TERRITORIAL INDICATORS FOR RURAL DEVELOPMENT: TARGETING LAGGING AREAS IN LITHUANIA

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The article presents research on diagnostics of lagging rural territories in Lithuania. It is based on the first phase of a joint technical support undertaken by Lithuanian Institute of Agrarian Economics and the World Bank in 2007. This technical assistance was designed to assist the Ministry of Agriculture of the Republic of Lithuania in their efforts to refine support programs for lagging rural territories in current and future programming periods for EU rural and regional development funds.

Key words: lagging rural territories, problematic territories, less favoured areas, rural development indices, envelopes, regional development.

Introduction

The primary objective of this study was to develop a set of diagnostic indicators that capture local territorial differences in social and economic well being. These indicators were developed with a view to better targeting EU funded rural and regional development measures to the areas lagging behind, and indices were formed using subsets of these indicators. The indices can further be used to strengthen the framework for allocating EU structural and rural development funds.

Up until 2007, EU supported measures benefited individuals and firms that were already in a strong position to prepare applications and provide co-financing. As a result, financial support concentrated in economically advantaged regions and municipalities. Among Rural Development Plan (RDP) measures the measure specifically targeted at disadvantaged regions was support to Less Favoured Areas (LFA). This measure represented the greatest share of Rural Development Plan resources in the period 2004–2006 (31%). An analysis of funding distributed under both Pillars of the Common Agricultural Policy during 2004–2006 showed that 28 of the 51 municipalities in Lithuania received more support per hectare of agricultural land than the national average. Among those municipalities that received the highest amounts of funding per hectare, most (79%) could be classified as Less Favoured Areas (Ribašauskienė, 2007).

Overall, the distribution of support in different regions was more determined by financial capability and the activity of the applicants. The regional analysis of support according to the Lithuanian RDP 2004–2006 measures shows that farmers in productive areas more actively participated in measure 1 (Support of Early Retirement from Agricultural Production Activities) and measure 5 (Support to Semi-Subsistence Farms Undergoing Restructuring). This was less typical for the farmers in LFA, even though the age and farm structure in these areas were worse than in favorable farming areas. Moreover, calculated per hectare LFA payments
served different purposes to different size farms: more social purpose for the small farms (income support) and economic for the bigger producers (economic viability).

The other mechanism significant for regional development applied in Rural Development Plan as well as in Single Programming Document (SPD) in 2004–2006 was priority criteria for project selection. In the case of RDP Afforestation of Agricultural Land measure, it provided extra points for projects that were implemented in LFA. Extra points for projects implemented in LFA were also given in case of SPD measures “Diversification of Economic Activity” and “Encouragement of Rural Tourism and Crafts”. Another regional priority criterion was applied in the case of the SPD LEADER+ Type Measure, named “Positive Impact for Reduction of Regional Development Differences (Especially in Problematic Territories and Projects Solving Problems in Ignalina Region). These two mentioned priority criteria were only part of the measures’ project priority criteria list, but they increased project’s chances for funding when competition emerged.

In April 2003, the Government of the Republic of Lithuania approved Designation Criteria of Problematic Territories (Decree No. 428, April 8, 2003), but in the period 2004–2006 Lithuanian problematic territories were not approved yet (Česonis, 2006). It was just the first attempt to incorporate problematic territories into rural development programmes.

Thus, spatial targeting has played little role in the allocation of EU financial resources, with the exception of the Less Favourable Areas measure. However, regional rural policy started to change. In January 2007 the Government of Lithuania has designated 14 municipalities as “problematic”, based on levels of unemployment and the proportion of people receiving social payments (Decree No. 112, January 31, 2007).

Methodology

a. Indicator Selection

Currently there are two official classifications of lagging rural territories in Lithuania – Problematic Territories based on indicators of social disadvantage and Less Favored Areas based on indicators of agricultural performance and potential. Problematic Territories are those municipalities where unemployment is 60% or more above the national average and/or the proportion of the population receiving social assistance is 60% or more above the national average. Less Favoured Areas are agricultural areas where characteristics include cereal yields lower than 80% of national average, value of total agricultural production per capita is lower than 80% of national average, population density is less than 50% of the national average, the percentage of the active population engaged in agriculture is more than 15%, the rate of population decline is 0.5% or more per year, or the territory is classed as a Karst area or covered by NATURA 2000 (Order No. 3D-72, February 27, 2004).

