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David Freshwater

The Importance of Improving Incentives and Employment Opportunities for Farm Households in Poland

*Farmers the world over, in dealing with costs,
returns and risks, are calculating economic agents.*

T.W. Schultz, Nobel Prize lecture, Stockholm, December, 1979

Abstract: Poland is experiencing the first stages of a period where its active labour force will decline steadily over time. This has raised important concerns with how well labour markets in Poland function, especially those in rural areas where there are still large numbers of households on small farms that have only limited engagement with formal work, and whose farm income is too low to provide an acceptable family income. The result is a high level of rural under-employment that imposes a growing burden on the economy and society, both in terms of unproductive labour and in high transfer payments to these families. There is a clear understanding that reducing the number of small full-time family farms in Poland is desirable as a way to: improve household incomes, address the need for more workers in other sectors, and further enhance the competitiveness of farming. Achieving this goal has been problematic, largely because to date there have been few incentives for these farm families to alter their behaviour. Simply put, the vast majority of small farm households do not perceive that they would be better off by engaging in formal employment. This largely reflects limited job opportunities in rural areas and a significant skill mismatch in local labour markets. But, it also reflects the continued existence of a variety of Polish policies that provide considerable financial benefits to these farm households, including a highly subsidized medical and retirement plan and exemption from income taxes, that significantly reduce the incentive to change behaviour. With a shrinking work force the cost of holding these potential workers in their current

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situation will only increase over time, but changing these longstanding policies remains a major challenge for the government.

Keywords: farm structure, rural development, part-time farming, local labour markets, agricultural policy.

1. Introduction

Achieving a more productive agriculture in Poland and improving the economic well-being of households on small farms are key government policy objectives. While it is generally recognized that this involves moving people off small farms, there has been limited success to date. Two important factors explain the slow pace of adjustment. The first is a lack of off-farm employment in most rural communities in Poland that makes it hard to find nonfarm employment in local labour markets. But equally important is a broad system of policies and programs that have the unintended effect of creating strong incentives to remain on a small farm, even though the farm cannot provide an adequate income. Improving both off-farm employment opportunities through a more effective rural policy, and reducing the incentives to remain a low-income farmer are both necessary in order to improve national economic performance and to increase the welfare of rural people.

Poland has one of the largest arable land bases in the European Union and is a major exporter of agricultural products, yet it has very low levels of reported agricultural productivity. This contradiction can be explained by the existence of a dual agricultural sector. In 2010 roughly 49% of land was operated by the 8% of farms with 20 or more hectares, while farms with less than 5 hectares accounted for 55% of farms (Eurostat 2014). The relatively small share of commercial farms have modernized and have a cost structure and level of technical efficiency that allows them to be competitive in national, European and global markets. But, there is still a large number of farms that are very small, with a high labour input and low levels of output. The people on these farms depend mainly on some combination of formal and informal off-farm earned income and transfer payments from the Polish government and European Union for their livelihood, with farm sales being a relatively minor contributor.

Because there are two distinct modes of production that have very different characteristics, the average performance of Polish agriculture appears weak, with far too many farms and far too much labour for the level of output produced (Campos, Jaklic, Juvanic 2010; Drost 2013). Consequently, the role of agriculture in the national and rural economy seems too large when Poland is compared to other members of the European Union, and more closely resembles the situation

in some other upper middle income countries that are also members of the OECD, such as Chile, Mexico and Turkey, in terms of the state of agriculture. However, there are more advanced countries with a large agricultural output that also have a dual structure of agriculture; with a small share of large farms accounting for the vast majority of agricultural production and land use, and a large number of small farms that play only an incidental role in production, but account for a significant share of land. For example, the OECD countries, such as Canada, Denmark, France or the USA have a relatively large number of small farms with low levels of output compared to the relatively small number of large commercial farms that offer a high enough level of farm sales to be able to support the farm household. Like Poland, small farms in these countries generate very little income from selling farm output. The key difference between Poland and these countries is that most of their small farms rely on earned income from formal engagement in off-farm work for the vast majority of household income, with transfer payments being only a minor factor.

A second key difference is that small farms in Poland mainly crop their land, whereas on small farms in other developed countries, including those where small farms are dominant in numbers, their land is mainly pasture. Because these farm households rely mainly on off-farm earned income they allocate most of their labour to off-farm work. This often leads them to shift to specializing in pasture based livestock systems that require limited capital investments and can be adapted to limited labour inputs. Moreover, small farms are more likely to be found on poorer land, where there is less potential for efficient crop production. But in Poland the large degree of field fragmentation, combined with very small total land holdings can preclude pasture based livestock enterprises, because it is difficult to create a large enough contiguous field to make an effective pasture for even a handful of cattle. Cropping practices on some of these fields can be more environmentally damaging than if the land were in permanent pasture. Consequently, Poland not only has a large number of small farms, but it faces significant environmental problems associated with some of them.

While farms in Poland continue to provide a large number of jobs, many can be characterized as being a form of underemployment (Lerman, Schreinemachers 2005; Ingham, Ingham 2004). Workers are poorly paid and their work does not make full use of their potential skills. While underemployment may be better than unemployment, there is still a cost to the worker in terms of a low income and to society in terms of wasted labour resources. The current CAP single farm payment exacerbates this problem, because it does not require that production take place. This has resulted in a considerable amount of the poorer land being left fallow, which further reduces the need for farm labour and adds to underemployment.

Given the very small size of these farms, it is impossible to make a convincing case that farming in Poland can evolve in a way that would allow all these workers to increase their productivity and earn higher incomes in farming. This means that extending the process of modernizing agriculture in Poland to increase output and exports will require more farm consolidation and the replacement of workers with machinery and other purchased inputs, just as it has in all other industrialized countries. Farms will continue to be operated mainly by families, but these farms will either be large enough that the vast majority of their output is sold, which will allow them to earn a high enough income to support the household, or they will rely on a combination of farm and off-farm income that will produce a similar level of total household income, but from multiple sources. Because there will inevitably be fewer farms, a large share of the current farm population will leave farming, ideally for a different and better career.

