men. When the model was re-estimated with the prevailing local level of



unemployment included as a regressor, it was found that the share of the burden borne by women declined as the jobless rate rose. One possible interpretation of this result is that females are harmed disproportionately in the initial phase of deteriorating labour market conditions, but that males become increasingly likely to be victims as the situation worsens.

Measured nationally, youth unemployment in Poland has reached near crisis levels, with four-in-ten young people in the labour market without work. At the local level, the position is worse in more agricultural areas, which was rather an unexpected finding. In particular, absorption onto the farm for those with agricultural backgrounds was anticipated as being likely to generate the opposite result, particularly given the prevalence of unpaid family working on Polish farms (Ingham and Ingham, 2004). To the extent that the outcome reflects a spurning of agriculture, it might be interpreted as a portent that reform of the sector might be achievable, although the likely long-term impacts on unemployed young people in a market with so few job opportunities is a serious concern. On the other hand, youths fare better in areas with greater concentrations of both purely domestic firms and of enterprises with foreign capital participation. The latter effect is also large. However, their unemployment is greater in areas where the potential labour supply, measured by the proportion of the population of working age is greater. Augmenting the regression with the powiat unemployment rate has a similar effect to its inclusion in the female unemployment model insofar as the variable is negative and significant.

More agricultural areas are also associated with more long-term unemployment; a reflection presumably of the dearth of employment opportunities for those without

farming connections. Nevertheless, once this has been accounted for, more densely populated powiats exhibit proportionately more workers without jobs for twelve months or longer, which was a rather surprising result. On the other hand, the greater the number of firms with foreign capital participation, the lower is long-term unemployment and the effect is once again large. Introducing the local unemployment rate into the model does not change the direction of these impacts, while the new variable is itself positive. In terms of a cross-section analysis, the simplest rationalisation of this finding, given that the instantaneous impact of an increase in unemployment would be to lower the proportion of those out of work for long periods, is that depressed areas in June 2000 had been so for elongated periods of time.

The foregoing exercise might be criticised on methodological grounds, insofar as it employed ordinary least squares as an estimating technique for the models analysed and observed only a single cross-section of data. As such, WP7 and Ingham, Ingham and Herbst (2005) developed the work by examining an eight-quarter unemployment rate panel of observations for the years 2000-2001 using a random effects estimation technique. The substantive findings above were largely unchanged by this refinement, a result that increases the degree of confidence in the veracity of the foregoing conclusions.

### *Labour Market Transitions*

It is clear that agricultural restructuring and rural development will require the reallocation of labour from farming to other activities, which the simple evidence suggests has not been occurring. However, this latter observation is made on the basis

of net data obtained from employment counts and may mask gross flows into and out of the sector. If such are taking place, ascertaining their nature might yield insights that could assist in the attempt to stimulate an orderly exit of labour and thereby lighten the fiscal load that the status quo imposes. With this in mind, two separate panels of micro-data from the LFS were analysed, as reported in WP4, WP8 and Ingham and Ingham (2005, 2004a).

In all cases, the objective was to explore individual transitions between a finite number of labour market states over a specified period of time. On the basis of data considerations, the number of states was restricted to four: employment in agriculture (EA), employment in another sector of the economy (E), unemployment (U) and inactivity (N). The exercises undertaken were then concerned with flows through the matrix provided as Table 8 between time periods  $t_0$  and  $t_1$ . Using the LFS, there is a basic choice between analysing observations that are one-quarter or one-year apart, with each having both advantages and disadvantages. In short, agricultural employment is known to fluctuate seasonally, which could distort the results from a quarterly panel, while annual panels are susceptible to ‘round-tripping’ between states. As Góra and Lehmann (1995) found, on the basis of early, constant sample LFS panels, that the latter problem was significant only for the unemployed, it was decided to analyse data that was twelve months apart.

Table 8      *Labour Market Transition Matrix*

$t_1 \setminus t_0$	EA	E	U	N
EA				
E				
U				
N				

The first panel exercise was conducted over the period running from February 1998 to February 1999, when labour market conditions were relatively favourable, with the unemployment rate reaching its lowest recorded figure (10.2%) in 1998 (GUS, 2004a). In an extension of earlier work undertaken in the region (Góra and Lehmann *op cit.*; Bellman *et al.*, 1995) the analysis covered both outflows and inflows to the four states, although the overwhelming conclusion was that of stagnation. Overall, 91.2 per cent of farmers did not change their status over the period. Both Góra and Lehman (1995), who carried out an earlier Polish study, and Bellman *et al.* (*op cit.*), who performed a similar exercise for East Germany, found higher levels of mobility, although the Polish figure was only 83 per cent for the first LFS panels. Doubtless this is because Poland had liquidated most of its state farms before the first LFS was conducted and movement out of the private sector has always been minimal.

Only 8.9 per cent of the farmers in the sample analysed for the current project moved. This was comprised of 2.5 per cent who left agriculture to get a job elsewhere, 5 per cent who withdrew from the labour market and 1.4 per cent who became unemployed. The unemployed were found to be the most mobile group, with more than half

changing status, 17 per cent to outside the labour market. In the case of those in farming at  $t_1$ , 3 per cent had entered/re-entered the labour force to go into an agricultural job, 2 per cent of were previously unemployed and 1.5 per cent had held a job in another sector.

The large number of observations in the panel – 2,698 for the outflows and 2,626 for the inflows - were subjected to multivariate, multinomial logistic regression analysis using a maximum likelihood procedure, with a number of personal and locational characteristics as regressors. Even with such a large number of observations, there are limits to the number of divisions into which categorical variables can be split in order for estimation to be possible. Of particular note in this regard was the fact that it was not possible to employ a full range of dummy variables for the 49 voivodships that existed at the start of the estimation period. Cluster analysis was therefore used to group the regions and this resulted in a plausible four tier division: Tier 1 comprised simply Warsaw; Tier 2 the major city areas of Gdańsk, Katowice, Kraków and Poznań; Tier 4 housed poor, agricultural localities, while Tier 3 accounted for the rest.

In terms of outflows from farming, the results showed that men were more likely to move to alternative employment than women, while age retarded the likelihood for both sexes, but particularly for females. All else equal, the odds of securing work in another sector were improved for those living in Tier 4 regions and as distance from a Tier 1 or Tier 2 area increased. However, these findings must be interpreted in the light of the result that rural workers were less likely to find work elsewhere. Likewise the chance of a successful exit decreased as the local unemployment rate increased. The self-employed and those still working in the state sector were unlikely to move to

from agriculture into other employment, while the possession of vocational education increased the chances. Nevertheless, simulations based on the results indicated that no characteristic vector was associated with the greater than fifty per probability of gaining alternative employment that Greene (2003: 684-685) regards as the minimum for a predicted transition. Flows of farm workers into unemployment were more likely for older women, those in paid private sector farming, those with vocational education, those in areas with higher jobless rates and those living in Tier 4 areas. Young women, those resident in rural areas, the self-employed and those working in the state sector were less likely to become unemployed. Age also reduced the odds of this move. Finally, the probability of farmers becoming inactive were greatest for older workers, but particularly women, private sector employees, Tier 4 residents and those living in peripheral localities. The self-employed, state employees, rural residents and those with vocational education were less likely to move out of the labour force. Nonetheless, even though all of these conclusions are based on results that were significant in a statistical sense, the low overall exits from farming must be borne in mind in making inferences from them.

