
Barriers to the Development of Green Economy in Rural Areas of Selected Districts of the Greater Poland Province

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Abstract:

Purpose: The aim of the research was to analyze the implementation of the sustainable development policy, including green economy in rural areas of the Greater Poland province in the context of planning and strategic documents of Poland and the European Union.

Design/Methodology/Approach: The analytical material consisted of the results of the survey interviews and the analysis of their content. In the survey, a standardized interview questionnaire was used, on the basis of which 668 computer-assisted telephone interviews (CATI) were conducted with representatives of the green economy sector in rural areas in the Greater Poland Voivodeship and 21 interviews with representatives of local government units at the level of rural and urban-rural communes.

Findings: The results of the research show the mechanisms to reduce the barriers to the development of green sector in the rural areas of the Greater Poland by organising social campaigns to change the awareness and educate the public on green economy, green jobs, sustainable development and social responsibility, improving the training portfolio to focus on the green skills through practical training, providing incentives for the enterprises and the residents to use the eco-friendly solutions in their businesses and households, preferential treatment of the projects and investments contributing to green economy, creating green jobs and supporting the development of green sector in the Greater Poland, as part of the selection process for the projects co-financed by the European Union.

Practical Implications: Recommendations resulting from the conducted research and analyzes may be used by institutions responsible for creating local and regional policies.

Originality/Value: The results of the comparative analysis and the theoretical discussion in this article supplement previous research on the analysis of the major barriers to the development of green economy sector in rural areas of the Greater Poland province.

Keywords: Rural areas, green economy, green jobs, barriers to development, local development, sustainable development.

JEL codes: O13, O15, Q01.

Paper Type: Research study.

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1. Introduction

The 'green economy' paradigm not only applies to the methods of production based on the principles of sustainable development, but also to using those principles in everyday activities of the society when utilising the available material goods, taking care of the natural environment and managing the products of human labour following the economic principles combined with the protection of the entire range of public goods, including natural resources, natural scenery and biodiversity. The green economy covers practically all fields of human activity that may affect any component of our natural environment, nature and ecological conditions of the life of communities, current and future generations.

Based on the experience of the countries in the European Community, the green economy will be a key factor in the local and regional development in Poland. The awareness at the local government and enterprise level is very low. A relatively few attempts have been made in Poland to introduce the concept of green economy and its effect on sustainable development in rural areas.

Based on the experiences of highly-developed EU countries (in particular, Scandinavian countries, Germany, France and the Netherlands), an increase in green economy increases the number of jobs in the sectors offering high quality jobs providing satisfaction, supporting creativity and innovativeness. The fact that since the very beginning Poland has been closely tied with the development of green economy and green labour market allowed to create the mechanisms that offer high quality jobs by shaping the current policies (both at the national, provincial and district level) to provide a financial, logistical and legal support to the development of green businesses and remove the barriers to the development of this sector of the economy.

The main purpose of this study and the analyses carried out as part of the study was to determine the barriers to the development of green economy in the rural areas of the Greater Poland province at the enterprise and local government level.

2. Literature Review

The latest global economic transformation was closely tied with the knowledge-based economy, the role of human capital, innovations and new technologies. A clear new trend that can be observed nowadays is focused on the green economy, green development, green enterprise and green jobs. Observing and defining the structural transformations related with the sustainable development and implementation of green economy is a current topic of research, often at borderline between science and politics, since on one hand, the politicians have a need for the analysis of a complex economy-society-economy system, and the scientific community needs the conclusions and experiences of politics in implementing the practical changes (Magnuszewski, 2010). A specific science-politics-science

learning process takes place that is key to the systematic approach which cannot predict all the correlations and considerations of this uncertain environment.

The problem with unambiguous definition of green economy has some underlying fundamentals - it is a relatively new term, and the experts in the field are relatively inexperienced, however, a discrepancy between the currently used definitions remains the main issue (Bednarz and Kulawczuk, 2014). The concept of green economy has been used for the first time in the "Blueprint for a Green Economy" report published by the British government in 1989, however, it has not been discussed in details, since the focus at that time was on the concept of sustainable and permanent development.