For exiting farm families two things are crucial. There has to be an increase in employment opportunities, either in the same rural area where they now live, or elsewhere, and these individuals have to acquire the skills to make them employable in new occupations. In 1964 Theodore W. Schultz argued that as conditions change individual farmers make careful assessments of their opportunities and select the most beneficial path, whether it is farm expansion, part-time farming, leaving farming, or continuing to operate in the same way. Currently in Poland, both market forces and government policies have created an environment that has led a large share of farm households to conclude that continuing to rely on transfer payments and informal work is the most rational behavior. For them to come to a different conclusion will require that the set of opportunities they face be different, which in turn requires different policies and altered employment conditions.

2. Context

Poland, unlike other CEE countries, during the communist period had a dual structure of agriculture. About one quarter of the land was operated by very large state and cooperative farms and the other three-quarters by very small farms, many of which relied on off-farm employment for much of their income. During this period both types of farms were fairly inefficient and food was relatively scarce in Poland, because of low farm productivity and because of required exports of food to the Soviet Union. But, by the 1980s a large share of small Polish farms were able to sell a significant share of their limited output at high prices due to policy liberalization and food scarcity (Prażmowska 2013). At this point in time small-scale farms were relatively prosperous, while workers of large state farms had stable employment prospects.

With the transformation in 1999, conditions in agriculture rapidly deteriorated. Large state farms were closed, displacing the vast majority of the workers. It was this collapse of state farms that accounts for the majority of the decline in farm labour in the 1990s (Dries, Swinnen 2001). By contrast, private farm employment was stable in most parts of the country and expanded in other parts, not because these farms were prosperous, but because they were the least bad alternative for people with farm connections who had lost their jobs in other sectors.

Somewhat surprisingly, many of these small farms reduced their degree of engagement with markets at this time (Chloupkova 2002; Halamska 2016). Given that there was a large reduction in off-farm employment and income in the period, the seemingly more likely behaviour would have been to try to expand market sales to restore some portion of lost off-farm earnings. However, a shift to smaller share of farm output being sold can be explained by four factors. The first was the rapid drop in food prices, as cheap imports from Western Europe drove down prices, which reduced the return and sales volume for Polish farms. The second was the increasing difficulty more remote farms had in getting their output to urban markets as transport costs increased and new market channels were created that were difficult for small producers to penetrate. The third was the increase in farm household size as family members moved back to the farm thereby increasing household food needs, which increased the share of production going to self-supply. Finally, with a fall in total farm income and increases in the cost of purchased inputs, small farms experienced increased costs of production, leading to some farms reducing levels of output, which would have given them less surplus output to sell. Thus, the share of small farms that were oriented to the market was significantly reduced in the 1990s, which in turn created pressure for government to increase transfer payments to these farms to maintain a minimum standard of living and political stability.

Over a quarter of the century later, while the situation of farm workers has improved on average, it remains precarious for many who are currently, or were formerly employed in farming. Some of the worst off are former full-time workers at the large state and cooperative farms, many of whom remain unemployed and whose children can also remain unemployed in a cycle of persistent poverty (Tarkowska 2008). These individuals lack both the skills needed to gain employment, and adequate access to job opportunities. The latter reflects both their remote location, far from active labour markets, as well as the limited demand anywhere in Poland for people with low skills, which limits any benefits from them moving to another location.

The number of very small private farms (less than 5 hectares) has slowly declined over time, but at a far lower rate than was expected at the end of the 1990s. This can be explained by the absence of a compelling reason for farm households

to change their behaviour. The absence of off-farm employment opportunities; provision of high levels of transfer benefits that are conditional on being a small limited resource farmer; difficulty in selling their land, which is the only asset the family has of any value to facilitate relocation; and a difficult national labour market that is fragmented, has weak information on possible jobs, and high levels of unemployment virtually everywhere, all provide a rationale for remaining in place.

However, while retaining surplus workers on small farms was a useful policy approach in the past in a period of high unemployment, it is increasingly problematic. Poland is rapidly moving from a situation where there were excess workers to one where they are becoming relatively scarce as new entrants fail to keep up with those who are retiring. Further wages in Poland are likely to remain lower than in much of western Europe so there is likely to be a steady outflow of prime workers leaving additional workforce shortfalls. Not only does holding workers on low productivity small farms reduce the supply of workers in the rest of the economy, it also reduces skill levels. If youth on farms believe they will remain on these farms they have very weak incentives to engage in formal education or in skill development, because neither of these offer any benefit to a farm worker.

Beyond the implications for the larger economy there are adverse consequences for Polish agriculture. Despite a large share of low productivity farms that provide very little output, Poland has become a major agricultural and food product exporter. It is uniquely positioned to supply both Russia to the east and the balance of the EU to the West. While it has made impressive strides the large small farm sector ties up people, land, capital and policy in unproductive ways. In aggregate Poland ranks as having one of the lowest productivity agricultural sectors in the EU and OECD. But if the drag of small farms could be reduced Polish agricultural productivity would increase rapidly. More importantly, the people now trapped in a low income situation would experience potentially huge benefits from either, expanding to a larger farm that could produce a better income, reattaching to off-farm jobs that would allow continuing as a life-style farmer with a diversified stream of income, or leaving farming for a better employment in another sector.

3. The Changing Logic of Small Farm Preservation

Unlike almost all other communist countries in Central and Eastern Europe, Poland did not nationalize all farmland in the post-World War II era, but allowed holders of small amounts of land to retain their farms, although there were significant restrictions on land transfers and production decisions were subject to state planning regulations. The result was a system of small farms where land

was essentially frozen in the hands of the landholding family, creating a pattern of intergenerational succession that kept families in farming. While large estates were nationalized, less than a quarter of farmland was converted to large scale state and collective farms. Consequently, Poland retained a large rural population that was dominated by small family operated farms. These farm households were integrated into the planned economy through two mechanisms. The first was production quotas that established specific farm output targets and the second was through off-farm employment – either in factories that were established in rural areas to take advantage of surplus farm labour or by encouraging farm household members to commute to work in nearby cities, which created a relatively high engagement of farm households in off-farm employment.