The results obtained from estimating a model of inflows to agriculture were poorer than was the case for outflows, both in terms of overall explanatory power and parameter significance. Nevertheless, the following conclusions are justified.

Movements into farming from other jobs were more likely for those with vocational education, older workers and those who were married. On the other hand, incomers were less likely to be female, particularly young women, resident in a rural area or a Tier 3 region. Those moving into agriculture from unemployment were likely to have been young and resident in a Tier 3 region. Women, married people, those with

vocational education and those from rural areas were unlikely to make this particular transition. The movement from inactivity into farming was most likely for females and older workers. It was less likely for married individuals, rural or Tier 3 residents and those with vocational education.

On the basis of this analysis and other related work, the following overall conclusions were drawn. Between February 1998 and February 1999, there was a net reduction of employment in agriculture of just 2.5 per cent. If that rate of net exit continued into the future, it would take 25 years to halve the number working in the sector and forty years to reduce it by two-thirds. The latter situation would leave Poland with approximately six per cent of its workforce in agriculture according to LFS conventions, which would be more comparable to the position within the old EU-15. In comparison, Ireland and Spain both halved the percentage of their employees working in agriculture between 1988 and 2000, while Greece and Portugal achieved a ten-percentage point reduction (Eurostat, 2001, 1993). Exits from agriculture to other jobs are negatively related to age, at least for those over thirty. Unfortunately, nearly half of all Poland's farmers are still over the age of forty-five and more than two-thirds are over thirty-five (GUS, 2004a). Farmers without land fare relatively well on this score, but they represent a small proportion of the total agricultural workforce. The panel also revealed that inflows to agriculture still persist, particularly among women and those aged over forty from amongst the ranks of the previously inactive. However, there are at least compensating outflows by the same groups, although these again reflect exchanges between farming and non-participation, whereas genuine and sustainable rural development will involve both agricultural restructuring and a reduction in the dependency rate (Ingham and Ingham, 2003). Those with vocational

education have, in relative terms at least, a high exit rate from farming, both into other jobs and into unemployment. Unfortunately, only one-fifth of the country's farmers have this level of schooling or higher (GUS, *op. cit.*).

The second panel used matching observations from the second quarter LFSs for the years 2001 and 2002, a period when registered unemployment rates hovered around 20 per cent and the LFS rate for the first observation was 18.4 per cent. During this time, agricultural employment actually rose by 3.9 per cent, which reflects the buffer-zone role often attributed to the sector. However, in this instance, the detailed work considered only outflows. The summary statistics revealed that 94 per cent of those working in agriculture in 2001 were still there one year later, which was an increase over the earlier period analysed. Of the original sample, 1.6 per cent left farming to get a job elsewhere, 3.9 per cent withdrew from the labour market and less than one per cent became unemployed. Those originally jobless were again the most mobile group, with 31 per cent changing status, of which forty per cent left the labour market.

Multinomial regression was once again employed to analyse the transitions, although this time the model was estimated using a maximum entropy approach, which meant that it was not necessary to impose a precise statistical form on the transformation used. While the precise specification also differed slightly from that examined for the earlier panel, its essentials remained the same. However, note might be made of the fact that a clustering exercise on the sixteen new voivodships generated an optimal seven tier group of locational indicators for inclusion in the model. These were:

Tier 1: Mazowieckie.

Tier 2: Śląskie, Wielkopolskie.



Tier 3: Kujawsko-Pomorskie, Łódzkie.

Tier 4: Warmińsko-Mazurskie.

Tier 5: Lubelskie, Podkarpackie, Podlaskie, Świętokrzyskie.

Tier 6: Małopolskie, Opolskie.

Tier 7: Dolnośląskie, Lubuskie, Pomorskie, Zachodniopomorskie.

Subject to the overriding observation that mobility was extremely limited, estimation gave rise to the following findings. While young men had more chance of securing non-agricultural employment than young women, the positions were reversed once individuals reached the age of fifty. The odds of an individual making the transition were inversely related to the jobless rate in the voivodship in which they resided, while those living in the two most advanced tiers (Tier 1 and Tier 2) and those in the eastern regions in Tier 5, which house a large proportion of the country's family farms, were less successful than the base group. On the other hand, individuals resident in Warmińsko-Mazurskie (Tier 4), an ex-state farming area, were more likely to leave agriculture for a job elsewhere. The odds of moving from agriculture into unemployment declined in middle age and there was no statistically significant difference between the sexes. Likewise, the longer people had been working in farming, the less likely they were to move into the unemployment pool, as were those possessing vocational education.

Location played no part in determining outflows from agriculture into unemployment. Young and old males were the more likely to move out of the labour market, as were female farmers throughout their working lives. On the other hand, self-employed

farmers were much less prone to move into inactivity. The spatial indicators also had statistically insignificant impacts on flows into inactivity.

Simulations based on the findings showed that, with the exception of individuals with very special characteristics, the chances of making a purposeful exit from farming were very low and the overall conclusions from the earlier analysis were upheld.

## **5. LOCAL DEVELOPMENT: A GMINA SURVEY**

A number of exercises were conducted in the name of the project to complement the picture of local development available from official statistical sources. One of these was a questionnaire study directed at a stratified sample of 433 leading officials in gmina authorities (17.5% of the total) that sought to identify local area development needs and to ascertain what efforts were being undertaken by the authorities and other relevant social actors to improve localities and in what ways. The survey instrument was a largely structured questionnaire that was administered by telephone and stratification of the sample was according to the national distribution of rural, mixed and urban gminas.

The questionnaire covered the following issues:

1. Location and links with regional centres.
2. Economic and social situation.
3. Financial position and development activities.
4. Conditions for entrepreneurship.
5. Cooperation with public and social actors.
6. National and supranational restructuring aid.

The results provide additional insights regarding levels of local development and the processes underpinning them at the time of Poland's entry into the EU.

Not unexpectedly, many of those interviewed identified the related phenomena of unemployment and poverty as significant problems within their communities. In rural localities, alcoholism joined this list. In general, those interviewed were reasonably satisfied with the performance of their councillors and administrators, although those questioned from rural localities expressed some concern over the educational qualifications of the latter group. Finance, along with unemployment, was rated as one of the two most serious issues hampering progress. There was a clear divide between the rural and urban respondents regarding the advantages they felt that their communities possessed, with the former tending to identify the environment and the latter location.

The responses from the rural gminas relating to farming revealed a familiar, albeit slightly confused, picture. On the one hand, there was widespread optimism that at least some of their agricultural products were competitive within the Union and that output levels had been maintained following accession or, in some cases, even increased. On the other hand, there was general recognition of the need to diversify the employment base within agricultural communities. At the same time, those interviewed identified out-dated and fragmented farms, non-competitive farming practices, hidden unemployment and farmers' resistance to change as hindrances to restructuring. Little importance was attached to environmental concerns; a finding in direct conflict with the EU's drive for the responsible stewardship of land in rural areas. Furthermore, the interviews pointed to exceptionally high unemployment rates

among ex-state farm workers, particularly in the areas where the largest farms had been situated. This is extremely ominous, given the length of time that has elapsed since the state agricultural units were liquidated.