The authors has highlighted that the implementation of green economy is unfeasible due to the countries fearing the decrease in the dynamics of economic growth as a result of reduced utilisation of natural resources. The green economy can be successful with its potential to evaluate the natural capital and seek the alternatives to its extensive utilisation. However, the market mechanisms must be included in the process, and the environmental losses must be allowed for in the gross domestic product (Towards a Green Economy ..., 2011). Currently, many experts agree that the green economy is a practical implementation of the concept of sustainable and permanent development that has not found its practical reflection due to the lack of operationalisation and transfer into the politics as specific goals and methods allowing to reach these goals (Ryszawska, 2013).

This issue was discussed at the United Nations conference in 2012. As a result, a declaration was adopted including the green economy as one of the key tools to achieve sustainable and permanent development, and providing means to shape the policies of individual countries, although, it also states that it should not follow a rigid set of rules governing its implementation, and should allow for the Agenda 21 and Millennium Development goals (Szyja, 2015).

The definitions of green economy and green development, most commonly used by the experts and promoting a wider discussion has been developed by the United Nations Environment Programme (UNEP) and the Organisation for Economic Co-operation and Development (OECD). In 2011, OECD (Towards Green Growth ..., 2011) has defined 'green new deal' as a stimulation of economy in the direction of green sectors, green infrastructure and green jobs. 'Green development' has been defined as a pursuit of economic growth and development while preventing the degradation of natural environment, loss of biodiversity and non-sustainable use of natural resources.

The green development is based on the initiatives existing in many countries promoting sustainable development and aimed at identifying clean sources of economic growth, including the development of green industry sectors, green jobs and green technologies and offers better management of structural changes related to

the transition to the green economy. The management of labour policies and social effects of changes in the conventional economy sectors will have to be reconciled with the use of new opportunities. In the same year, UNEP has defined 'green economy' as the economy affecting an increase in prosperity and social equality, reducing the environmental risks and utilisation of natural resources (Towards a Green Economy, 2011).

In the local development, including the green economy, local government units specified in the Act on Public Finances, section 3, art. 9 are a key factor, creating the public finances sector with the local government associations, budgetary units and local government budgetary divisions (Ustawa z dnia 27 sierpnia 2009 r. o finansach publicznych).

The Act on the Local Governments includes specific tasks of the local government units. From the point of view of green economy, The tasks, most important from the point of view of green economy, are the ones aimed at meeting the collective needs of the community, in particular:

- a) spatial order, property management, environmental and natural resources protection and water management;
- b) local roads, streets, bridges, squares and traffic management;
- c) waterworks and water supply, sewage system, municipal waste treatment and disposal, maintaining cleanness, order and good condition of sanitary equipment, landfills and communal waste disposal, energy, heat and gas supply;
- d) local public transport;
- e) district housing construction;
- f) sports and tourism, including leisure and sport facilities and areas;
- g) district greenery and tree-covered areas;
- h) district promotion.

The second category of the participants in the local development is a private sector, including private-owned enterprises and organisations. Pursuant to art. 3 of the Act of 6 March 2018 on entrepreneurs - Entrepreneurs Act (Ustawa z dnia 6 marca 2018 r. Prawo przedsiębiorców) - "the business activity is an organised gainful activity carried out continuously on one's own behalf", whereas, pursuant to art. 4, the entrepreneur is a natural person, legal entity or organisational unit other than the legal entity, with a legal capacity granted by a separate act, carrying out the business activity". The private sector including various businesses, may be both the background and the component of the green economy. The private sectors deemed 'green' are classified in the following PKD 2007 (Polish Classification of Activities) categories:

- Section A - Agriculture, forestry, hunting and fishing;
- Section D - Electricity, gas, steam, hot water and air conditioning manufacturing and supply;

- Section E - Water supply; sewerage, waste management and remediation activities;
- Section F - Construction;
- Section H - Wholesale and retail trade;
- Section I - Accommodation and food service activities.

