INNOVATION OF ORGANIZATION MODEL FOR INTEGRAL RURAL DEVELOPMENT - SERBIA CASE STUDY

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Summary

The experience of the EU in the way of stimulating rural development has been accepted as a starting position in Serbia. The level of economic growth, even in rural areas, despite efforts is not at the desired level. Ways to stimulate rural development process are researched deductively on the example of two municipalities in Sumadija, Serbia. The result of the research pointed to the need to specify the policy of integrated rural development of the municipality and the need to innovate the existing models of organization. It is concluded that the policy of rural municipalities should be directed to: active access to finance, identity politics, and continuing education. Innovation in the organization involves: an Initiative team who prepare the documentation as a basis for decision-making, implementation of agricultural incubator (a symbiosis of business, technology and incubator for a quality management system), and establishing a system of vertical mergers.

Key words: Integral Rural Development, the model of organization, an agricultural incubator.

JEL: Q180, R1, Q190, M2.

Introduction

Integrated Rural Development (hereinafter referred to as IRD) is accepted as a concept of agriculture in the Republic of Serbia, including: primary agricultural production, industrial food production, and, the processing of medicinal herbs. IRD “unites the social, economic, cultural, environmental, demographic, spatial, and any other important component of the development of a particular area (Stevanovic et al., 2013), or the...
integrity of social life in local communities with it” (Günther, 2012). The implementation of the concept of IRD directs the (political) decisions of state authorities (state and municipalities), which are focused on economic and organizational measures. Stop the negative demographic trends may be improving the quality of life, therefore, investment in infrastructure, diversification of economic activities and the development of creative industries appropriate to a rural area.

Development of rural areas has multiple importance for any country. To that extent, measures encouraging an integrated rural development exceed, until recently, the dominant, the politics of agriculture. The European Economic Community, and Economic Union comprehend the importance of rural development and launched a project LEADER (acronym in French reads: Liaisons Entre Actions de Development de l›Economie Rurale - a network approach means economic development of rural areas), with the aim of encouraging IRD.

Program Leader I is focused on funding projects based on the presented business plans (Malesevic, 2004). Although this program has given positive results, the following program (LEADER II) has enabled the development of regional and local networks - local action groups (LAGs). The role of LAGs to be operators of development (for municipalities) existing and encourage entrepreneurship. The immediate task of LAGs is to encourage innovation and entrepreneurship with emphasis on the formation of business incubators and clusters.

Stopping the negative tendencies of development of rural areas can be the integration of primary, secondary and tertiary sector. Declaration of Cork (Malesevic, 2004) is introduced multi-partnership (state representatives, business and other subjects), with emphasis on the involvement of local people in creating strategies. Local participation paves the way for traditional forms of solidarity and self-help, characteristic of a particular rural area. Incentives for rural development has been directed toward investments in infrastructure, diversification of farm activities, employment in industry and services (especially tourism), and, improving the quality of life. At the same time, it was developed a process of enlarging the agricultural area within a single farm.

Twenty years ago (1993) were formed County Enterprise Boards (CEB) at the regional level, with the aim of encouraging (horizontal and vertical) connection. Board members, in addition to the director of the local LAGs, are: representatives of state bodies and agencies, non-governmental organizations, trade unions, farmers, local businesses and others. Their role was to: promote the development of entrepreneurship, connecting entrepreneurs with relevant institutions; actively communicate with financial institutions, and government agencies and authorities; provide training and continuing education for a variety of business activities.

However, the application of the concept of IRD, created by the potential of developed states of the European Union (hereinafter EU) is facing some difficulties in countries that are at the approximate level of development as well as Serbia.

Experience in Ukraine indicates problems faced (Moroz, 2013): „Special attention ought to be devoted to promote cooperation between households. Such cooperation should comprise
not only agricultural production activities, but also the processing, storage, transportation, sale of agro-food products, provision of different services, etc. The creation of cooperative structures ought to be initiated by households themselves, rather than being imposed from the outside. “It insists on the radical change of the role of rural households and the necessity of understanding the possibilities and advantages of association and the development of industry and services.

Indicative problems IRD observed in Romania, due to its membership in the EU. A survey (Mikulcak, et al., 2013) noted problems in the financing of agricultural holdings. The reason is insufficient compliance with the terms of the concept of EU and limitations of development of agricultural holdings.

**Method of research**

The subject of this research is the concept of IRD in Serbia, as seen at the municipal level. Focus is placed on the application of established policies and restrictions on agricultural development in Serbia.

