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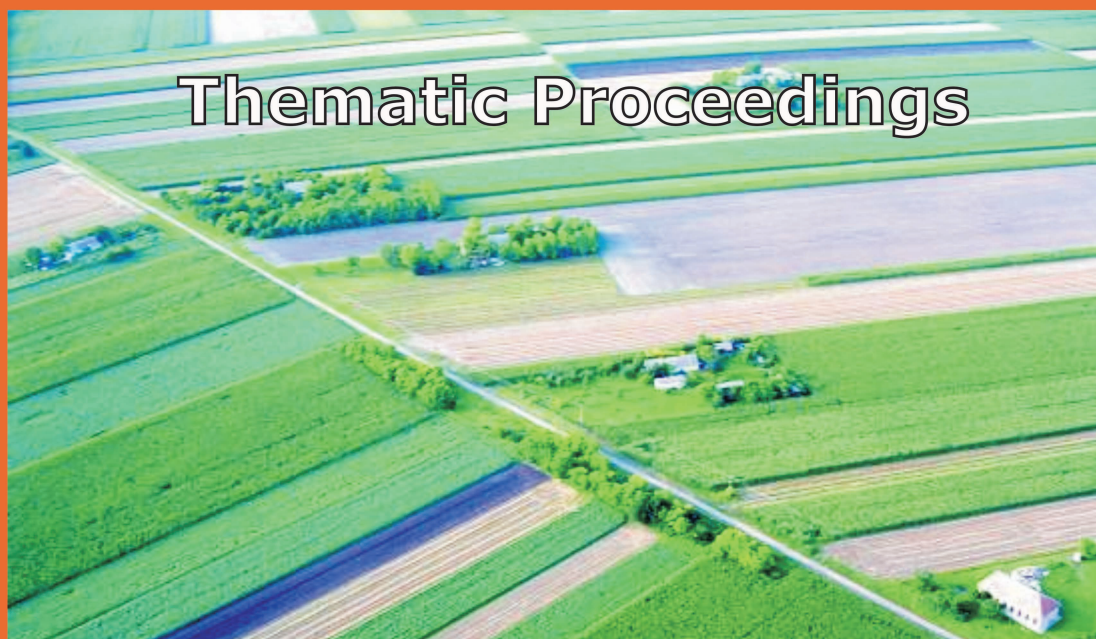
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DEVELOPMENT OF AGRICULTURE AND RURAL AREAS IN CENTRAL AND EASTERN EUROPE



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LABOUR MARKET AND RURAL DEVELOPMENT PERSPECTIVES

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1. INTRODUCTION

From the traditional point of view, the economic development theory is generally used for the basic economic growth and development factors explanation. More recently, a special attention in the economic development theory has been paid to the regional and interregional differences, including rural-urban dichotomy observations. It is also important to notice that transition process strongly supports the idea of regional concentration of new businesses, foreign direct investments and employment growth. The cities agglomerations characterized by diversified industrial structure, good infrastructure and high skilled labour, are more attractive than specialized (so-called mono-industrial) regions. The first group is consisted of small number of regions with good economic performances. The other group is represented by large number of poverty-stricken regions.

Previously explained differences are usually matched with urban-rural relations. Thus, rural regions economic development theory has to generate the high-achieving answer *how rural development policy can stimulate economic growth in rural regions*. In that context, three main approaches can be distinguished: (1) the exogenous development approach; (2) the endogenous development approach; (3) the mixed (exogenous/endogenous) development approach. (Ida J.T, 2001) The main factors of rural development in exogenous models are externally determined. Till the 1970s this approach tended to be the dominant model for rural development explanation. Economic development models derived from this position are considered as pure agglomeration models. From this point of view, rural development is largely dependent on and externally determined by the urban regions development. This kind of theories did not result in sustainable economic development, especially not in rural areas. The rural areas local resources have to be evaluated more specifically. Thus, local development factors and values are considered as rural economy development impulses in the endogenous development approach. Intensive interaction and cooperation between local actors can be considered to be prerequisites for the success. Mixed development approach rejects polarization by confirming existence of important connection between local and external rural development forces. In this approach, the analysis of economic development is considered as an analysis of complex, both local and external,

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networks. It is important to notice that rural economy perspectives in developed countries have been built on mixed approach based on local and external factors interaction.