The analysis carried out as part of the study shows that the background of the green sector comprises institutions and organisations carrying out activities focused on the local development. A form of support at the local government level may involve creating advantageous conditions of the development of local entrepreneurship by reducing the administrative barriers, creating conditions for the development of investment or creating guarantee and loan funds for small and medium enterprises. According to Chmieliński *et al.* (2015), the function of the institutional environment of companies in the rural areas is, in the first instance, to create the best possible legal and formal conditions for entrepreneurial development, and to directly affects its growth. According to the authors, the statement is based on a view that the entrepreneurship mainly depends on the factors most often associated with the individual features of the entity, including:

- a tendency to take risks,
- an ability to seek the development opportunities and means of financing,
- an ability to respond to external circumstances: innovative impulses, financing opportunities.

The barriers to the development of green economy at the provincial level has been detailed in the Green Economy and Green Jobs Development Strategy for the Greater Poland province. The main barriers include (Bednarz and Kulawczuk, 2014):

1. A dependence of the main fields of the green economy in the Greater Poland province on imports of new technologies, limiting the development capabilities.
2. Low level of investments in the Greater Poland province, closely related to the business support and financing system. A subsidy system prevailing in the Greater Poland province combined with a limited tendency to use the bank financing for business development limits the investment capabilities.
3. A limited capability to cooperate with the research sector in implementation of new technologies in renewable energy production and environmental protection creating the development gaps.

The activities of local governments are also a key component affecting the sustainable development and green economy. By performing internal and ordered activities, the local government may create conditions to facilitate social, economic and ecological changes, following the direction of integrated and sustainable development.

At the regional level, the tasks focused on the sustainable development are carried out by the local government of the Greater Poland province. The main intervention directions for the local government were established in the operating target 3.2 “Improving the conditions and protecting the natural environment of the Greater Poland” in the “Development Strategy for the Greater Poland province to 2030”, approved in 2020. The planned tasks include (Zarząd Województwa Zachodniopomorskiego, 2005):

- expanding, protecting and improving the quality of water resources;
- improving the quality of air;
- improving the waste management operations;
- protecting the biodiversity and scenery, including forest resources and ensuring permanence and continuity of the natural system;
- improving the natural conditions for agriculture;
- shaping the awareness and social attitude to ecology, improving the ecological and environmental security.

As part of the supporting activities in the development of green economy at the local level, the tasks of the local governments include the actions taken to protect climate and natural resources (energy efficiency and development of renewable energy sources), to limit (low-waste technologies) and reuse waste (utilisation and recycling), and to change the consumption model, including ecological education of the society.

3. Methodology

The survey was conducted among two groups of respondents. The first group included 668 representatives of the green economy sector in the rural areas of the Greater Poland province. The second group included 21 representatives of the local government at the rural and urban/rural district level. Due to the purpose of the study, a key feature used to include the respondents in the survey was conducting the business activity in the rural areas and in the urban/rural areas of the districts of the Greater Poland province.

For the survey among the representatives of local governments of rural and urban/rural districts, the sample size was determined in accordance with the procedures used in the public statistics of the Statistics Poland. The sample size was selected using a stratified random sampling method.

In the first stage of sample selection, the survey among the representatives of the local government was conducted in 10% of randomly selected rural and urban/rural districts of the Greater Poland province [N=207], i.e., in 21 districts [n=21]. This procedure to determine the sample size using a stratified random sampling method corresponds to the methods used by the Statistics Poland (Główny Urząd

Statystyczny). The next stage to select the sample size was to calculate the share of rural and urban/rural districts for the individual layers. It was also assumed that the procedure of selecting individual institutions will be based on a simple sampling without replacement. Similar to the survey among the representatives of local governments, the survey among the representatives of local businesses was carried out using a CATI surveying technique.