This study is focused on developing a comprehensive typology that could address multiple aspects of area-based socio-economic disadvantage. After an ex-
tensive review of different methodologies and indicators for characterizing lagging rural regions, it was decided to use indicators suggested by John Bryden and colleagues (Bryden, 2002). These indicators were combined with those recommended in a Guidance Note produced by the European Commission (Guidance Note G, 2006). It was then determined which of these indicators were available at the NUTS 3 level (counties) and at the NUTS 4 level (municipalities). Because there is often a mix of leading and lagging municipalities which are hidden in the NUTS 3 aggregation, it was decided to focus on the data available at the NUTS 4 level. This allows for a more detailed comparison between levels of socio-economic well being in different parts of the country. The indicators selected were grouped according to the following themes: demographic, social well-being, investment and business, and agriculture. The most recent available data was used, the latest being January 1, 2006. In cases like investment where there can be large changes from year to year, three year averages were used to smooth the data.

b. Choice and use of indicators

The indicators identified were further used to construct indices which could then be added together in order to rank Lithuanian municipalities using a combined “rural development index”. The indicators which were used to construct this index are presented in Table 1. They are grouped according to four different dimensions of socio-economic wellbeing for Lithuanian municipalities: demographic status, social well being, business and investment, and agricultural indicators. We usually had several indicators in each category and in key variable selection process also used correlation analysis and principal component analysis statistical methods to guide selection and avoid using available indicators that were highly correlated with each other.

Table 1. Indicators used to construct the combined rural development index

<table>
<thead>
<tr>
<th>Demographic status</th>
<th>Social well being</th>
<th>Business and investment</th>
<th>Agricultural</th>
</tr>
</thead>
<tbody>
<tr>
<td>– Percent of population over working age Jan 06 (-)*</td>
<td>– Unemployment rate 05 (-)*</td>
<td>– New business formation, average 03/02 to 05/04(+)*</td>
<td>– Ave farm size (+)*</td>
</tr>
<tr>
<td>– Average annual population change 04/03 to 06/05(+)*</td>
<td>– Average earnings per capita 05 (+)*</td>
<td>– Investment per capita in tangible fixed assets, average 03 to 05(+)*</td>
<td>– Ag Land Quality (+)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– FDI per capita, average 03-05 (+)*</td>
<td>– Percent of agricultural employment (-)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>– Holdings as % of agr land (+)*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>– LFA as % agr land (-)*</td>
</tr>
</tbody>
</table>

*indicators used in calculating index, + positive indicator, - negative indicator

Since these indicators were expressed in different forms such as percentages, hectares, litas per capita etc, they needed to be standardized so a composite index could be constructed. The standardized data is \( Y = \frac{(X - \text{mean } X)}{\text{standard deviation } X} \), so that adding across all municipalities sums to zero. Each thematic index is formed by giving the same weight to each of the indicators within that theme. For example, unemployment and average earnings per capita each have a 50%
weight in the Social Well-being index. For the purpose of constructing a composite rural development index it was decided to add the four thematic components together with equal weights (though they could as well be given different weights depending on priorities of policy makers). These indices were used to create five categories of territories: (i) leading, (ii) promising, (iii) intermediate, (iv) lagging, and (v) severely lagging. Cities are outside as an additional non-ranked category.

**Key Findings**

a. **Spatial Characteristics of Social and Economic Well Being in Lithuania**

Less favoured areas, Problematic areas, and territories where Less Favoured Areas and Problematic Territories overlap tend to be disbursed throughout the country, except in the more productive central area and near the larger cities in the East and West of Lithuania. However, there is some clustering of ‘problematic’ areas along the borders with Belarus, Poland, and Russia. Again, these classifications are not sufficiently specific to separate the lagging from the promising region. While the above measures represent a useful starting point for understanding the spatial distribution of socio-economic well being in Lithuania, it relies on a limited set of indicators.

The set of indicators chosen in this study according to the recommendations of Bryden and colleagues (Bryden, 2001; 2002; 2004), OECD (1994 and 2002) and the European Commission (Guidance Note G, 2006) include indicators of demographic status, social well-being, business and investment, and agricultural performance and potential (presented above in table 1). Each of these categories represents a separate index of socio-economic well being in Lithuania. The following are the main findings of the analysis of the spatial distribution of each of these indices.