Attention is focused on two the municipalities of Sumadija: Rekovac and Smederevo. Municipality Rekovac is extremely underdeveloped municipalities, and in Smederevo rural area covers about 40% of its territory and population. The difference in demographic characteristics, level of economic development and infrastructure, transportation, tourism, and industry resources suggests a deductive approach to the comparative analysis of these municipalities. Internal documents of the observed municipalities are the primary source of data. They were supplemented by the use of various documents adopted by the Parliament and the Government of the Republic of Serbia, Institute of Statistics of the Republic of Serbia, the National Bank of Serbia and other available sources.

The determination of the innovated model of organization (with the aim of accelerating IRD) will include a variety of entities created by the municipality or organizational unit within the administrative authority of the existing forms of association observed in the territory of the municipality. In this regard, it is considered that the innovation model of organization IRD depends on achieving the following hypotheses:

1) It is justified request specifying the IRD policy at the municipal level in the Republic of Serbia.

2) The role of the state (from the bodies of the municipalities to the level of the Republic) is inevitable in the integration of all available resources.

3) Implementation of policy IRD in Serbia depends not only on compliance of the economic measures but also on the established model of organization.

It is understood that the result of the analysis should be formulated in an appropriate proposal.
Analysis of rural development municipalities Rekovac and Smederevo

The present moment development of Serbian economy means inadequate and unstable GDP growth, high unemployment, trade and budget deficits, and high public debt. “In the past twenty years the GDP Serbian economy has been reduced to 60% of the level in the nineties of the twentieth century. Industry participation in the economic structure 2009 was 15.9%, lower than the share of industry Yugoslavia immediately after World War II - about 20% (Stevanovic et al., 2013). “In 2012, there was a negative GDP - a decline of 2%, while public debt has reached 60% of GDP (Stevanovic et al., 2013). However, in the previous year was recorded GDP growth of 2.5% (NBS, 2014), with an increase in the public debt to around 63% of GDP (Ministry of Finance of the Republic of Serbia, 2014). The physical volume of agricultural production in 2013 increased compared to the previous 21.5% (Statistical Office of the Republic of Serbia, May, 2014) turnover in retail trade fell by 2.7%; salaries and wages, expressed in nominal terms, increased by 6.2%, but the real decline of 1.5% (Ministry of Finance, 2014). Inflation has been reduced to about 2.2% (NBS, 2014).

Municipalities Rekovac and Smederevo are in Sumadija and belonging to different regions. Municipality Rekovac Gledic is surrounded by mountains (the highest peak of 922 m above sea level) and the mountain Juhor, between which is a plateau - basins Levac. The municipality of Smederevo is situated along two major rivers: the Danube and Morava and slightly wavy lowland soils. Close to two major rivers are the territory of Smederevo much richer Water Resources in relation to the municipality Rekovac. Air in the municipality of Smederevo and Rekovac and is temperate continental, with approximately the same climatic characteristics.

Among the surveyed municipalities there are significant differences in the number and structure of population and level of economic development. The municipality belongs Rekovac least developed municipalities in Serbia, which is dominated by primary production. Smederevo has significant industrial potential and developed infrastructure solutions.

Table 1. Basic statistics of municipality

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Number of population</th>
<th>Area [km²]</th>
<th>Number of resorts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smederevo</td>
<td>109,809</td>
<td>484</td>
<td>29</td>
</tr>
<tr>
<td>Rekovac</td>
<td>10,987</td>
<td>366</td>
<td>31</td>
</tr>
</tbody>
</table>

Source: (Municipality Rekovac, 2011), (Municipality of Smederevo, 2013)

According to the last census, in the city of Smederevo area live more than 60% of the population, and in the Rekovac about 1,600 residents of the municipality. Municipality Rekovac characterized by extremely negative demographic trends. After a period of intense immigration, the latest census shows that the trend of population growth of Smederevo, but with a slightly pronounced negative demographic trends in the past decade.
Very unfavourable age structure is in REKOVAC, with 47.96% of the population older than 55 years (Nikolic and Ivanis, 2013). In addition, unfavourable structure and in terms of the share of highly educated population (total population over the age of 15 years) in the municipality Rekovac (5.3%), while in Smederevo is 8.00%. The age structure of the population is somewhat better in the municipality of Smederevo, where over 55 accounts for over 23% of the total population.