Although the survey did not reveal high levels of debt in the majority of gminas, most of the individuals questioned believed that attracting increased levels of external investment, domestic or foreign, would be the best way to improve the finances of their authority. In the attempt to achieve this, most localities were engaged in promotional campaigns, although these tended to avoid relatively high cost activities like media advertising and PR agencies. Instead, low cost actions such as the internet, leaflets and a presence at fairs were favoured. However, the survey revealed that only limited injections of foreign capital, whether in the form of wholly owned enterprises or joint ventures, had so far occurred in the majority of areas, which accords with other results from the project (WP6). Nevertheless, the majority of those interviewed were not only of the opinion that FDI flows into Poland will increase significantly now that the country has joined the Union, they also felt that their local area had something to offer such investors. In terms of other factors that it was felt might improve local level finances, respondents pointed mainly to actions that were outwith the control of their authority: increasing state subsidies, giving gminas greater shares of personal and company taxation and allocating to them an increased share of powiat revenue.

The survey provided a rather mixed picture regarding the existence of the sources of social capital that might potentially be tapped to bolster local development endeavours. Thus, while many local associations and organisations were to be found

in the rural gminas, only more or less essential institutions such as a school, bank and a social assistance office existed in the majority. Furthermore, it was these latter bodies that were felt to be the most important for local progress. Also, while the work found that many authorities had registered social associations, there was widespread scepticism about their value. Those interviewed placed far greater weight on physical capital, particularly infrastructure, than on social capital as a major driver of development. Although the survey uncovered some involvement in town-twinning and other trans-national projects, the majority of authorities had not participated in them. Likewise, although there is a reasonable degree of involvement with the NGO sector in rural gminas, the same was not true of the mixed and urban localities. Nevertheless the latter two groups of communities on average donated significantly more to NGOs than their rural counterparts.

Finally, the survey evidence suggested that the gminas are engaging with European programmes, with a majority having already made successful bids to pre-accession funds. Furthermore, a significant number of authorities had already applied to one or more of the mainstream EU programmes for which Poland is now eligible, with many amongst the remainder in the process of preparing submissions. The results did however indicate, albeit for a small number of authorities, that there was doubt over the likely success of these proposals, either because of the amount of competition that they would face at the pan-European level or because of their inability to provide the requisite matched funding. The premonition of this minority well may well turn out to be the more realistic. Nonetheless, the results indicated that the vast majority of the gminas felt that their community would benefit from EU membership, although the most sceptical were those from the rural areas.

## **6. FOREIGN DIRECT INVESTMENT**

Although there are well rehearsed counter-arguments, the bulk of the literature on the transition economies regards FDI as a beneficial force augmenting the potential for growth through capital injection, technology and management expertise transfer, and local spillovers. Indeed, Baldwin *et al.* (1997) went so far as to argue that increased FDI inflows would be one of the major gains from EU membership for the transition economies. Poland, in common with the other countries from CEE, has benefited from the large inflow of FDI into the region that has taken place over recent years, although its per capita injections are far less impressive than the raw figures would suggest. Moreover, the inflows have been concentrated spatially around major urban centres (WP6; Hamilton, 2000). Given that accelerated development in Poland has been largely a feature of its urban areas and that regional differentials within the country are large and persistent, a questionnaire study of inward investors was undertaken in order to attempt to learn more about the reasons underlying their general rejection of the country's rural areas as locations. The evident interest shown by gminas in such activity, as demonstrated in the returns for the questionnaire discussed above and in the case studies discussed below, further underpins the relevance of such exercises.

The approach adopted was to ask senior executives within companies that had already invested in Poland of their perceptions, relative to the rest of the country, of the locational attributes of five eastern voivodships that have received little FDI, are predominantly rural in one or more senses of the word and have low levels of development. This was found to be an important issue in the case of inward investors to Australia, with many holding incorrect opinions about the characteristics of the

country in relation to those of its rival locations (BIE, 1996). The rank scores of the five highlighted regions on some major indicators that underscore their retarded development are given in Table 9, with the ranks being awarded in increasing order from the highest figure downwards in each case. While the statistics largely speak for themselves, it will be noted that Warminsko-Mazurskie differs in a number of respects from the other voivodships included in the Table. Its inclusion in the group of five was determined by not only its poor general performance, but also because it was a major centre of state farming, the persistent legacy of which has been the highest rate of unemployment in Poland. Further details on the theory, international distribution and detailed discussion of the survey and its findings can be found in WP6. What follows summarises the results of the exercise under its major thematic headings.

#### *The Business Environment in East-5 Relative to the Rest of Poland*

The East-5 were regarded as inferior locations on all eight of the business environment indicators included in the questionnaire, with numerous evaluations that they are much worse than the rest of Poland being recorded. The assessments were most critical in terms of the supporting services available within them and their research and development facilities, followed closely by the paucity of networks of relevant businesses that they are able to offer. Insofar as the five regions house only eighteen per cent of the higher education institutions in Poland and have lower than average R & D expenditures, these assessments must be regarded as vindicated. Only in terms of the chance to open up a new market, which was viewed most favourably overall, did the East-5 receive any evaluations to suggest that they are much better than other areas of the country. However, as shown above, they are low income territories containing only one-fifth of Poland's population. On the other hand, they

Table 9      *Development Indicators for the East-5: 2002 Rank Scores*

	<b>GDP per Head</b>	<b>Ave Gross Monthly Wage</b>	<b>Unit Labour Cost</b>	<b>Employment in Private Sector %</b>	<b>Employment in Agriculture %</b>	<b>Unemployment Rate %</b>	<b>Companies with Foreign Participation Per Head</b>
Lubelskie	16	14	1	2	1	13	14
Podkarpackie	15	16	2	2	3	10	16
Podlaskie	13	12	4	4	4	14	15
Świętokrzyskie	12	9	3	1	2	8	13
Warminsko-Mazurskie	14	10	9	12	8	1	12



are close to emerging markets further east, such as Ukraine and Belarus, and this characteristic might ultimately be one of their strongest assets.

#### *Inducements and Finance in East-5 Relative to the Rest of Poland*

Inducements and finance lower the costs of one location over another and the East-5 attracted more support as investment sites in this regard than in the case of their business environment, with the findings indicating a rough equality with other regions of Poland. Indeed, their overall average was lower than it otherwise would have been principally because of relatively poor perceptions of the availability of capital. On the other hand, the eastern regions were actually seen as being slightly better than the rest of the country in terms of the non-financial support available from local sources and the subsidies/tax breaks on offer in the area. In all cases, however, the modal sentiment was that the East-5 cannot be differentiated from the rest of the country. Unfortunately, no contemporary evidence on the inter-regional distribution of the forms of support encompassed under the rubric of the question could be found with which to compare these assessments.