Following the transition in 1989, Poland faced major upheaval in its society, economy and labour markets. Many state run enterprises in urban and rural areas, including the large collective and state farms, failed, creating high levels of unemployment. In rural areas off-farm employment opportunities collapsed as state enterprises were closed leaving several hundred thousand workers with no alternative but to become full time farmers on a small farm. Poland buffered part of the lost earned income by extending transfer payments to low income individuals and strengthening its public pension plans in the 1990s (Keane, Prasad 2002). Relatively rapid urban growth in the next two decades replaced many of the lost urban jobs, but economic conditions in rural Poland did not improve as quickly, resulting in high levels of rural unemployment, and for households on small private farms the loss of off-farm income and an increased dependence on farm output and transfer payments.

At the time of transition the farm population was over one quarter of the national population, with the vast majority of farm workers living on very small private farms that were incapable of providing adequate household incomes. In principle, encouraging a rapid farm consolidation at this time into a smaller number of larger more productive farms that could provide an adequate level of household income would have led to agriculture making a larger contribution to GDP and exports and to better incomes for the remaining farm families. However, the high levels of surplus workers across all labour markets in Poland and the inability to absorb it rapidly led to a different decision.

Instead, warehousing excess labour on small private farms was a cost-effective policy in a time of limited budgets, high levels of surplus labour and a focus on stimulating national economic growth by first modernizing the urban regions (Swinnen, Dries, Macours 2005). Relative to other unemployed workers, including workers from the closed state and cooperative farms, those on private farms were relatively well off. While they had lost most of their earned income from off-farm

employment, they owned their homes and could provide a significant portion of their food needs from self-supply. Thus, compared to those living in rented housing, the cost of providing subsidies to farm families to sustain households was significantly lower.

Compounding the labour market problems of the time was a fairly rapid demographic growth through the 1990s and into the 2000s that led to increases in the size of the potential workforce. But, even rapid economic growth over much of this period did not fully utilize all available labour, and, as a result, unemployment rates remained high and labour force participation rates remained low (Rutkowski 2006). A consequence of this situation was that there was no compelling reason to modernize the structure of Polish agriculture by encouraging farm exits. Better opportunities for growth and more pressing problems in urban areas, in terms of numbers of unemployed and housing conditions, made rural development a marginal issue. Moreover, finding alternative jobs for surplus farm labour was a challenging prospect given: stagnant local labour markets that meant relocation would be needed to find a job, weak formal skills of most farm workers, and a farm workforce with high proportions of the very young with no job history and the very old with few years left to work.

Political forces contributed to the stability of policy to maintain small farms (Gorlach 1995; Halamska 2004). Long periods of inter-generational succession led to beliefs among farm families that their way of life, including state support, was: desirable, an important part of national culture, and deserving of support. Since the share of households on small farms continued to be a large share of the rural population even as their numbers steadily shrank, they continued to be a significant and cohesive voting block that had a relatively small number of core issues. This gave them political influence well beyond their still significant numbers. Given that this political influence still exists today, it will be important to design reforms in ways that offer opportunities for an improved life to these households, rather than creating a threat that they will be made worse off.

While in the past it was politically, economically and socially desirable to maintain a large number of surplus workers on small unproductive farms, this is no longer the case. Poland, like the rest of the European Union and most of the OECD countries, is experiencing a significant demographic decline that is leading to an aging and shrinking workforce. The magnitude of this decline is large enough that the government has taken steps to strongly encourage higher fertility rates. But, even if these are successful, it will be decades before they have an impact on the labour market. With a shrinking workforce it no longer makes sense to hold a considerable number of current and future workers out of formal labour markets and in a low income situation. The opportunity costs to society of these workers and

the transfer payments that sustain them are now too high to continue past policies. The question is how to find a new set of policies that create better opportunities for the large number of farm households who now are excluded from the market economy.

Achieving major structural change in Polish agriculture will not be easy, even though it is desirable. Over time a large number of barriers to: household exits from farming, farm consolidation, and increased participation in off-farm work have been created through public policy, establishing social norms, and path dependent economic processes. Clearly agriculture already makes major contributions to the Polish domestic economy and to its international trade, and there is considerable untapped potential. More importantly, much of the labour now in farming is not needed to achieve this potential, but is now needed in other parts of the economy. Most importantly, it should be possible to improve the living standard of those farm households now relying on transfer payments for a relatively poor quality of life by developing pathways to higher amounts of earned income, either through restoring participation rates in off-farm employment to what they were in the 1980s, or by encouraging exits to new and improved careers either in rural or urban areas.

While new policies will be required to bring about this outcome they will only succeed if they are capable of altering the perceived levels of costs, returns and risks, that farm households assign to different occupational choices. Because there are important interactions among policies and market forces that must be fully recognized, getting the right mix of policies and market signals will be challenging.

4. Small Farms in Poland

The number of farms in Poland has decreased significantly since 1990 and average farm size has increased, but at a fairly slow rate, particularly in the last decade. In 2013 almost 55% of Polish farms operated less than 5 hectares, 48% sold less than 4000 euros of output, but 12% of operators were less than 35 years old while just under 10% were over 65. By comparison, the EU-28 shares were 6% and 31% respectively for operator age. Finally, in 2014 farming accounted for almost 12% of employment in Poland while it was less than 5% across the EU-28 (Eurostat 2017).