Dominant natural resource in both municipalities is high quality agricultural land (Table 2).

Table 2. Land use categories (in ha), 2012

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Smederevo (ha)</th>
<th>Rekovac (ha)</th>
<th>Share in total agricultural area (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Area - Total</td>
<td>32.980</td>
<td>21.636</td>
<td>100</td>
</tr>
<tr>
<td>Arable land</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cereals</td>
<td>26.826</td>
<td>12.478</td>
<td>81.34</td>
</tr>
<tr>
<td>Industrial plants</td>
<td>20.079</td>
<td>6.623</td>
<td>60.88</td>
</tr>
<tr>
<td>Vegetables</td>
<td>552</td>
<td></td>
<td>1.67</td>
</tr>
<tr>
<td>Roughage</td>
<td>2.966</td>
<td>1.524</td>
<td>8.99</td>
</tr>
<tr>
<td>Orchards</td>
<td>3.229</td>
<td>4.331</td>
<td>9.79</td>
</tr>
<tr>
<td>Vineyards</td>
<td>3.764</td>
<td>3.174</td>
<td>11.41</td>
</tr>
<tr>
<td>Pastures and meadows</td>
<td>1.675</td>
<td>794</td>
<td>5.08</td>
</tr>
<tr>
<td>Ponds, swamps and marshes</td>
<td>584</td>
<td>5.190</td>
<td>1.77</td>
</tr>
</tbody>
</table>

Source: (Municipality Rekovac, 2011), (Municipality of Smederevo, 2013)

The level of economic activity it is difficult to assess the positive assessment. The situation is somewhat better in Smederevo, with over 13,500 employees and about 9,000 unemployed. On the territory of the municipality there are about 800 legal entities and over 3,000 entrepreneurial activities. Two companies (U.S. Steel and Sinvoz with about 8,000 employees) exist in the expectation strategic partners from abroad. In Rekovac is business actively until about 60 (small and micro) enterprises and about 180 (mostly commercial and craft) shops. And in Rekovac is present problem unfinished process of privatization of agricultural households and industrial facilities. In both municipalities have not been completed bankruptcy of several agricultural enterprises, and the significant areas of agricultural land are not used.

City of Smederevo has a significant investment potential, and is prepared in a more significant area equipped with infrastructure of industrial zones. In the last quarter of 2013 opened the drive with a projection of employment more than 500 workers by the end of the investment (capital originating from Finland).

The municipality invests Rekovac also significant efforts aimed at encouraging rural development: creating documents (strategies and studies) IRD, Regional Planning and planning documents aimed at the design and construction of infrastructure and infrastructure. However, municipalities Rekovac as extremely underdeveloped municipalities, there are no accumulation of its own, and are sent only to the funds in the budget of the Republic of Serbia and donations from abroad.
The problem of infrastructure is especially pronounced in the municipality Rekovac. There are problems of water supply, operation and expansion of the sewerage network. The level of infrastructure development, as well as their own lack of accumulation is one of the limiting factors of rural development of the municipality.

A strong economy and a rich and fertile rural hinterland in Smederevo have well (for the situation in Serbia) road network and connection to Corridor 10, the opportunities for effective use of rail and inland waterway transport. The development of social services in accordance with the level of development and the number and structure of the population surveyed municipalities.

Municipality Rekovac has two elementary schools (with the appropriate number of protruding departments in rural areas) and the High school of Agriculture. From this year, in this municipality was opened a department accredited higher applications agriculture school from Prokuplje, which provided significant potential for improving the education system. Health care is provided by health centre, comprising works several clinics in nearby villages. Sports activities are taking place at an amateur level, and plans are building a sports centre in Rekovac.

On the other hand, the municipality of Smederevo has dissected the structure of primary schools (33 primary schools with 10,000 students) and 6 secondary schools (over 4,000 students). With the help of the Swiss government was formed a regional educational centre with the aim of continuous training of workers in education, or other expert profiles. Hospital in Smederevo engaged more than 280 doctors, dentists and pharmacists. In the municipality operates a cultural centre, library, museum, several galleries and other cultural institutions. In Smederevo seems more sports teams competing at the national level, a variety of indoor and outdoor sports fields for various sports, swimming pool with hot (geothermal) water.