#### *Availability and Quality of Factor Inputs in East-5 Relative to Rest of Poland*

The highlighted regions attracted a wide range of evaluations on the six indicators included in the section of the questionnaire covering factor inputs. Land and unskilled labour were considered to be relatively abundant in the area. The former seems reasonable insofar as population densities in the five voivodships lie below the national average, although the amount of agricultural land that they contain that is designated for industrial use is strikingly low. The availability of managerial and skilled labour, on the other hand, was regarded as poor. This might be regarded as a

realistic impression, given the low average wages prevailing in the five and the concentration of low productivity agriculture within their borders.

#### *Input Costs and Turnover in East-5 Relative to the Rest of Poland*

The most favourable impressions of the East-5 as an investment location under any indicator group were recorded for input costs and turnover, with the voivodships being rated more positively than other areas of Poland on each of the five counts contained within the family. They fared best of all in the case of the cost of land, although this was closely followed by premises and wage costs. Views were somewhat less supportive in the cases of labour turnover and unrest. Hard data on inter-regional land and premise costs is not readily available, although less formal sources do point to lower prices in the east of Poland than in the rest of the country. As shown above, wages are certainly lower in the highlighted territories than elsewhere, although the strong caveat is that unit labour costs are in general much higher. It is hard to assess the true situation regarding levels of labour unrest inasmuch as there were only eleven strikes recorded officially for the whole of Poland in 2002. Nevertheless, just one of these took place in the East-5.

#### *Quality of Communications Networks in East-5 Relative to Rest of Poland*

The disadvantages confronting the under-developed eastern territories find expression in the views of respondents regarding the quality of their communications networks, although particularly so in the case of their transport linkages. This applies to their rail and road links and even more so to their air and sea access. Opinions were slightly more favourable in the case of telecommunication networks, although even these fail, on average, to achieve parity with the rest of the country. These findings are

reflected in the actual communications infrastructures contained within the East-5 and the rectification of this shortcoming remains one of the major challenges for policy in the years to come.

#### *Quality of Governance in East-5 Relative to the Rest of Poland*

The question of governance has attracted a good deal of interest in the literature on the transition economies, although the respondents to the survey saw little to differentiate the East-5 from other regions of Poland on the four attributes arranged under this particular head. Thus, while the overall quality and efficiency of local government services, the bureaucratic transparency and the prevalence of corruption were viewed as slightly below the prevailing norm, local governments were felt to be marginally more helpful in the east. Unfortunately, there is no known, contemporary data against which to assess the accuracy of these evaluations.

#### *Quality of Local Community Environment in East-5 Relative to the Rest of Poland*

The final section of the questionnaire enquired about perceptions regarding eight aspects of the local community environment. On only two counts – the absence of crime and the quality of policing – did the East-5 achieve parity with the rest of Poland. With the possible exception of the degree of civic mindedness, the east was perceived as inferior to the rest of the country on the other attributes listed, although this was particularly true in the case of the prevailing linguistic competencies and the attractiveness of the area to re-locating workers and their families. The survey responses regarding crime are certainly in accord with the known facts, at least inasmuch as Podkarpackie, Podlaskie and Świętokrzyskie have the lowest per capita crime rates in the country and all five voivodships have higher than average rates of

crime detection. On the other hand, the attractiveness of the region is clearly limited by the poor levels of higher educational provision, while two of the five have the lowest number of nursery school places in Poland. Some might counter these shortcomings by pointing to the fact that the area has very low levels of air pollution in comparison with the rest of the country, although this attribute has, to date, failed to attract foreign investors.

Overall, the results from the survey indicate that perceptions of the five most depressed eastern regions of Poland are not radically out of line with the salient facts. Unfortunately, therefore, this points to a situation that will not simply be overcome by better marketing and promotion and leads straight to the heart of the question about the direction of causality between levels of development and FDI. In reality, there is doubtless some degree of mutual causation at work, which points to the need for further attention to be paid to the development deficits that exist in the east of the country. These deficits are not small and they range from the concentration of economic activity in low value agriculture through to the prevailing inadequate level of infrastructure provision. Without a more effective policy response to these failings than has been observed in the past, the regions in question may be trapped in a low development, low FDI trap from which they have great difficulty escaping.

## **8. CASE STUDIES**

Current discussion of rural development within Poland is focused primarily on the consequences of EU enlargement and the reassessment of existing rural development policy. In addition, debate is centred on two issues; first, the experience of the implementation of the Rural Development Plan 2004-2006 and, second, the

assumptions for the National Development Plan 2007-2013. Projects arising from these plans are financed primarily by the EU, although the Polish government must provide co-financing equivalent to twenty per cent of the total cost. The absorptive capacity of Poland's rural gminas is of critical importance if they are to benefit from these monies. Thus, local officials, presumably working in league with residents, must be able to identify needs, draw up detailed plans and then lobby their voivodship authority to prioritize their schemes. In the light of this, three case studies were undertaken to investigate in detail the relationship between the level of development and the absorptive capacity of local communities.

The case studies were structured around the following key issues:

- Social capital, as reflected by the effectiveness of local leaders, the prevailing formal and informal institutional frameworks and the links between the relevant actors in the pursuit of development-oriented undertakings.
- The role played by local actors in proposing and implementing change, innovative solutions and capital projects.
- Local leaders' opinions concerning the proposed strategic rural development tools and solutions.
- Absorptive capacity and competencies in relation to accessing EU and other assistance funds.
- Local development tools and their effectiveness.

The gminas selected for the case studies were chosen on the basis of development levels and growth and on social capacity criteria. Underpinning this approach was the desire to include communities with disparate development paths which, in addition,

differed in their readiness or ability to take advantage of the opportunities afforded by EU accession. The aim was to identify communities which owe their success or failure predominantly to internal processes rather than exogenous factors.

Accordingly, gmina selection was based on the following criteria:

- Level of development.
- Development barriers.
- Economic growth.
- Social capital.
- Interesting examples of local initiatives and local authorities' efforts.
- Translatability of prospects – i.e. a minimum impact of non-replicable external factors.

For each of the aforementioned criteria, a number of indicators were devised to identify those communities that merited in-depth consideration and these are described in detail in WP10. Most of them were quantitative and derived from the typology developed in WP4, although the final selection was also based on the analysis of qualitative measures. In addition, while the majority were based on the existing situation in Polish gminas, the dynamics of development were an equally important consideration and, therefore, both level and derivative measures were employed in the selection process. This exercise resulted in the following four-way classification of localities:

1. Highly developed and fast growing.
2. Poorly developed and slow growing.
3. Poorly developed but fast growing.
4. Highly developed but slow growing.

Two cases were selected on these criteria; the first, Łukowa in the voivodship of Lubelskie, was chosen as an example of a highly developed and fast growing gmina, while the second, Wąpielsk in Kujawsko-Pomorskie, is a poorly developed and slow growing one.

The selection procedure described above was supplemented by the views of four external experts representing the Union of Rural Communes of the Republic of Poland, the Rural Development Forum and the Rural Development Foundation. All of these organizations specialize in the local development of Poland's rural areas. The individuals concerned were asked to identify the gmina that, in their opinion, represented the best example of good development practice and local initiative. The authority that gained the most support was Korycin, which is in the voivodship of Podlaskie, and this community was added to the list of case studies.