- The spatial distribution of the index of demographic status suggests that the leading regions (which have low levels of retired population and high levels of population increase) tend to be clustered around Lithuania’s cities. On the other hand, municipalities which are lagging demographically are clustered in Northeast and South of the Country (with the exception of Kelmės and Šakių municipalities).

- According to the social well-being index, there is a cluster of lagging municipalities along the border regions, while other lagging municipalities tend to be dispersed throughout the country. There are two major groups of leading municipalities, one clustered in the center of the country in close proximity to the urban areas of Vilnius and Kaunas, while the other cluster is along the coast and Northwest in proximity to the port city of Klaipeda, resort city of Palanga and the industrial city of Mažeikiai. The indicators used for this index included unemployment and average earnings per capita.

- The distribution of lagging and leading municipalities according to business formation and investment follows a pattern with leading municipalities tending to be in close proximity to major urban areas, resorts and industrial towns, while lagging municipalities are more remote from these economic activity poles and/or clustered along the borders with Russia, Poland, and Belarus.

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- According to the index of agricultural performance and structure both lagging and leading municipalities form distinct clusters that appear unrelated to urban proximity but rather to land resources and productivity. Accordingly, leading agricultural municipalities are clustered in the center of the country, while lagging areas are clustered in the East, Southeast and Southwest, where soils and land productivity are lower. This is somewhat different to the spatial distribution of other indices.

b. The Combined Rural Development Index

The final element of the analysis is the combined rural development index, which merely combines all four thematic indices into one, with equal weights given to each of them to create a measure for classifying lagging rural areas in Lithuania. Five categories of municipalities are designated – leading, promising, intermediate, lagging, severely lagging, and cities (table 2). Those which fall into the lagging or severely lagging categories tend to be more remote from urban or industrial centers and/or located on the border with Russia, Poland or Belarus. It is also the case that no lagging or severely lagging municipality is adjacent to or contains a city.

Table 2. Distribution of municipalities according to combined rural development index (according to 2006–2007 data)

<table>
<thead>
<tr>
<th>Categories</th>
<th>Municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severely lagging</td>
<td>Lazdijai d. (district), Ignalina d.</td>
</tr>
<tr>
<td>Leading</td>
<td>Klaipėda d., Kaunas d.</td>
</tr>
</tbody>
</table>

Conclusions and Recommendations

The extended process of collecting data and comparing characteristics of different municipalities has clearly demonstrated the importance of abundant and high quality data at the most detailed possible level. This is especially a problem in rural territories, where there is less data available. Separating rural territories from urban areas is practically impossible except for the major cities. In general, there is a need for more years of data and more recent data for some factors. NUTS 3 level data are not very helpful because they are too aggregate to identify territorial differences, but data for NUTS 4 and NUTS 5 levels is rather limited.

Diagnostics will be improved if better data is available, and more and better data would help improve program design and implementation. Improved data should include more indicators reported by Department of Statistics, improving coverage of existing data for rural area, and possibly surveys to gauge the attitudes
and behavior of the rural population. Among the most important data that are not available at the NUTS 4 level are GDP or income per capita and the education levels of the population (which would reflect the quality of labour).

A well organized and detailed monitoring system would be of great value in tracking the improvements or deterioration of conditions in different communities and regions. It would be a way to institutionalize the type of analysis of territorial characteristics that has been reported here.

In order to improve access of disadvantaged or lagging areas to the programs and development resources of EU and national programs, it is important to take a place-based approach to evaluation of needs and the development of solutions. This includes building the capacity of peripheral and lagging areas through training and bottom-up approaches to local development, designing and managing programs so that there is wide access available. One of the ways to do it could be application of regional financial envelopes as indicative funding levels to encourage broader participation and to prevent project resources from being monopolized by a few large projects in prosperous regions (Saktina, 2006, Ribašauskienė, 2007). The socio-economic indicators discussed above could also be used to target more funding to lagging areas. Such an allocation approach could be designed for specific measures or a broader range of activities or programs. Important policy decisions on such envelopes are where and when to apply them, what factors to include in them, what weights to use if more than one indicator would be needed for that, and finally a mechanism for reallocation of funding resources if a region is not able to use it. Increased funding to lagging regions could serve the enhanced development of human resources, add to deficient private share of project funding in case of good local projects.

Finally, there are different problematic areas with potentially different criteria for support during the 2007–2013 programming period, but it could be useful to consider all the lists of disadvantaged areas in applying measures to different territories. For example, the Ministry of Interior is looking only at their set of two indicators, which this study shows are not correlated with income and investment differences. Also these two indicators, share of unemployed and share of social allowance recipients, are too highly correlated between themselves and practically describe the same disadvantage. Other indicators, as those in this study, for example, income per capita could be considered for better capturing of territorial differences.