The population of business entities included 6,772 businesses operating in the rural areas, in the districts selected at the sample size selection stage for the survey among the representatives of local governments. The sample included 668 entities. The representativeness was ensured through the selection of the sample size based on the determined exact sample size, allowing for the size of individual sections of the green economy as per the PKD (Polish Classification of Activities). The following formula was used to determine the minimum sample size:

$$N_p = p(1-p) \frac{\mu\alpha^2}{d^2}$$

where:

- N_p – required sample size;
- $\mu\alpha^2$ – coefficient (from the charts), expressed as a fraction of the significance level of confidence coefficient;
- p – fraction of the population with a specific feature;
- $(1-p)$ – fraction of the population without a specific feature;
- d – maximum fraction estimation error.

90% confidence level and 5% maximum fraction estimation error were used when determining the minimum sample size. The determined sample size among the representatives of local businesses was used as a basis for random sampling and the next research procedure. The sampling frame included a REGON database with the address data of all registered entities. The determined number of entities was randomly selected from each section of the PKD (Polish Classification of Activities). The survey was conducted in March and April 2020.

4. Survey Results

The data collected during the survey among the representatives of businesses operating in the green economy sector in rural areas and local government units allowed a comprehensive analysis to determine the barriers to the development of green economy and their causes in the rural areas of the Greater Poland province.

The results of the survey among the representatives of local governments show lack of commitment of the local governments in the activities focused at the development of green economy and lack of commitment of local governments in meeting targets

and goals focused on the development of green economy that are consistent with the local government policies at the provincial level. Only some local governments support the activities related to the disposal of asbestos, renewable energy, environmental protection and efficient use of natural resources, replacing high-emission boilers, promoting healthy diet and lifestyle that are consistent with the local government policies at the provincial level.

Lack of the local government commitment towards the ecological goals consistent with the local needs was also observed. Only some isolated districts carry out any activities related to the development of ecological and forest education, development of bicycling and hiking tourism, energy savings and air quality protection as part of the act on supporting the thermal upgrade enterprises, protection of natural environment and rational use of natural resources that are consistent with the local needs.

Another reason for the lack of commitment of local governments in the development of green economy is the lack of commitment of local governments in implementing the eco-friendly solutions. A minority of the local governments has carried out any tasks focused on obtaining additional sources of financing for the ecological activities, reducing CO₂ emission, reducing air, soil, water and noise pollution, dissemination of information on eco-management, waste recycling, use of renewable energy sources (biofuels, wind power plants etc.), consulting, counselling and training related to ecology, i.e. activities aimed at implementing eco-friendly solutions.

The local governments also did not show sufficient initiative in obtaining external means to finance pro-ecological activities. Some local governments used the EU structural means to support the pro-ecological activities. The response of the representatives of districts participating in the survey shows insufficient initiative of local governments in planning the activities supporting the development of green economy that in the future can be financed as part of the development programmes. In some cases, dissemination of knowledge on ecology, environmental protection, reduction of the adverse effects of human activities on the environment, biodiversity, creating green jobs, using renewable energy sources or training employees on the environmental protection requirements, waste management, energy efficiency was planned based on aids available as part of the development programmes.

Another barrier to development of green economy identified based on the analysis of the development strategies of the districts is the lack of commitment of local governments covering the rural areas in the Greater Poland province in determining the goals of the green economy that can be objectively evaluated based on the implementation monitoring indices. According to the concept of the analysis, the local development strategies were evaluated from the point of view of the determined monitoring indices/features, based on the assumption that the local

governments pledge to carry out the activities within this scope, and most often focus on the activities that may be evaluated after the strategy is implemented.