Each of the localities was visited by a team of experienced fieldworkers who interviewed key local actors such as the wójt (mayor), the headmaster, major employers, the leaders of NGOs and the priest, as well as representatives from organizations such as the volunteer fire brigade, farmers' associations and local residents. The teams used the semi-structured questions from the gmina questionnaire (WP9) as the basis for their interviews.

In certain respects the case study gminas are quite similar; all are predominately agricultural, all have poorly educated populations and none house any major tourist attractions. However, two – Łukowa and Korycin – are exhibiting signs of development, while no progress is evident in Wąpielsk. Table 10 presents the

summary findings. It is evident from the information presented there that the feeling of community and trust is much lower in Wąłpielsk than in the other two communities. Two arguments can be advanced to explain this. The first is the influence of the church, insofar as congregations in Wąłpielsk are fragmented, whereas the church is a key element in the social infrastructure of both Łukowa and Korycin.

The second is the role of the wójt in the community. From the interviews conducted, Łukowa appears to have a very popular mayor who is exceptionally pro-active in pursuing measures to improve the quality of life in the gmina, is actively engaged in lobbying for his community and has been successful in securing funds for this purpose. He is also supported by a competent administration. Although Korycin's wójt is respected by the majority of the gmina's residents and has also presided over successful community developments, certain misgivings concerning his management style were expressed. The residents still harbour resentment over his unilateral rationalisation of the area's primary school provision in the face of considerable local opposition, even though the majority are actually very pleased with the new facility. In addition, the fact that his administrators are afraid to put forward their own ideas for fear of losing their jobs implies that the wójt's regime is somewhat authoritarian. Likewise, misgivings were expressed about his treatment of the clerks who were in post at the time of his election and whom he subsequently dismissed. In contrast, the mayor in Wąłpielsk is less engaged in development activities and believes that there is little he can do to improve the situation in his gmina. Furthermore, the residents do not seem to disagree with this view: if they have any complaints, they do not blame



Table 10 *Gmina Social Capital*

Indicators of Social Capital	Łukowa	Wapielsk	Korycin
Education	<ul style="list-style-type: none"> <li>• 3% hold a degree.</li> <li>• 33% have secondary/post-secondary education.</li> <li>• 30% have only basic vocational education.</li> </ul>	<ul style="list-style-type: none"> <li>• There is no secondary school in this gmina.</li> <li>• Residents are poorly educated.</li> </ul>	<ul style="list-style-type: none"> <li>• 4% hold a degree.</li> <li>• 25% have a college education.</li> <li>• 50% have no more than primary education.</li> </ul>
Employment/Unemployment	<ul style="list-style-type: none"> <li>• 80% tobacco farmers.</li> <li>• One large manufacturer providing holidays but reducing wages.</li> <li>• Unemployment &lt; 3%.</li> </ul>	<ul style="list-style-type: none"> <li>• 66% in small scale agriculture.</li> <li>• No large employers.</li> <li>• Unemployment very high for the young and the poorly educated.</li> </ul>	<ul style="list-style-type: none"> <li>• 66% run farms which are larger than national average.</li> <li>• Seasonal work.</li> <li>• No large employers.</li> <li>• Low unemployment.</li> </ul>
Tolerance of diversity	<ul style="list-style-type: none"> <li>• Homogeneous population.</li> <li>• Little migration.</li> </ul>	<ul style="list-style-type: none"> <li>• Entrepreneurs regarded with suspicion.</li> </ul>	<ul style="list-style-type: none"> <li>• Illegal seasonal workers treated well.</li> </ul>
Socio-economic advantage	<ul style="list-style-type: none"> <li>• Prosperity due to Protestant work ethic caused by past annexation to Russia.</li> <li>• Over reliance on tobacco industry.</li> </ul>	<ul style="list-style-type: none"> <li>• 25% of residents receive social aid.</li> <li>• Many felt better off under communism.</li> </ul>	<ul style="list-style-type: none"> <li>• Relatively prosperous.</li> <li>• Ageing population.</li> </ul>
Trust	<ul style="list-style-type: none"> <li>• Long tradition of trust.</li> <li>• Recent inequalities eroding this.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited as the community is not well integrated.</li> <li>• Fear of crimes committed by young people.</li> </ul>	<ul style="list-style-type: none"> <li>• No fear of crime.</li> <li>• Strong, integrated community.</li> </ul>
Civic groups	<ul style="list-style-type: none"> <li>• Many active groups in existence.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited in part by the absence of a strong church.</li> <li>• No social committee or agricultural producers' groups.</li> </ul>	<ul style="list-style-type: none"> <li>• Many active groups in existence.</li> </ul>

Table 10 (continued) *Gmina social capital*

Indicators of Social Capital	Łukowa	Wapielsk	Korycin
Trust in institutions	<ul style="list-style-type: none"> <li>• Wójt highly respected.</li> <li>• Administrators viewed as efficient.</li> </ul>	<ul style="list-style-type: none"> <li>• Wójt not considered pro-active.</li> <li>• Residents have low expectations of administration.</li> <li>• School teachers very critical of administration.</li> </ul>	<ul style="list-style-type: none"> <li>• Wójt respected by majority.</li> <li>• Wójt criticised for consolidating schools.</li> <li>• Administrators afraid of making suggestion.</li> </ul>
Community co-operation	<ul style="list-style-type: none"> <li>• Administration holds public consultations.</li> <li>• Low level of interest in council meetings.</li> <li>• Individuals help each other.</li> </ul>	<ul style="list-style-type: none"> <li>• The school community, including parents, very active.</li> </ul>	<ul style="list-style-type: none"> <li>• The residents form a close knit community.</li> <li>• Wójt considers family and social ties to be sentimental.</li> <li>• Director of Culture and Sports Centre not respected. She describes residents as inactive and they boycott any event she organises.</li> </ul>
Church	<ul style="list-style-type: none"> <li>• Strong influence.</li> <li>• Very high level of church attendance.</li> </ul>	<ul style="list-style-type: none"> <li>• Fragmented congregation so church is not a unifying institution.</li> </ul>	<ul style="list-style-type: none"> <li>• 30% regularly attend.</li> <li>• The priest is respected, but not considered active due to his age.</li> <li>• The vicar is highly respected and active.</li> </ul>

the local authority, preferring instead to shift the onus onto generally unfavourable conditions over which he has no control.

Currently, the whole of Poland is categorized by the EU as an Objective 1 area and, as such, is eligible for the highest level of support from the Structural Funds.

Notwithstanding the Union's commitment to subsidiarity, programmes under these Funds operate at the NUTS 2 (voivodship) level. This means that if gminas are to secure any funding, their leaders must convince the regional authorities of the merit of their plans. This might be a difficult task in a situation in which there is an average of more than one hundred and fifty other gminas in the voivodship all attempting to do the same. This reinforces the conclusion that a pro-active wójt, assisted by competent officials, is a crucial requirement for development.