The combination of a much higher share of prime working age individuals in farming and a preponderance of small and unproductive farms with weak attachment to markets suggests the possibility of poorly functioning rural labour markets that are keeping many farm family members underemployed. The question of why small farms in Poland employ such a large share of the workforce has been topical since the 1990s, when agricultural employment on private farms

in Poland increased after the transformation, even as farm employment decreased in other Central and Eastern European countries (Lerman, Csaki, Feder 2004). Henningsen (2009) conducts an exhaustive review of theories on the slow pace of adjustment of Polish agriculture since 1989. While he identifies numerous theories he emphasizes three things – the weak formal skills of Polish farmers that limit their off-farm employment potential, fragmented land holdings and weak land markets that freeze land in current hands, and the strong influence of transfer payments to farmers that hold them in their current situation (p. 58). These three elements suggest that explaining the persistence of small farms can be understood in terms of local labour market dynamics, where individuals assess their relative returns from current employment in terms of opportunity costs associated with other careers.

Clearly a farm with sales of only 4,000 euros or less cannot by itself provide an acceptable level of family income, so something else is allowing these households to remain on their farms. Theodore W. Schultz in his Nobel Prize Address (1979) forcefully argues that poor people, particularly poor farmers, make rational choices. The essence of Schultz's argument is, the poor respond to better opportunities, but, absent beliefs that better opportunities exist they do not change their behaviour. The implication from Schultz's insight is that if small farmers in Poland do not change their behaviour they must not perceive better opportunities.

This of course begs the question, what is their current situation, including their perceived opportunities? While there is huge variability across the population of small farms (less than 5 ha in size) the representative farm can be characterized as: one with limited land that is highly fragmented among multiple non-contiguous plots, income low enough that food is a considerable share of total household expenses, limited money for investments in farm modernization, excess family labour for the size of the farm operation, a high reliance on transfer payments to offset limited earned income, and weak attachment to non-farm employment. When off-farm employment exists it is often through grey or informal markets in the form of unregistered employment or direct sales of farm products to other households.

These characteristics are linked in important ways as Henningsen observed in his 2009 study. Small farms inevitably produce limited output, and if they are operated by low income households a large share of this output tends to be consumed on the farm as self-supply. Self-supply is attractive because own-produced food is cheaper than purchased food and food is a major budget share for poor households. In Poland, the high ratio of self-consumption to output has been used to characterize these farms as being semi-subsistence. While this is technically accurate, it misses the point that unlike true subsistence farms, where food is not

readily available for purchase, in Poland food can be easily bought on the market at reasonably low prices. This suggests that Polish households on small farms self-supply because their output is too small to have much left over to sell, not out of physical necessity or poorly functioning markets, which is a different form of behaviour than is the case in developing countries.

A second linkage is between the reliance on transfer payments and off-farm employment. The Polish government has long provided a strong degree of support to low income households, including farm households who receive a distinct medical insurance and pension package. Keane and Prasad (2002) show that government transfers were significant enough to roughly maintain historic levels of total income inequality after the transition through the 1990s, even as earned income inequality greatly increased when jobs were lost due to restructuring. Transfer payments remain in place within Polish society and continue to alter incentives to participate in market activity, by creating a wedge between after tax earned income in the formal economy and lower nominal income with supplemental benefits from farming.

Major Polish policies benefiting small farms include access to a highly subsidized pension and medical insurance programme (KRUS), the opportunity for an earlier retirement, exemption from income tax and exposure to an agricultural land tax that is held at very low rate. In addition, farm households are also able to access the extensive set of public services available to all Polish citizens. However, these benefits have a number of strings attached that constrain behaviour. Most importantly, participating in formal employment can lead to conversion to the regular pension and medical insurance plan with its requirement to pay premiums and to paying income tax. Where wages are low, the resulting after-tax income may be less than is available with low farm earnings and transfers. Similarly, after a threshold level of farm output sales, the household loses access to these subsidies, so once again there is a disincentive to earn more money by expanding farm sales.

While employment in the formal economy can be discouraged by the transfer regime, low levels of income lead to participation in the informal economy. Unreported income improves the economic welfare of those receiving it, but it reduces tax revenue and leads to the continuation of transfer payments that might not be warranted if recipients full income was known. Not only is there an incentive to augment income for households living on small farms, there is also opportunity, because the informal economy in Poland is thought to be relatively large. Estimates of the size of the shadow economy for 2015 put it at a bit over 19% of GDP, with income from non-registered labour in agriculture, construction and manufacturing, and income from unreported cash transactions accounting for about 60% of the total (Ministry of Treasury 2015). For farms, unreported sales of agricultural output are

inevitably interpreted by the Statistical Agency as food that went to self-supply, which leads to an understatement of market sales.

A third linkage is through skills or human capital and farmland. Most Polish farmers have relatively low levels of formal education and when they do have technical qualifications it is in agriculture. In addition, most Polish farmers come from families of farmers, and the vast majority operate farms that have been in the same family for multiple generations. The result of this long connection between a family and a parcel of land is a group of individuals who have strong tacit and formal skills in farming, but whose skills are not readily transferred to other occupations, which limits their opportunities for non-farm work. Moreover, because the farms they operate have been in the family for extended periods and because the land is highly fragmented their skills are particularly tuned to that particular farm, making them even more fixed in place. Due to their farm specific knowledge their particular farm is worth more to them than it is to someone else who lacks that accumulated knowledge. In effect, the farm is more productive with their skills present than it would be with another operator, *ceteris paribus*. While they may be attached to a particular farm for cultural or personal reasons, there is also a pure economic benefit from the particular combination of that operator on that specific farm. Fragmentation also makes the land less valuable than a similar size contiguous plot. A consequence is that the farm is worth less to someone else than it is to the current operator, which creates a disincentive to sell. The same factors can also limit the return from expanding a farm, since plot specific knowledge for new land can only be acquired over time.