The main reason is that the majority of the local governments, in their development strategies, did not include any indices/features that would allow to evaluate the activities within the scope of energy policy, heat policy, construction policy, in particular, in the thermal performance improvement of the buildings, water and sewage policies, emission reduction policies, natural and artificial aquifer protection policy, fauna and flora protection policy, agriculture, fishery, fishing and forestry, education policy and promoting the ecology. Another barrier to the development of the green sector identified based on the survey among the green sector businesses is a low development potential of the green economy in rural areas in the Greater Poland province.

According to the surveyed, it was due to the overall unfavourable situation predicted for the next year (2021), high fixed costs covered by the representatives of the green sector, lack of opportunity to expand the market coverage in the next 5 years, low innovativeness of the business entities operating in the green economy, low share of green sector businesses with the ecological designations and/or certificates, low share of employees with higher education in the structure of the green businesses and lack of attempts to improve the knowledge on the environmental protection among the green sector's employees.

The representatives of the surveyed businesses also highlighted lack of implementation of environmentally-oriented activities taken by the entities operating in the green economy sector. According to the surveyed, it is caused by a monotypic implementation of environmentally-oriented activities focused on waste reduction and sorting which should be correlated with the cost management and the need to observe legal regulations, and not intentional activities on the development of green economy. They have also observed lack of commitment of the green economy businesses in implementing comprehensive environmental protection solutions. A small minority of businesses support the initiatives focused on saving energy and fuels, limiting the air, water and soil pollution and limiting the noise level, delivery of products, services and green technologies, monitoring the sources of natural environmental degradation sources, using eco-friendly materials, e.g. natural, degradable, recycled, using renewable energy sources, e.g. wind power plants and biofuels, limiting carbon dioxide emission to the atmosphere or disseminating information on ecological management to support the development of green economy. Another barrier to the development of green economy according to the representatives of businesses operating in the green sector is an inability to identify the opportunities to implement the activities on the sustainable development by the green sector businesses.

The commitment of the local governments in implementing comprehensive environmentally-friendly solutions was also rated low. Only some of the businesses

took the initiatives involving use of energy from renewable sources, limiting fuel and energy consumption, training the employees on environmental protection, waste management, energy efficiency or sustainable development of residential and non-residential construction by thermal performance improvements and district heating plant upgrades to support the development of green economy.

5. Summary

The entrepreneurs and representatives of surveyed institutions and non-governmental organisations have noticed many barriers to the development of the green sector and green jobs within that sector. Two of the identified barriers can be attributed to the activities of the local governments in the rural areas. The first barrier is related to the lack of commitment of local governments to the activities focused on the development of green economy, lack of interest in the local needs to use the green products and services and the need to plan for the environmentally-oriented activities. As a result, the local governments do not put any effort in obtaining additional means of financing from the European Union to carry out the tasks supporting the development of green economy. The second barrier is related to the strategic planning within the local governments. In their development strategies, a majority of the local governments did not include any indices/features that would allow to evaluate the tasks within the scope of energy policy, heat policy, construction policy, in particular, in the thermal performance improvement of the buildings, water and sewage policies, emission reduction policies, natural and artificial aquifer protection policy, fauna and flora protection policy, agriculture, fishery, fishing and forestry, education policy and promoting the ecology.

Another three barriers to the development of green economy in the rural areas of the Greater Poland province has been identified in the activities of the green business. The results indicate that the businesses show a low development potential, a low activity in implementing the environmentally-oriented activities and an inability to identify the need and opportunities to implement those activities in the future. The mechanisms to reduce the barriers to the development of green sector in the rural areas of the Greater Poland may include:

- organising social campaigns to change the awareness and educate the public on green economy, green jobs, sustainable development and social responsibility of the businesses;
- improving the training portfolio to focus on the green skills through practical training, in place of many low-quality trainings that do not guarantee qualifications;
- providing incentives for the enterprises and the residents to use the eco-friendly solutions in their businesses and households. The media message must be followed by the actual benefits for the society;
- preferential treatment of the projects and investments contributing to green economy, creating green jobs and supporting the development of green sector in

the Greater Poland, as part of the selection process for the projects co-financed by the European Union.

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