## **9. TOWARDS THE TYPOLOGY**

One of the major purposes of the project was to arrive at an overall typology of Polish local area development, particularly as this obtains in rural communities. The basis for this exercise was established in WP4, although the work reported there has been updated once to take account of later data and is under revision again to take account of the results from the 2002 Agricultural Census and the simultaneous, general Housing and Population Census, receipt of which were delayed, and other findings from the project. This will enable the exercise to be refined, particularly with respect to farming, and the revised typology will be used to inform the manual that is currently under construction for the local government fraternity. It must be noted, however, that all new information in the

Censuses is compiled on the basis of the restricted definition of agricultural employment that the authorities have now adopted and the results will need to be subjected to sensitivity analysis to ensure that misleading conclusions are not drawn from the work.

The information for the first revision of the typology was derived from the Small Area Database (SADB) for the year 2002, which is the most important source of local area statistics in Poland. The choice of indicators employed in the analysis was in part been dictated by availability – for example, GDP and labour market data are not available at the gmina level – but also by recognition of the fact that certain local area characteristics are both direct measures of development and determinants of its future likely trajectory. In particular, attention focused on housing, community infrastructure, business activity, local amenities, the structure of agriculture, and gmina finances. Where appropriate, the variables used were deflated by gmina area or population. Having examined the spatial distribution of each of these indicators in turn by means of a series of clustering exercises, an overall typology based upon their aggregation was compiled.

### *Housing*

The housing shortage continues to be an area of concern in Poland and one that constrains the mobility that might assist in alleviating the country's pressing unemployment problem. While other variables were examined initially, once collinearity problems had been eliminated from the data, the following four remained for inclusion in the final clustering:

- Total number of dwellings per capita.

- Dwellings completed per capita.
- Useable floor space (m<sup>2</sup>) per capita.
- Proportion of dwellings owned by the gmina.

The analysis produced a five cluster solution and it is noteworthy that no gminas from the eastern voivodships highlighted in the FDI survey (WP6) were to be found in the two best performing groupings, although half and one-third of their memberships were in fact rural. However, these clusters were very small and over forty per cent of the communities in them came from the capital region of Mazowieckie. If attention is restricted to the three groupings containing the vast majority of localities, an interesting bi-polar distribution emerged for rural gminas, in general, and those from the East-5, in particular. Thus, rural communities accounted for three-quarters of both the best and the worst performing clusters and whereas areas in Lubelskie, Podlaskie and Świętokrzyskie had quite reasonable scores, those in Podkarpackie and Warminsko-Mazurskie fared extremely badly. Differences in housing quality can therefore only be cited as a partial offset in town and country standard of living comparisons.

### *Community Infrastructure*

As noted throughout the research, infrastructure deficiencies represent a serious impediment to progress in many rural areas of Poland. One of the constituent cluster analyses therefore examined the comparative performance of gminas on the following group of indicators:

- Water line distribution network (km<sup>2</sup>) per unit area.

- Main telephone lines (including ISDN) per capita.
- Sewerage distribution network (km<sup>2</sup>) per unit area.
- Gmina hard surfaced roads per unit area.
- Repaired gmina roads per unit area.

A five cluster solution once again proved optimal, with by far the largest being the worst performing. Rural gminas were concentrated in the grouping of communities with the worst standards of provision and there were none at all in the cluster with the highest level of facilities. With the exception of Warminsko-Mazurskie, the eastern regions highlighted in the FDI study noted above were noticeably under-represented in both of the two clusters that were relatively well endowed. Pomorskie, containing the major seaports of Gdańsk, Gdynia and Sopot, and Śląskie, which houses Katowice, were the most favoured regions, at least insofar as they had the greatest proportions of localities in the best two clusters.

#### *Business activity*

The nature and structure of business is obviously of paramount significance in explaining prevailing rural disadvantage as well as being the factor that must change if this is to be alleviated in the future. In the final analysis, the following five variables were employed to categorize gminas in this regard:

- Total number of REGON (the Polish business register) entities per capita.
- Proportion of REGON entities in the public sector.
- Proportion of REGON entities in agriculture.

- Proportion of REGON entities with foreign capital participation.
- Proportion of REGON entities in financial intermediation.

One fact stood out from the preliminary screening of the data: thirty per cent of Polish communities had no enterprises with foreign capital participation and half of these were located in the East-5. Furthermore, ninety per cent of the areas with no foreign capital were rural gminas.

The analysis proper produced an optimal solution of only two groups, with one dominating the other on all counts. Even with account taken of all five variables, the East-5 performed worst of all insofar as ninety per cent of their communities were to be found in the disadvantaged cluster. Once again, a marked rural-urban divide resulted, with almost nine-in-ten of the former being in the least developed group and over eighty per cent of the latter being identified as more advanced. The eastern border region of Lubuskie had the highest proportion of gminas in the developed group from within the East-5 and this contained almost rural communities from that area to be found in the cluster.

### *Local Amenities*

Development is, of course, more than an economic concept and, although the quality of life is ultimately an intangible notion, some attempt to capture differentiation in the provision of amenities and services was warranted. Ultimately, the following eight variables, reflecting the discussion in MARD (2004b), were included in the amenities cluster:

- Museums per capita.
- Cinemas per capita.
- Hospital beds per capita.
- Libraries per capita
- Shops per capita.
- Pharmacies per capita.
- Nursery school places per capita.
- General secondary school places per capita.

The analysis once more pointed to the optimality of a two cluster solution, with approximately one-quarter of the gminas being members of the group with superior local facilities. Although Warminsko-Mazurskie performed well, Lubelskie, Podkarpackie and Podlaskie from the East-5 had exceedingly poor profiles. Rural communities accounted for only one-in-twelve of the localities that were well endowed with amenities, while only 2.2 per cent of the gminas with poor facilities were urban.

### *The Structure of Agriculture*

Restructuring of the agricultural sector is clearly the most critical issue confronting contemporary Poland. Prior to the release of detailed data from the 2002 Agricultural Census, however, the available information at the level of the gmina that post-dated the equivalent exercise undertaken in 1996 was limited, particularly in relation to labour input. In the event, the clustering exercise was undertaken on the following four land use variables:



- Private agricultural land per unit area.
- Total orchards per unit area.
- Total meadows per unit area.
- Total pastures per unit area.

The results obtained indicated the optimality of a four cluster solution, with one of those emerging clearly as the most highly developed. Lubelskie, one of the East-5, was the region with the lowest proportion (10%) of its communities in this cluster, while Podkarpackie, Podlaskie and Świętokrzyskie all had less than twenty-five per cent. For comparative purposes, Lubuskie had nine out of ten of its localities in this group, while Zachodniopomorskie had eighty per cent. Both of these voivodships lie on the western border of the country. As would be expected, urban gminas were heavily over-represented in the developed cluster. Repeating the exercise incorporating information from the 2002 Census will undoubtedly alter these specific findings although, given the aggregation procedure employed, it is unlikely that this will have an undue influence on the overall typology.

### *Gmina Finance*

The following variables were originally selected in order to examine the health of gmina finances:

- Revenue of gmina budget per capita.
- Personal income tax revenue per capita.