Rural areas development relay on labour availability and quality. It is a key factor of rural prosperity. In the PAIS - *Proposal on Agri-Environmental Indicators*, 27 rural indicators (almost 50%) are based on population and labour (*Population and migrations* – demographic and changes; *Social well-being* – employment and quality of employment; *Economic structure and performance* – enterprises, human capital and structure). Parallel, list of internationally adopted OECD themes, applied in rural development monitoring of *Economic structure and rural regions performance*, consists of following indicators: labour, employment, enterprises and sector structure, productivity, as well as investments. Labour market performances indicate employment possibilities and perspectives for rural economy diversification. This analysis can support rural policy conceptualization. It is important to point out that approach suggested in this paper does not diminish other rural development indicators importance. Labour market characteristics evaluation leads us to human capital value identification in a specific rural region. Thus, the key indicator of a rural economy state and perspective can be derived from relatively simplified and accessible labour market statistics.

2. RESEARCH METHODOLOGY

Among priorities of *The National Employment Strategy of Serbia* (2005) decrease of regional differences is marked as the most important long run goal. Unfortunately, in this study regional was not seen in the context of rural-urban dichotomy. In this strategy labour market rigidity and relatively low labour force mobility among regions in Serbia is noticed. In the context of less favoured areas revitalization, job creation inside region gets on importance. It is also well known that term underdeveloped region in Serbia is synonym for rural area. This paper analysis starts with an overview of methodology applied in the rural labour market composite index determination. It is derived from original labour market mapping study in Serbia (Mihail Arandarenko ed., 2006) and adjusted for specific purpose of analysis – synthetic rural labour market index definition.

It is already mentioned that *The National Employment Strategy of Serbia* was not dealing with rural-urban differences. Furthermore, even in *The Agricultural Strategy of Serbia* (2004) very little attention on rural development was paid. Rural is equalized with less-favourable. Scientific research projects – *Agriculture and Rural Development of Serbia in the International Integration Processes* and *Multifunctional Agriculture and Rural Development in the function of EU integration*, both financed by the Republic of Serbia Ministry of Science (2006-

2010) are attempting to change this situation. These studies argue that territorial scheme applied in rural regions definition must distinguishes two levels of geographic detail: local community (municipalities) and regions (counties). According to international organizations, a wide range of criteria for the designation of “rural” areas consists of following: (1) size of population (total or agglomerated, absolute or relative); (2) population density (in relation to total or usable area); (3) commuting intensity (towards major cities or labour market centres); (4) share of agriculture (either in employment of in value added). (Way, 2003) In this paper analysis definition of rural area as a local community with a population density below 150 habitants/km² is used (OECD, 1996).

Table 1 Classification of regions in Serbia by degree of rurality

Degree of rurality	Number of regions	% Population	% Land area
Predominantly rural regions	18	55	75
Significantly rural regions	6	24	21
Predominantly urban regions	1	21	4
Total	25	100	100

Source: Bogdanov and Stojanovic (2007)

At the local community level the territorial grid is very detailed and consists of small, basic administrative or statistics units. This area is classified as being either rural or urban. At the level of larger administrative units or functional zones (counties or labour market areas), regions can usually be characterised only as being more or less rural. A typology of regions in Serbia is based on their degree of rurality according to the share of their population living in rural communities. Communities are divided into rural and non-rural depending on their population densities using OECD criteria. Then, on NUTS 3 level regions are qualified as follows: (1) Predominantly rural – more than 50% of the population in rural communities; (2) significantly rural – between 15 and 50% of the population in rural communities; (3) predominantly urban – regions below 15% of the population in rural communities. Predominantly urban region is only territory of Serbia capital city – Belgrade. Main characteristics of rural Serbia are presented in table 1. Rural Serbia (significantly rural and predominantly rural regions) consists of 24 counties and 144 municipalities.

Table 2 Labour market composite index structure

Indicator	Aspect	Sign	Group
GNP per capita in 2003 (RSD)	I	+	A
Share of agricultural population, 2002	I	-	A
Illiteracy rate (%)	I	-	A
Index of GDP per capita, 2003/2001	II	+	A
Unemployment rate in 2004	I	-	B
Participation rate in 2004 (%)	I	+	B
Share of long term unemployment (over one year) in %	I	-	B
Average wage 2004, per employed (RSD)	I	+	B
Job vacancy to unemployed ratio in 2004	I	+	B
Labour market demographic index	II	-	B
Share of LF members with higher education, %	II	+	B
Share of LF with primary school or less, %	II	-	B
Share of main industry in total employment (diversification measure), %	II	-	C
Share of private sector in total GDP 2003	II	+	C
Index of unemployment 2004/2001	II	-	C
Index of average wage 2004/2001	II	+	C
Foreign direct investment by September 2005, per capita	II	+	C