Finally, benefits from EU programmes help hold households in farming. Subsequent to EU accession Polish farms gained access to farm support through the Common Agricultural Policy (CAP). For small farms the most important form of support is the direct payment, which provides an annual lump sum based on the number of hectares owned by the farm. For small farms this is a relatively low amount, but relative to their total income it adds a significant increment to cash flow. Notably these funds do not affect eligibility for Polish government transfers. Also, an apparently now common practice in the informal economy is for a farmer to lease a parcel of land to a neighbour with adjoining property using an unregistered lease. This allows the landowner to continue to collect the CAP direct payment, because they remain the operator on record, while obtaining unreported lease income from the neighbor. While Poland reports relatively limited leasing of land in its agricultural statistics, it only reports registered or reported leases.

5. The Consequences For Farmer Behaviour

If we take Schultz's admonition about farmer behaviour in the context of labour allocation decisions seriously, what we observe is in effect a high reservation wage for farmers in the formal labour market. Farmers are unwilling to work for low wages in the registered market because the returns after deductions are too low to make it worthwhile given: the ability to self-supply, opportunities for generous transfer payments that require being a full time farmer, and opportunities to generate unreported income from informal work and farm sales. If only their income from agricultural activity is reported these are farms that should not continue to exist – yet they do. Because they do, and because they are not the classic form of a subsistence household that produces virtually everything it consumes they must have additional income, either from transfers or that is earned but in unreported forms.

There have been numerous suggestions, including from Schultz, that investments in human capital are crucial in moving people out of the poverty trap of small scale farming in Poland (Schultz 1979; Chaplin, Davidova, Gorton 2004; Rizov, Swinnen 2004; OECD 2008). While education levels in Poland are in general quite high, they are significantly lower in rural areas. Part of this is a weaker school and training system than is the case in urban areas, but part is an assessment by families that the returns from education are not compelling.

Today, even with the remarkable growth of the Polish economy, there are far fewer non-farm job opportunities in rural Poland than there were in the communist era. Before 1990 off-farm employment was common in rural Poland because the planning system located manufacturing plants in rural areas or provided transport for rural workers to urban plants (Halamska 2016, p. 33). The vast majority of these plants failed in the early 1990s, because they were not competitive in a market economy. In the intervening period the focus of national investment has been in urban areas where a larger share of the population now lives and the opportunities for modernizing the economy were more apparent. Accession to the EU provided new funding for rural development but most of this money went for farm modernization and infrastructure development – sewer and water systems and roads. Despite these improvements in infrastructure there has been relatively weak economic development in most rural areas, with limited net new job creation. However, there are clear examples of strong economic growth in a number of rural areas, particularly those close to urban agglomerations and in parts of the northern and western regions. A generally weak rural economy has led the government to refocus its economic development strategy going forward in 2017 on rural areas and small and medium cities (Ministry of Economic Development 2017).

For many small farms their local labour market does not offer many job opportunities at high enough wages to make either part-time farming, or exiting farming and remaining in the community an attractive option. Exiting farming and relocating to another labour market is in principle an alternative option. However, the costs of relocation are high and farmers are generally not knowledgeable about job opportunities in other labour markets, nor are their skills particularly relevant. The risks associated with these two facts would discourage many small farm operators from giving up their farm. In addition, labour markets in Poland are generally not working well (Boulhol 2014). They are characterized by: a high share of temporary jobs with fixed term contracts, unemployment rates that are high particularly for young and older workers, and weak matching processes that do not do a good job of connecting workers with specific skills with employers looking for those skills. In addition, Poland has relatively strict business regulations that can be a barrier to new firm formation and business expansions that lead to a growth in demand for workers.

Weak employment opportunities in rural labour markets have important consequences for farmers behaviour. If the possibility of a local off-farm job is low, there is little incentive to improve human capital, unless there is also a plan to exit farming and relocate. But if the market for farmland is weak, as is the case if farmland markets are tightly regulated, land is of limited agronomic quality, or farms are split into fragmented parcels, then the farm will not generate sufficient revenue when sold to allow a transition to a new location and a new career. While farmland can be an asset that allows a transition to another place and career, owning it can also be an impediment to change.

6. Policy Implications of the Slow Decline in Farm Numbers and Employment

Given these conditions, perhaps it is not surprising that the number of small farms has not fallen as far, or as quickly, as was anticipated. Historically small farms played a potentially valuable role during the early stages of adjustment in the 1990s by absorbing surplus labour and providing households with an acceptable standard of living, albeit through public subsidies. (Csaki, Lerman 2002; Dries, Swinnen 2001). When compared to workers on state and collective farms who lost their jobs when these farms were liquidated and had no land resources of their own to rely on, smallholders had a much better outcome.

A relatively current estimate of surplus labour in Polish agriculture is about 500,000 workers (Chmielinski, Karwat-Woźniak 2015). The Polish labour force is estimated at about 18 million people with about 2.25 million people employed

in agriculture. This suggests that the surplus workers in agriculture are a bit under 3% of the total workforce and 20% of the agricultural work force. Poland also has a relatively low labour force participation rate (65%) and a somewhat high unemployment rate, (8%) in 2017. These conditions are both consistent with high levels of surplus labour in agriculture and the persistence of small farms. But given demographic projections, the question is, how long will labour markets continue to experience excess supply?

In the post transition period Poland experienced relatively rapid growth in its labour force due to high levels of fertility. At the same time the economy underwent a major transition as it moved away from the socialist model of full employment to a market based system. The initial consequence of this was considerable job displacement, including the termination of state and collective farms, and the loss of off-farm income opportunities for households on small private farms. Similar job losses and labour market restructuring occurred across Poland, including urban areas, and there were important challenges in reconfiguring the economy that resulted in high unemployment and reduced wages. In a period where there was a clear excess supply of labour, keeping workers in agricultural employment through modest subsidies was a sensible approach to reducing the size of the surplus labour problem.

In the current decade though, Poland has moved from benefiting from an expanding labour force to a shrinking one (Boulhol 2014). In this new regime for Poland maintaining economic growth will hinge both on increasing worker productivity and on better utilization of the labour force. This will include increasing participation rates, reducing unemployment and encouraging underutilized workers to move to different occupations (OECD 2016). Although this change is important for the entire economy it has clear implications for agriculture, because of the large share of underutilized labour.