While some of MoI Problematic Territories are the same as in this study, some of the lagging ones identified in this study are not included in the MoI list, and some of their “disadvantaged areas” are not disadvantaged ones according to other indicators. So the method of this study with a broader list of indicators could be helpful in reassessing the ranking of assistance receivers.
References

TERITORINIAI RODIKLIAI KAIMO PLĖTRAI: ATSILIEKANČIŲ LIETUVOS VIETOVIŲ NUSTATYMAS

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Santrauka

Straipsnyje aptariami diagnostiniai rodikliai, skirti teritorinių socialinių-ekonominių skirtumų nustatymui, teikiamos rekomendacijos dėl šių rodiklių naudojimo kaimo ir regioninės plėtros priemonių paramos skyrimo sprendimuose. Iki šiol Lietuvoje Europos Sąjungos remiamose kaimo ir regioninės plėtros priemonėse teritorinis aspektas buvo mažai taikytas, finansavimas, iš-
skyrus Kaimo plėtros plano priemonės Mažiau palankios ūkininkauti vietovės paramą, koncentravosi ekonomiškai stipresnėje vietovėse.

Šio tyrimo analizēje taikytų metodologiją sudaro keli skirtingi metodai. Pirmiausia buvo apžvelgti įvairūs esami kaimiškumo bei socialinio ir ekonominio atsilikimo rodikliai. Po to šis išsamus rodiklių sąrašas buvo peržiūręs siekiant sumažinti rodiklių skaičių iki svarbiausių rodiklių rinkinio ir suformuoti „Jungtinį kaimo plėtros indeksą“, apimantį demografinį, socialinęs gerovęs, verslo ir žemės ūkio aspektus.

Straipsnyje pateiktos tokios pagrindinės rekomendacijos: detalnesnį duomenų rinkimas savivaldybių (NUTS 4) lygmenyje siekiant geresnės diagnostinės paramos politikams sprendimams; geresnės paramos paskirstymas atsiliekančiems regionams ir gebėjimų stiprinimas juose suteikiant daugiau kokybės mokymų bei techninės paramos; straipsnyje pristatytų indeksų taip pat siūlomi naudoti teritorinei stebėsenai įgudžinant KPP ir kitoms programoms.

Raktiniai žodžiai: atsiliekančios kaimo vietovės, problemiškas teritorijos, mažiau palankios ūkininkauti vietovės, kaimo plėtros indeksai, vokai, regioninė plėtra.

ТЕРРИТОРИАЛЬНЫЕ ПОКАЗАТЕЛИ ДЛЯ СЕЛЬСКОГО РАЗВИТИЯ: ОПРЕДЕЛЕНИЕ ОТСТАЮЩИХ МЕСТНОСТЕЙ ЛИТВЫ

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Резюме

В статье обсуждаются диагностические показатели, предназначенные для установления различий социально-экономического развития территорий, предлагается рекомендации для использования этих показателей при политических решениях распределения ресурсов помощи в средствах сельского и регионального развития. До настоящего времени в литовских средствах сельского и регионального развития, поддерживаемых Европейского Союза, территориальный аспект мало употреблялся и, с исключением средств Плана сельского развития “Меньше благоприятные территории сельского хозяйства” финансирование сконцентрировалось в экономично более сильных местностях.

В этом исследовании примененную методологию составляют несколько разных методов. В начале были рассмотрены существующие показатели, определяющие сельские местности и социально-экономическую отсталость территорий. После, этот список показателей был пересмотрен для выявления списка самых главных и сформирования “Объединенного индекса сельского развития”, который включает демографические, сельскохозяйственные индикаторы, индикаторы социального благополучия и бизнеса.

В статье предложены такие основные рекомендации: более детальное собираие данных на муниципальном уровне (NUTS 4) для более метких политических решений; лучшее распределение ресурсов для отстающих регионов и укрепление способностей в них через дополнительные качественные учения и техническую поддержку; в статье представленные индексы также предлагаются употреблять для территориального мониторинга во время выполнения Программы сельского развития и других программ.

Ключевые слова: отстающие сельские местности, проблематичные территории, наименее благоприятные территории сельского хозяйства, индексы сельского развития, конверты, региональное развитие.