Unfortunately, the correlation coefficient between these two variables was exceptionally high (0.95) and therefore only the first of them was retained for analysis. With only one variable available it is not possible to conduct a meaningful cluster analysis so the gminas were grouped according to income groups, ranked in ascending order, for the purpose of mapping the distribution and to provide a financial input to the aggregate typology. The classification highlighted small agglomerations of rich gminas in the south and west of the country, around Warsaw and in the south-east. It further indicated that poorer gminas are concentrated in the east of the country. Over two-thirds of the communities in the two least well resourced groups were rural.

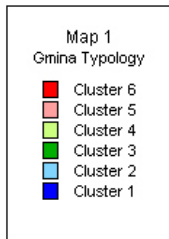
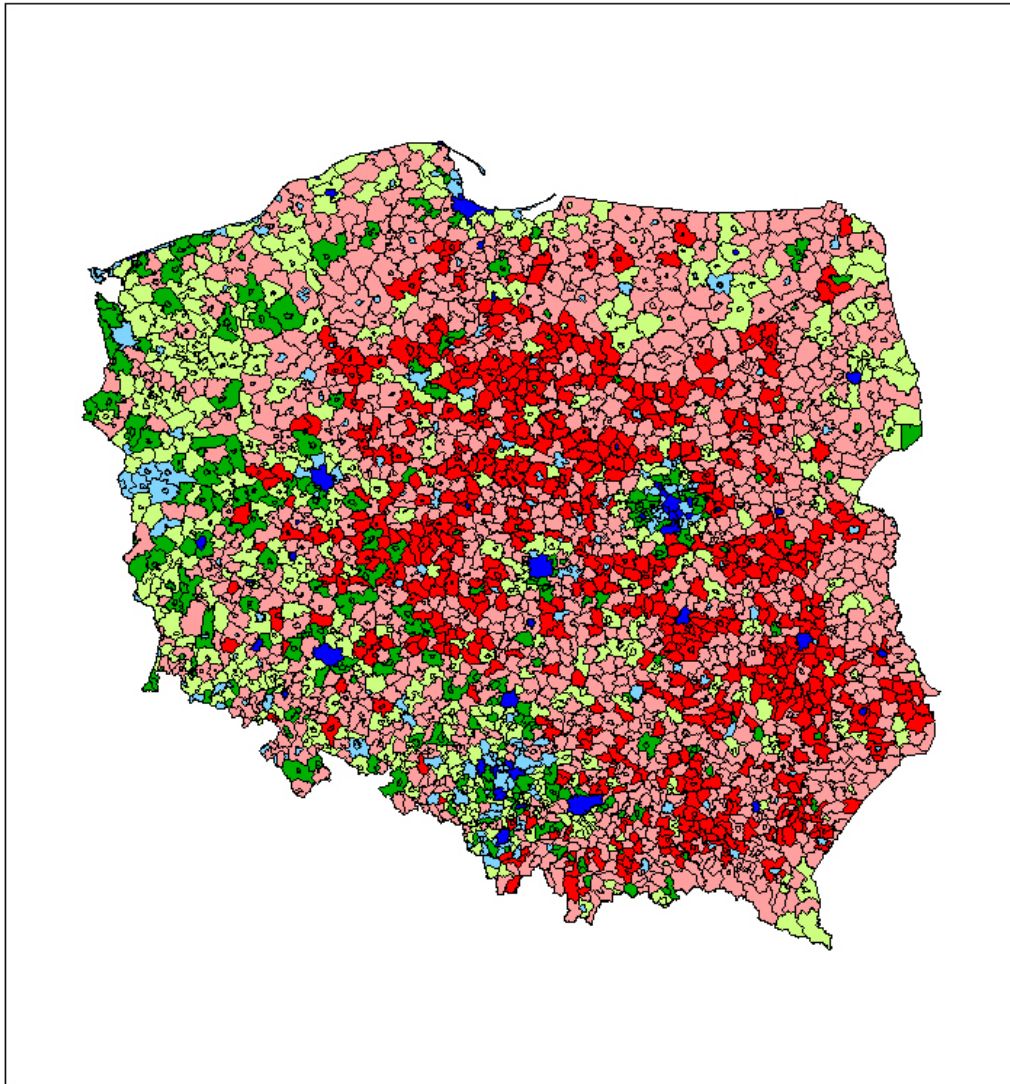
#### *An Aggregate Typology*

In order to aggregate the foregoing findings into an overall typology of Polish space, a scoring procedure was employed to arrive at an aggregate ranking of the gminas. In particular, the clusters that emerged in each of the separate exercises were ranked to in order of the relative level of development that they were assumed to reflect, with the number one being assigned to the most developed cluster. To avoid the problem of assigning weights to the various indicators that were determined simply by the number of clusters that emerged in each separate exercise, the resulting hierarchies was then re-based to lie in the 0-1 interval. The resulting scores were then summed across the indicator families for each gmina to yield an overall development indicator taking possible values ranging from zero to six and these were then grouped into unit intervals for the purpose of illustration. However, in absolute terms, the best performing locality – Jastarnia in Pomorskie – attained a score of zero, while the worst three – Biala Rawska

and Sadkowiec in Łódzkie and Obrazów in Świętokrzyskie – amassed totals of 5.80.

When enumerated by authority type, 83.8 per cent of rural communities fell into the two least developed groupings, compared to 48.8 per cent of the mixed gminas and just 3.1 per cent of the urban areas. A mere seventeen (1.1%) of the rural gminas were classified in the two most developed categories.

Map 1 draws out the resulting development hierarchy, in unit intervals, across Polish space. While the largest number of the best performing gminas lies in Mazowieckie, the greatest concentration is actually to be found in Pomorskie, a northern, Baltic Sea region. The eastern regions do not perform well, with Świętokrzyskie having no communities in the best performing aggregates and the East-5 occupying five of the six lowliest positions in terms of the proportion of gminas in the two most developed intervals. However, Lubelskie has three gminas with aggregate scores below unity and this places it in the top half of the distribution of the voivodships. Nevertheless, if attention is focused on the two best performing groups – that is, gminas with aggregate scores of less than two – then the eastern regions occupy four of the five lowliest positions. Only Małopolskie from the remainder of the country performs slightly worse than Podkarpackie. Kujawsko-Pomorskie represents the region with the highest proportion of the worst performing communities, although Lubelskie and Świętokrzyskie are ranked next. Podlaskie, in particular, performs relatively well on this score.



## **10. CONCLUSION**

Poland has now acceded to the EU, apparent testimony to the success of its post-communist transition drive. Unfortunately, several years of strong economic growth and the virtual completion of the country's privatization programme cannot conceal the fundamental lack of progress in stimulating the development of its rural areas, in general, and the restructuring of its agricultural sector, in particular. This failure is perpetuating longstanding town and country divisions and, as the sixth most heavily populated Member State, with almost forty per cent of its citizens resident in rural localities, this poses an additional, serious challenge to the EU's drive for economic and social cohesion and the elimination of regional inequalities.