Distortions in all labour markets will require more attention, but those in the agricultural labour market are fairly well understood. Both labour market outcomes for farm households and structural change in the sector can be accomplished by a small number of what may appear to be radical changes. These all have the effect of increasing the incentives for underutilized labour to move from farming to another occupation, either on a part-time or full-time basis.

7. Policy Reforms to Improve Agricultural Labour Utilization

If the “small farm problem” in Poland is to be resolved it will be mainly through efforts that lead to improvements in expanding employment opportunities in rural labour markets. Doing this should lead to a reassessment by members of farm

households on how to allocate their labor in ways that offer the highest rate of return. If improvements in labour markets is the main approach, then the three elements of active labour market policy are the logical starting point – improving the quality of labour being supplied, increasing the demand for workers, and enhancing the matching process that connects workers with employers. Because farm families are already self-employed and many will want to retain their connection with farming particular attention has to be paid to improving opportunities for off-farm work that allows a role in farming to continue. The five recommendations listed below provide a framework for policies that should change the incentives for engaging in formal off-farm employment and, if Schultz is correct, alter behaviour.

7.1. Support the Concept of Pluriactivity or Part-Time Farming

The most important element is to restore the possibility of off-farm employment, since it is the mechanism that is most likely to alter current behaviour by providing new possibilities for labour allocation. The idea of part-time farming is not new to Poland. During the communist era private farms were small and most farm households engaged in both farm and off-farm work. Restoring this tradition is important both for farm households and for more balanced rural development that can strengthen the broader economy.

Increasing the opportunity cost of farm labour by making more employment options available in local labour markets in rural regions will alter the decisions of low-income farm households away from their current disengagement with the formal economy. The new national regional development policy, *The Strategy for Responsible Development* and various OECD reports on rural development provide a clear framework for undertaking this challenge. While strengthening the rural economy is important in all OECD countries, it is especially important in Poland because the rural population share is large and because the transition of agriculture from a traditional form to a modern form is not yet complete.

It is unreasonable to expect for farms of less than 10 hectares to be able to generate sufficient output to provide an acceptable level of household income, unless they produce a particularly high value specialty product. Instead, these “life-style” farms should be operated to provide quality of life benefits and a portion of household income. But, without earned income from off-farm employment, small farms can only be viable with high levels of state support through transfer payments or other subsidies.

The number of small farms that would be damaged by an abrupt cut in subsidies without the possibility of finding supplemental earned income is too large to be

politically acceptable to any government. If Polish and EU subsidies are cut to reduce distortions in farm decision-making, it is crucial to facilitate better employment opportunities in rural Poland for these households if major disruptions to rural society are to be avoided.

7.2. Strengthen Rural Education, Training and Employment Systems

Programmes must also be put in place to provide new workers with appropriate education and skills. In most instances these investments in human capital may be required before efforts to stimulate new job opportunities are considered. This is because improving foundation education levels and building broadly-applicable skills can be a long term process, and because potential employers will require convincing that an appropriate local labour force is available before they invest in a rural community.

Investments in improving matching processes will also be required. These help to connect workers with specific skills with appropriate potential employers, and can include supplemental tailored training that refines skills to meet specific employer needs. Matching processes can also help workers identify employment opportunities outside their current local labour market. Although this will almost certainly result in a relocation to a new place and a farm exit, it will be important in those places where the supply of underutilized farm labour is higher than the potential for new employment opportunities.

7.3. Continue Investments in Rural Infrastructure

Since accession to the European Union Poland has made important strides in improving infrastructure in rural areas with the support of EU funds. Better sewer and water systems and improved roads are beneficial to rural population in terms of improving the quality of life. However, they are essential for building a stronger economic base, because firms require these public services to be present and in good condition before they become willing to consider locating in a community. Similarly, access to broadband has become an essential requirement for most firms, making it an essential part of basic infrastructure.

While much of rural Poland now has upgraded infrastructure there are significant parts of the country where additional investments are needed. Even though this type of investment is no longer an EU funding priority, it is essential that Poland continues to support rural infrastructure improvements. Improving roads is essential to better connect farms with processors or markets and allow better flows of commodities. Rural manufacturers depend on good transport links to move

inputs to their firm and to ship outputs to customers. This makes infrastructure a key part of the foundation for successful rural economic development.

7.4. Reform Government Support to Farmers

Formal agricultural policy plays an important role in shaping farm decisions and in altering agricultural structure. While Polish agricultural policy is largely driven by the CAP, there are important domestic policies that affect farmer decisions.

Move to a Single Pension and Medical Insurance Plan

Phasing out KRUS by ending new enrollment into the plan will allow current beneficiaries to maintain their expected benefits while encouraging other people to assess the decision to be engaged in farming versus some other career on the basis of market returns. Presently the differences in benefits and contributions between KRUS and ZUS are large enough that they can create a distortion in choices among occupations.

End the Exemption From Income Tax for Farmers

Exempting frames from income tax has a clear subsidy effect. But because the exemption is restricted to a maximum size of farm it also reduces the incentive to expand a farm beyond a certain point. This limits the efficiency of the enterprise and of the Polish farming sector in general. Finally exempting farmers from income tax reduces the incentive to create a system of accounting on the farm and weakens management practices, neither of which are desirable for the farm or the country.

Integrate the Agricultural Land Tax Into the Broader Property Tax System

Currently the only tax paid by small farms is a property tax that is based on the price of barley and the quantity and quality of the land. This system tends to keep land in farming that might have a better use. The effective tax rate is relatively low and the tax rate on farmland is disassociated from tax rates for other forms of land use. Using a harmonized land tax mechanism, such as market value assessment, would remove another distortion that influences farmer behavior.