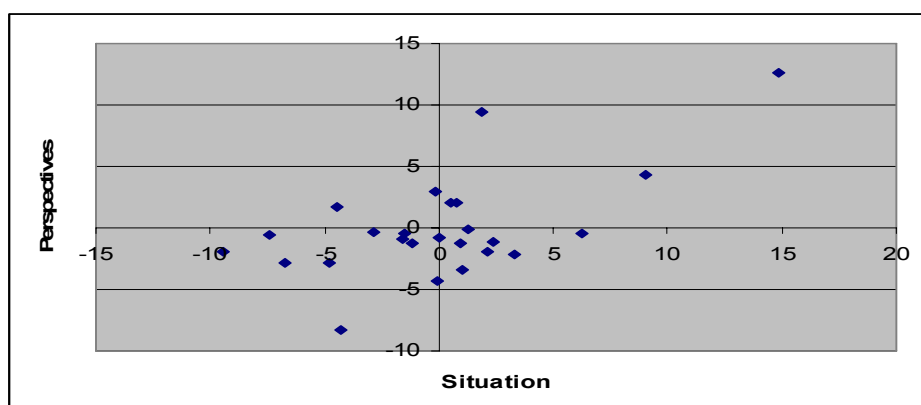
(List is modified according to Mihail Arandarenko, ed. (2006), p. 37-38)

In order to provide an overall view of rurality under certain circumstances composite indexes (developed from a combination of individual indicators) might be useful. Composite measures of individual labour market indicators are designed to give an easy overview of a complex array of labour market statistics. It is important to open and make understandable composition of summary labour market index (table 2). In the context of this paper analysis, labour market risks had been evaluated as the result of previous development processes (Aspect I) and probability of future prosperity (Aspect II). This analysis suggests that most significant indicators of rural labour market composite index are connected with labour market characteristics (Group B). In the explanation of the synthetic index, rural labour market prosperity factors are used as the second most important group of indicators (Group C). Finally, during composition of labour market index current state of general economic conditions in the region is marked as the third one (Group A). Statistical set of data (separately often not expressed in the same measurement unit) are standardized by their average deviation divided by their standard deviation. Thus, all standardized indicators take same average (0) and standard deviation (1) values.

3. RESEARCH FINDINGS AND CONCLUSION

Analysis of rural labour market composite index gives us an idea for rural areas classification. According to the partial group of indexes placement in proportion to the total average for Serbia, four typical groups of regions might be extracted. The

static-dynamic aspect of analysis aloud us rural regions differentiation in the following groups: (1) good situation, good perspectives; (2) bad situation, good perspectives; (3) bad situation, bad perspectives; (4) good situation, bad perspectives. Designed according to their sign of synthetic indexes I and II (situation and perspectives), four types of regions are presented in Descartes system (graph 1.)



Graph 1 Rural regions classification in Serbia,
according to labour market current position and developmental potentials

As it can be seen from the graph above, most regions in Serbia are described with attributes good situation and bad perspectives, or bad situation and bad perspectives. Rural regions in Serbia are suffering of extremely bad situation according to current state and perspectives of rural labour market. In the area described with words good situation, good perspectives only five regions are placed: City of Belgrade, Juzno-backi, Sumadijski, Branicevski and Nisavski county. The worst situation was marked in significantly rural region at south of Serbia - Jablanica county. Research findings related to the components of rural labour market index ranking are presented using counties relative position (table 3).