Strategy of Sustainable Development of Rekovac (2011) pointed out the strategic objectives: the development of local infrastructure, the principles of sustainable development and environmental protection (Stevovic et al., 2014), development and adoption of urban-planning documents, in order to create favorable conditions for attracting investments, that is, the promotion of small and medium-sized enterprises and entrepreneurship; improving the quality of life of all citizens and the development of programs aimed at young people and their survival in the municipality Rekovac (Stevovic et al., 2011).

In Smederevo goals are directed towards comparative advantage: support existing industry and attract investment; development of transport (three modal transport); active measures to support the development of agriculture and manufacturing industry, i.e., the development of tourism. It also recognizes the importance of acquiring and applying knowledge, active management of demographic policy and environmental protection.
Politics IRD in Serbia

Economic effects of IRD in Serbia (research-proved the condition of the given sample) indicate the need to review the established organization.

Problem capabilities of local administrative units to have them direct and strengthen rural development, there has been a few years ago. The National Programme for Agriculture Serbia 2010-2013 (Ministry of Agriculture, 2010) is recommended that one should “support the construction of regional and local institutions to support rural development.” The same document emphasized that it should “organize programs directed towards strengthening the capacity of regional and local institutions to support rural development.” It was found that the units of local self-government may establish legal entities in support of the implementation of agricultural policy and rural development. Then, in the National Programme for Rural Development (2011) points out that “the development of an institutional framework directly affects the access of rural population to physical capital, financial and other services, technologies and markets, which determines the benefit of production as a result of using this capital and service”.

Experience IRD in Ireland, showed that seeks to establish an appropriate network organization. Bearing in mind the recommendations, it is the EU, and Serbia is specified organizational model that is expected to contribute to the faster development of rural areas. In line with these recommendations, in Serbia in the municipalities put into practice modelled the LAGs, i.e., the regional development centres. It is encourages the establishment of business incubators and clusters. Activities are being undertaken continuing education in agricultural production, i.e., mentoring with the goal of self-employment (mostly youth and other vulnerable groups). In addition, within each municipality operates Agricultural Development Fund.

However, the achieved level of rural development shows that the existing measures do not give the expected results. Demographic trends, and still have negative tendencies. Communal infrastructure development is slow, and the working conditions and quality of life do not have sufficient appeal to the younger population. It is ignored the politics of land management. Also, absent efforts to merging of agricultural land (commassation, for example) Cooperatives is suppressed, and clusters (as initiators of horizontal integration) and business incubators (aimed at entrepreneurship development) do not provide the desired results.

In accordance with the aforementioned, it is proposed to focus IRD at the municipal level to: 1) an active policy of providing access to financial resources; 2) potentiating of identity politics; 3) the development of a knowledge-based, and 4) innovation model of organization (Dlesk et al., 2013).

(1) The real sources of financing rural development funds are: the budget of the Republic of Serbia, the various EU funds, domestic and foreign investors, and of course, its own funds the municipality and its inhabitants. The role of local government is very important in attracting assets from these sources of financing already prepared projects,
and attracts investment. However, the expected amount of incentives and investments (certainly no more than 1-2 billion per year) is not sufficient to solve the current problems of IRD. Experiences in Romania, Ukraine and Serbia suggests that support for further development should primarily be sought in their own natural resources and available human resources.

(2) An amount of commodity excess that Serbia has to offer on the international market is relatively small. However, foods of plant and animal origin originating in Serbia have the quality that allows them to successful market. Identity politics means the performance of the market with products that have a brand and protected geographical origin or characteristics of traditional food. Products that have secured traceability of products from a particular geographic area, as well as built a tradition of production have the potential for more economic efficiency.

(3) Creation of excess demands of agricultural households that have knowledge of a wide spectrum. Modern food production include: proper application of agro-technical measures; proper selection of plant material, and racial composition of the livestock; provision of health food products; measures to preserve the environment; abilities and skills to use information technology; knowledge of the market economy in agriculture. Contemporary international trade is characterized by increasingly high demands of security health safety, and thus the introduction of the program and standards of safety and quality in the agricultural and manufacturing sector (HACCP, Codex Alimentarius, ISO, and GLOBALG.AP). Continuity in education, set on a large scale, is the main instrument for achieving development goals. Namely, how natural resources are scarce and limited - human potentials, its ability to innovative work - a key pillar of rural municipalities.

(4) The achieved level of rural development, strong fluctuations in the physical volume of agricultural production and the lack of desired results point to the need to upgrade existing models of organization. A similar conclusion is suggested in the above mentioned survey in Romania suggests to “bridge the existing organization” IRD in the EU (Mikulcak, 2013).