While state farming was long since liquidated, more than eight million people are still resident on Poland's private farm holdings, the vast majority of which are too small to be economically viable. Furthermore, over four million workers remain attached, however tenuously, to the land. This figure is little changed from that recorded at the onset of the transition and is itself witness to the failure of rural development policy over the past fifteen years. The indictment would lose a good deal of its potency if the country had been left unsupported in its efforts to overcome what is patently an obstinate problem that has important social as well as economic foundations. Unfortunately, significant sums of external aid have been received over the years, most notably in terms of pre-accession funding. However, absorptive capacity has been lacking and development monies, as opposed to transfer payments, have too often failed to reach the fundamental causes of the problem. This experience does not inspire confidence that the Structural Funds will

afford the panacea for the agri-rural development deficit. Indeed, the recent decision to reduce the evident size of the farming sector by the amendment of statistical conventions radiates resignation.

The surveys and case studies undertaken for the project confirmed the need evident from national statistical sources that improved educational levels and a diversification of the rural employment base are central to the stimulation of development. Neither of these will be easy, however, without a fundamental improvement in the rural infrastructure, defined in its widest sense, and a movement of labour from the farms. Simple recognition of these facts immediately exposes the circular reasoning involved: evidently neither will happen without the other. Nevertheless, the concessions extracted during the course of the EU accession negotiations, whereby proposed farm payments were increased at the expense of rural development allocations, defy all logic. The work undertaken has demonstrated that strong local leadership can stimulate change, but this appears to have its limits, with external capital unmoved by purely local initiative which, in any event, appears incapable of initiating the necessary exit from agriculture. Without much stronger resolve on the part of the central authorities, beginning with a fundamental reform of KRUS, rural development and agricultural restructuring look set to remain the Achilles heels of what in many ways has been a relatively successful transition.

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## **APPENDIX A**

### **FURTHER WORK**

Although the formal period of grant funding has ended, the work undertaken during the life of the project is being continued and extended in a number of ways. What follows highlights the major directions in which this will proceed.

#### *The Typology*

The typology of Polish gminas needs to be revised in the light of the data from the Agricultural and the Housing and Population Censuses that has recently been made available. This work will be completed shortly and all materials will then be in place to finalise the report that is to be delivered as a Practitioner Manual to the leaders of the country's rural community.

#### *Practitioner/FAPA manual*

The Practitioner Manual will be produced by the project co-ordinators working with FISE and assisted by the research arm of the Foundation for Assistance Programmes for Agriculture (FAPA), which is allied to the Ministry of Agriculture and Rural Development (MARD). The Manual will be distributed by FAPA to relevant policy makers at all levels of government.

#### *Spatial autocorrelation*

While controls for spatial spillovers have been incorporated into a number of the papers produced as the research proceeded, extending the work to experiment with a wider range

of contiguity measures will permit greater confidence that patterns of spatial autocorrelation have been identified correctly.

#### *The Gmina Questionnaire*

The gmina questionnaire produced a number of suggestive findings and the associated database is being augmented by information from the Small Area Database in order that further hypotheses can be tested more adequately.

#### *Policy*

The Member States are currently in the process of negotiating, somewhat acrimoniously, the EU's budgetary provisions for the years 2007-2013. The outcome could conceivably have important ramifications for particular expenditure programmes and the potential impacts of these on Poland's rural areas and its agricultural sector are being monitored closely.

**APPENDIX B**  
**SURDAR WORKING PAPERS**

- A. Czyżewski, H. Ingham and M. Ingham (2002), 'EU Expansion and the Urban-Rural Dichotomy', WP No. 1, 2002.
- W. Orlowski, H. Ingham and M. Ingham (2003), 'How Big a Problem is Polish Agriculture?' WP No. 2, 2003.
- A. Czyżewski, M. Ingham and H. Ingham (2004), 'An Analysis of Polish Unemployment Problems at the Powiat Level', WP No. 3.
- Z. Zolkiewski, H. Ingham and M. Ingham (2004), 'Urban-rural Dichotomies in Poland and the EU: Multinational Comparisons and an Exploration of the Polish Small Area Data Base', WP No. 4.
- K. Herbst, M. Ingham and H. Ingham (2004), 'Labour Flows into and out of Polish Agriculture: A Micro-level Approach', WP No. 5.
- M. Ingham, H. Ingham and J. Kowlaski (2005), 'FDI in Poland: Evidence and a Survey of Investors' Perceptions', WP No. 6.
- M. Ingham, H. Ingham and J. Herbst (2005), 'Local Unemployment in Poland', WP No. 7.
- H. Ingham and M. Ingham (2005), 'Worker Mobility in Polish Agriculture', WP No. 8.
- M. Ingham, H. Ingham, J. Herbst and K. Herbst (2005), 'Development in Polish Communities: The Results of a Gmina Survey', WP No. 9.
- J. Herbst, K. Herbst, H. Ingham and M. Ingham (2005), 'Local Development in Poland: Case Study Perspectives', WP No. 10.

## APPENDIX C

### OTHER PUBLICATIONS

#### *Published*

M. Ingham and H. Ingham, 'Enlargement and the Labour Market: Theory, Perception and Fact', *Industrial Relations Journal*, vol 35, no. 6, pp. 500-517, 2004.

H. Ingham and M. Ingham, 'Poland's Agriculture: How Big is the Problem of Polish Agriculture?', *Europe Asia Studies*, vol. 56, no. 2, pp. 213-234, 2004.

M. Ingham and H. Ingham, 'Enlargement and the European Employment Strategy', *Industrial Relations Journal*, vol. 34, no. 5, pp. 379-396, 2003.

W. Orlowski, 'Poland's Accession to the European Union and Prospects of Restructuring the Agriculture and Rural Areas', *Research Bulletin of the Research Centre for Economic and Statistical Studies of the Polish Central Statistical Office*, vol. 12, no. 3-4, pp. 5-24, 2003.

#### *Forthcoming*

M. Ingham, H. Ingham H. Bıçak and M. Altınay, 'The Impact of (More) Enlargement on the EES', *Industrial Relations Journal*, 2005.

#### *Submitted*

M. Ingham and H. Ingham, 'Labour Flows into and out of Polish Agriculture: A Micro-level Approach', *Statistics in Transition*.

H. Ingham and M. Ingham, 'Worker Mobility in Polish Agriculture', *Comparative Economic Studies*.

M. Ingham, H. Ingham and J. Herbst, 'Local Unemployment in Poland', *Journal of Regional Science*.

**APPENDIX D**  
**PRESENTATIONS**

- J. Herbst, 'Forming Social Capital in Rural Areas', paper delivered to Ministry of Social Security/World Bank seminar, Warsaw, 2005.
- H. Ingham, 'The Ins and Outs of Polish Agriculture', paper presented to the British Association of Slavonic and East European Studies Annual Conference, Fitzwilliam College, Cambridge, April 2003.
- K. Herbst, 'The Role of NGOs in Local Development', paper presented to the British Association of Slavonic and East European Studies Annual Conference, Fitzwilliam College, Cambridge, April 2003.
- M. Ingham, 'The European Employment Strategy', paper presented to North West Institute for Economic Development, Blackpool, September 2002.
- M. Ingham, 'Economic Exclusion in Poland: A Rural-Urban Comparison', paper presented to the British Association of Slavonic and East European Studies Annual Conference, Fitzwilliam College, Cambridge, April 2002.