End Current Practices of Modulating CAP To Benefit Small Farms

Poland has often chosen to adopt implementation approaches for CAP that provide increased benefits to small farms beyond those in the basic structure of the programs. This helps retain small farms by increasing their income, but it reduces the amount of support for larger farms that are competing with other EU enterprises. If Poland is trying to increase the competitiveness of its commercial

farm sector it should be trying to minimize domestic impediments to these farms success.

7.5. Promote Further Agricultural Modernization By Improving Land Markets

Part of Polish agriculture is now highly competitive in external markets and farm and food exports make an important contribution to Polish foreign trade (Wigier 2014). In addition, Polish consumers have benefited from lower food costs due to more open markets and greater efficiency in domestic food production. Continuing this process of modernization will require further farm consolidation, which means that a considerable decline in current farm numbers will be needed to allow continuing farms to grow to a more efficient size. For this to happen potential exiters have to find potential buyers of their farmland.

At present, the farmland market in Poland is not very active, especially for small fragmented parcels of land. Such land has low value to a potential buyer because it is difficult to integrate into an existing farm enterprise. And, low prices for their only significant asset can make it harder for small farm operators to leave farming to start a new career or retire. Consequently, improving farmland markets will both allow commercially oriented farmers to expand and those who would prefer another career to exit. Recently Poland has increased its regulation on farmland sales to restrict the size of farms over 300 hectares and discourages the sale of land to people who do not have formal status as farmers and crucially are not already residents in the municipality where the farm is located. These changes tend to freeze land ownership in current hands, and reduce the value of farmland by reducing the number of potential buyers. This harms sellers and is likely to reduce the growth in agricultural productivity that Poland seeks.

The second and perhaps less controversial way to improve land markets is to encourage the use of formal land leases. Such leases can reduce the operating costs associated with fragmented fields by allowing neighbours to swap the rights to use land among themselves in a more transparent way. Multi-year leases can encourage the tenant and landlord to make improvements in land since each has some assurance that the costs will be recovered in future years. Moreover, an active leasing market provides important information for pricing land that is being considered for sale or purchase.

8. Conclusions

It is almost universally accepted that Poland has too many small farms that impede the productivity of agriculture and offer only low incomes to the families

that operate them. Yet there has been only low progress in reducing the number of small farms either through land consolidation that would allow some to grow to a more efficient size or through exits that would move labour to more productive and rewarding occupations off the farm. T. W. Schultz suggested long ago that farmers throughout the world act in their self-interest, so the persistence of large numbers of small farms that provide only limited income requires an explanation that explores the incentives and opportunities these families face.

Two types of explanation are provided in the paper. The first is that there are too few external employment opportunities in the local labour markets these households live in to provide a “pull” out of full time farming. Local labour markets are relevant because most of these people have both limited skills and lack the information and resources to successfully relocate to other larger labour markets. But equally important is the web of incentives that have been put in place by the national government that support small farms. These include: a separate and highly subsidized pension and medical system for farmers, exemptions from income and property tax for small farms, restrictions on selling farmland, and various modulations of CAP programmes to increase benefits to small farms. Each of these policies was designed to provide short term relief to a pressing political issue but their cumulative effect has been to lock households in place. As long as the people on small farms perceive that they are better off remaining in place, they will continue to do so. This is Schultz’s main insight.

While holding labour on small farms was probably a good policy decision in the past when Poland was trying to deal with the major structural adjustments to its economy that had displaced large numbers of workers, it is not the current situation. Poland is entering a period where the workforce is shrinking and aging. Holding labour in low value activity on small farms is not in their interest, or in the national interest. Moreover, global agricultural markets are becoming even more competitive, and if Poland seeks to expand its role in these markets it will have to keep improving agricultural productivity. This too will entail reductions in the resources now locked on small farms. Both of these points are strong arguments for policy reforms that will accelerate reductions in the number of full time very small farms.

Bibliography

- Boulhol H. (2014). Making the Labour Market Work Better in Poland. *OECD Economics Department Working Papers* 1124, OECD Publishing, Paris.
- Campos M., Jaklic T., Juvancic L. (2010). Factors Affecting Farm Productivity in Bulgaria, Hungary, Poland, Romania and Slovenia After the EU Accession and Likely Structural Effects. Paper presented at the 118th EAAE seminar, Ljubljana, Slovenia August 2010.

- Chaplin H., Davidova S., Gorton M. (2005). Impediments to Employment and Enterprise Diversification: Evidence from Small-Scale Farms in Poland. Paper presented at the 11th Congress of the EAAE, Copenhagen, Denmark, August 2005.
- Chloupkova J. (2002). Polish Agriculture: Organizational Structure and Impacts of Transition. Unit of Economics Working Papers, no. 3, The Royal Veterinary and Agricultural University, Copenhagen, Denmark.
- Chmieleński P., Karwat-Woźniak B. (2015). Changes in population and labour force in family farming in Poland. *Studies in Agricultural Economics*, 117, 140–146.
- Csaki C., Lerman Z. (2002). Land and farm structure in transition: The case of Poland. *Eurasian Geography and Economics*, 43 (4), 305–322.
- Dries L., Swinnen J. (2002). Institutional reform and labour reallocation during transition theory and evidence from Polish agriculture. *World Development*, 30(3), 457–474.
- Drost S. (2013). The agricultural sector in Poland and Romania and its performance under the EU influence. *Arbeitshefte aus dem Otto-Strammer-Zentrum*, 21, Freie Universität Berlin, Berlin.
- Eurostat (2014). Agricultural Census 2010 – Main Results. European Commission, Brussels, http://ec.europa.eu/eurostat/statistics-explained/index.php/Agricultural_census_2010_-_main_results [accessed: 12.07.2017].
- Eurostat (2017). Statistical Factsheet: Poland, June 2017. European Commission, Brussels, https://ec.europa.eu/agriculture/sites/agriculture/files/statistics/factsheets/pdf/pl_en.pdf [accessed: 12.07.2017].
- Gorlach K. (1995). The peasant issue in contemporary Poland. *Polish Sociological Review*, 110, 139–158.
- Halamska M. (2004). A different end of the peasants. *Polish Sociological Review*, 137, 245–268.
- Halamska M. (2016). The evolution of family farms in Poland: Present time and the weight of the past. *Eastern European Countryside*, 22, 27–51.
- Henningsen A. (2009). Why is the Polish farm sector still so underdeveloped? *Post-Communist Economics*, 21 (1), 47–64.
- Ingham H., Ingham M. (2004). How big is the problem of Polish agriculture? *Europe-Asia Studies*, 56 (2), 213–234.
- Keane M., Prasad E. (2002). Inequality, transfers and growth: New evidence from the economic transition in Poland. *Review of Economics and Statistics*, 84 (2), 324–341.
- Lerman Z., Schreinemachers P. (2002). Individual Farming as a Labor Sink. Paper presented at the AAEE annual meeting, Long Beach, CA, July 2002.
- Lerman Z., Csaki C., Feder G. (2004). Evolving farm structure and land use patterns in former socialist countries. *Quarterly Journal of International Agriculture*, 43 (4), 309–335.
- Ministry of Economic Development, Poland (2017). *The Strategy for Responsible Development*. Warsaw.
- Ministry of Treasury: Poland (2015). Share of Shadow Economy Declines in Poland, <http://www.msp.gov.pl/en/polish-economy/economic-news/6377,Share-of-shadow-economy-declines-in-Poland.html> [accessed: 12.07.2017].
- OECD (2016). Poland: Economic Survey. OECD Publishing, Paris.