Table 3 Counties in Serbia according to labour market index ranking

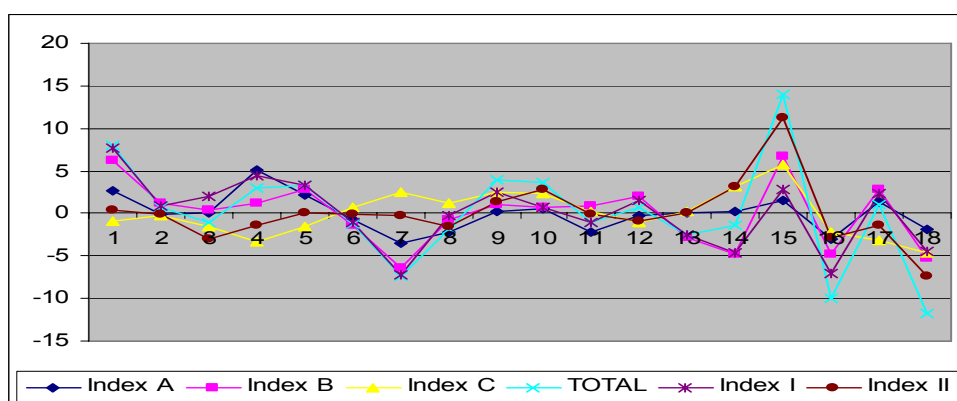
No	Counties	Index A	Index B	Index C	Total	Index I	Index II
1	Belgrade	1	1	2	1	1	1
2	Severno-backi	4	3	15	4	3	10
3	Srednje-banatski	16	13	14	13	13	13
4	Severno-banatski	15	15	18	15	9	23
5	Juzno-banatski	2	12	23	12	4	20
6	Zapadno-backi	5	7	19	8	5	15
7	Juzno-backi	3	2	10	2	2	3
8	Sremski	18	18	11	17	18	14
9	Macvanski	24	24	5	22	24	12
10	Kolubarski	22	17	8	16	16	16
11	Podunavski	14	11	7	9	8	8
12	Branicevski	10	10	6	5	11	6
13	Sumadijski	8	8	9	6	12	5
14	Pomoravski	9	14	4	7	15	4
15	Borski	21	9	13	14	17	11
16	Zajecarski	17	6	17	11	10	17
17	Zlatiborski	13	19	12	19	19	9
18	Moravicki	12	16	24	18	14	24
19	Raski	11	22	3	20	21	7
20	Rasinski	20	20	21	21	22	21
21	Nisavski	6	4	1	3	7	2
22	Toplicki	23	21	20	23	23	22
23	Pirotski	7	5	22	10	6	19
24	Jablanicki	25	25	16	24	25	18
25	Pcinjski	19	23	25	25	20	25

Legend:  Predominantly rural regions
 Predominantly urban regions
 Significantly rural regions

According to total labour market composite index, the best ranked predominantly rural region is Nisavski County, placed at south of Serbia. It is interesting to notice this county best position at the Index C (even better than capital city of Serbia – Belgrade). Index C was used to evaluate labour market perspectives in the region. Significant influence at the good perspectives on this region labour market situation in the future can be explained by large amount of FDI as external developmental factor. The largest tobacco industry in Serbia (DIN) is placed in this region and privatised by Philip Morris Company. On the other hand, the worst

position on the list according to the total labour market composite index hold predominantly rural region - Pcinjski County. The almost same situation is recorded at the Jablanicki County – the worst positioned significantly rural region in Serbia. Both regions are placed at south of Serbia and both of them are struggling with mono industrial structure and bad perspectives related to labour market demographic index development. These regions will be exposed to permanent outgoing migration of rural labour force.

Labour market rigidity and relatively low labour force mobility among regions in Serbia direct our attention to less favoured areas revitalization by job creation inside the region. The differences noticed in the predominantly rural regions position (related to rural labour market index structure) are most reflected at the south regions of Serbia (graph 2).



Graph 2 Synthetic labour market index (total and components)
in the predominantly rural regions of Serbia

Analysis of correlation coefficients for composite indexes let us to emphasize a few important relations at the rural labour market: (1) total index is significantly correlated with Index B – labour market indicators; (2) Index II, marking perspectives of rural economy development, is significantly correlated with Index C – describing rural labour market basic changing directions (table 4). Basically, correlation coefficients show high connection between total index and all groups of indexes. The most important correlation is established with the rural labour market index (group B) and the less importance is recorded with positive changes in the area of economic reforms and restructuring (Index II).

Table 4 Correlation matrix

Table 4 Correlation matrix	Total	Index I	Index II	Index A	Index B	Index C
Total	1.000	0.932	0.847	0.850	0.973	0.502
Index I	0.932	1.000	0.605	0.910	0.960	0.209
Index II	0.847	0.605	1.000	0.601	0.724	0.834
Index A	0.850	0.910	0.601	1.000	0.839	0.165
Index B	0.973	0.960	0.724	0.839	1.000	0.316
Index C	0.502	0.209	0.834	0.165	0.316	1.000

As a consequence of developmental conditions in the past, Index B composed of labour market indicators show highest correlation with current situation (0.84), and the lowest correlation with factors that were used to describe positive changes and perspectives (0.17). Labour market is still under pressure of situation influenced by previous developmental conditions. On the other hand, positive reforms processes are not significantly strong in terms of capacity for changing heritage. But when the predominantly urban region – City of Belgrade had been excluded from analysis, important difference in Indexes A and C correlation was appeared. Calculated negative correlation (-0.015) shows regional policy changing direction – less favourable areas in Serbia will be exposed to stronger community support measures in order to provide balanced regional development model in Serbia, including urban-rural relations. Rural economy development factors should be seek within mixed exogenous/endogenous rural development approach, with special attention paid to a key factor – human capital.

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