Innovation in the organization of rural development in Serbia

The purpose of the innovation of the institutions of rural municipalities is balanced development that leads to raising the quality of life. The starting point is the acceptance of the need: Strengthening the role of the municipal administration in stimulating the IRD, as a social movement of strategic importance, and the introduction of innovations in all aspects, including innovation model of the IRD.

The first step in updating the model of the development of rural areas is the formation of the Initial team at the municipal level. The Initial team would consist of representatives of local authorities, business associations, non-governmental organizations, business entities (companies, banks and other financial institutions), as well as scientific and professional staff. It is understood their volunteer involvement, similar to the Irish experience. The Initial team is the realization of the concept of IRD in all relevant dimensions.
Emphasis is placed on the role of the Initial team in establishing mini industrial plants. Structure Activity mini production facilities include the processing of foodstuffs of plant and animal origin, variety of alcoholic and non-alcoholic beverages; production of organic feed and extraction of medicinal plants. It is estimated that these projects require a relatively modest amount of investment from 50 – 100,000 Euro. The backbone of investing in mini-industrial plants would be a public-private partnership. Applying this concept will be to facilitate access to funds (domestic and foreign) that normally donate or invest in the development of underdeveloped areas. In this context, identity politics gained importance.

Example of Smederevo shows another possibility of innovation in the organization of rural development. In this city there are about sixty thousand inhabitants in the urban environment, with a strong industrial tradition. The task of Initial team may be creating a market in its own territory. For example, reliance on renewable energy sources (geothermal, thermal solar energy) can have multiple effects on economic development and quality of life in rural areas. At the same time, the experience gained engineering organizations would allow performance at home, and the growth and performance in the international market.

The second step and the development of the network of the IRD is a review of the characteristics and role of business incubators: helping entrepreneurs two to five years after establishment (rent space on favourable terms, accounting, legal advice, etc.). Business incubators (with conventional roles), in conditions of deep crisis, and with the current credit conditions in the banking market are not fertile ground for their activities in rural areas.

A key element of the innovation model of the IRD on the territory of is the establishment of agricultural incubators. Agricultural incubator simultaneously with business incubator should include technology incubator, and the incubator for the implementation of the quality management system (QMS), (Nikolic et al., 2008).

Contemporary business requires the application, including the transfer of agricultural technology (Nikolic, 2005) in the IRD: primary production and in the activities of mini-industrial plants.

The introduction of incubators for QMS is caused by creating the conditions for participation in the market (large retail chains in the country and abroad). Introducing standards require technical support, and then control its implementation, with the aim of ensuring performance in domestic and international markets.

Self-conquest of the above knowledge beyond human potential farm in Serbia, and in this fact is the reason for necessity of the establishment of agricultural incubator.

It is pointed out that the effect of technology incubators and incubators (QMS) is necessary to establish the vertical connectivity: science (research institutions, technology parks) - region (Innovation Centre) - Municipalities (development and consulting organization).

The third step of the innovation IRD is horizontally and vertically, connecting businesses (agricultural household, mini-industrial facilities, business services - logistics, tourism, etc.). To perform in the domestic and international markets, appropriate association (cooperatives,
business associations, clusters) can be made for the necessary concentration of capital market performance and providing funds for investment in the future.

**Conclusion**

The concentration of population in urban areas (which grow to megalopolis) indicated the need for a balanced development of rural areas. According to the practice EU and in Serbia accepted the concept of IRD as a support in improving the quality of life in rural areas.

Project future of the village with agricultural policy that encourages the enlargement of agricultural households (“full-time farms), their rationalization and specialization, and finally the design and establishment of desirable rural and agrarian structure indicating and economically sustainable farms presupposes the selection of appropriate and effective policies IRD, which is an integral part of the policy of economic development.

Comparative analysis of rural areas in the two municipalities (Rekovac and Smederevo), confirmed the date hypothesis and indicated the need for:

- The necessity of strengthening the role of the state in encouraging IRD;
- Focusing policy IRD municipalities in the provision of financial resources, identity politics, and organization of continuing education;
- Innovation of the existing model of rural development.

The innovation of the existing models of the IRD is proposed in three areas: creating innovative teams; formation of agricultural incubators and the activities of the horizontal and vertical connections.

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Rezime


Ključne reči: integralni ruralni razvoj, politika razvoja opština, model organizacije, poljoprivredni inkubator.

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