- Prażmowska A. (2013). *Poland: A Modern History*. London: J B Tauris.
- Rizov M., Swinnen J. (2004). Human capital, market imperfections and labour reallocation in transition. *Journal of Comparative Economics*, 32 (4), 745–774.
- Rutkowski J. (2006). Labour Market Developments During Economic Transition. World Bank Policy Research Working Paper 3894, Washington D.C., April 2006.
- Schultz T.W. (1979). The Economics of Being Poor. Nobel Prize Lecture, December 8, 1979, Stockholm, Sweden, http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1979/schultz-lecture.html [accessed: 12.07.2017].
- Swinnen J., Dries L., Macours K. (2005). Transition and agricultural labour. *Agricultural Economics*, 32 (1), 15–34.
- Tarkowska E. (2008). Poverty and social exclusion in rural areas: Poland. In P. Bertolino, M. Montanari and V. Peragine (eds.), Final Report of the Study on Poverty and Social Exclusion in Rural Areas, Study on Poverty. Unpublished report to the European Commission, https://www.researchgate.net/profile/Silvia_Sivini/publication/237103993_POVERTY_AND_SOCIAL_EXCLUSION_IN_RURAL_AREAS/links/0a85e53296b2230937000000.pdf#page=199 [accessed: 12.07.2017].
- Wigier M. (2014). The competitiveness of Polish agriculture after accession to the EU. *Economics of Agriculture*, 61 (1), 87–102.

Znaczenie wzrostu atrakcyjności i możliwości zatrudnienia pozarolniczego dla małych gospodarstw rolnych

Streszczenie: Polska przechodzi pierwsze etapy rozłożonego w czasie procesu spadku liczby osób aktywnych zawodowo. Wskutek tej sytuacji powstają obawy związane z funkcjonowaniem krajowego rynku pracy, zwłaszcza na obszarach wiejskich, gdzie nadal duża liczba rodzin utrzymuje się wyłącznie z pracy w małych gospodarstwach. Ich członkowie nie szukają formalnego zatrudnienia poza rolnictwem, mimo że ich dochody są zbyt małe, by utrzymać rodzinę na odpowiednim poziomie. W rezultacie mamy do czynienia z wysokim odsetkiem osób pracujących poniżej swoich kwalifikacji, co stanowi coraz większy ciężar dla gospodarki i budżetu państwa, zarówno z punktu widzenia bezproduktywnej pracy, jak i wysokich transferów socjalnych dla tych rodzin. Widać wyraźnie, że redukcja liczby małych gospodarstw w Polsce jest pożądana jako sposób na podniesienie dochodów rolniczych gospodarstw domowych, jako sposób na rozwiązanie problemu niedoboru pracowników w innych sektorach, oraz jako sposób na wzmocnienie konkurencyjności rolnictwa. Osiągnięcie tego celu może jednak stanowić problem, szczególnie ze względu na zbyt mało zachęt, które skłoniłyby członków rodzin prowadzących te gospodarstwa rolne do zmiany zachowania i podejmowania pracy poza rolnictwem. Większość członków rodzin żyjących w małych gospodarstwach rolnych nie zdaje sobie sprawy z tego, jak bardzo ich sytuacja finansowa by się poprawiła, gdyby podjęli oni formalne zatrudnienie.

Sytuacja ta jest odzwierciedleniem ograniczonych możliwości zatrudnienia na obszarach wiejskich oraz wciąż istniejącego problemu niedopasowania kwalifikacji pracowników do potrzeb lokalnego rynku pracy. Prócz tego można powiedzieć, że obecna sytuacja jest także skutkiem długoletniej realizacji polityki, gwarantującej znaczące zapomogi finansowe dla takich gospodarstw rolnych. Nie bez znaczenia jest także szczerze subsydiowany program ubezpieczenia zdrowotnego i emerytalnego oraz zwolnienia z podatku dochodowego. Wszystkie te świadczenia budżetowe zniechęcają do zmiany zachowania. W miarę zmniejszania się zasobów siły roboczej koszt utrzymywania tych potencjalnych pracowników będzie się zwiększał. Zmiana długoletniego kierunku polityki w tym zakresie pozostaje jednym z kluczowych wyzwań dla obecnego rządu.

Słowa kluczowe: struktura gospodarstw rolnych, rozwój obszarów wiejskich, lokalne rynki pracy, polityka rolna, działalność rolnicza w niepełnym wymiarze czasu.