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Key Challenges in Rural Development: Bringing economics, management and social sciences into practice
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Edited by Hans Karl Wytrzens

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Content

Euroleague FOR LIFE SCIENCES BOKU
Key Challenges in Rural Development
Bringing economics, management and social sciences into practice

Editor's preface

Hans Karl Wytrzens

The proceedings "Key Challenges in Rural Development: Bringing economics, management and social sciences into practice" are something special compared with the previously released discussion papers of the Institute for Sustainable Economic Development, as they are published as small compilation – containing selected individual contributions of six doctoral students. All authors participated in the Euroleague for Life Sciences (ELLS) Summer School in Vienna, Austria from July 3-9, 2016 The ELLS Summer School was jointly organised by the University of Natural Resources and Life Sciences, Vienna, the Czech University of Life Sciences Prague (CULS) and the Warsaw University of Life Sciences – SGGW, on behalf of ELLS, in cooperation with LIFE Copenhagen, SLU Uppsala, University Hohenheim and Wageningen UR.

The guiding questions of the Summer School which were at the heart of the debate were: Which are current key problems of rural areas and how do economics, management and social sciences contribute to solve them? Main objective was to grasp the diversity of living conditions in rural areas and subsequently to deeper understand

- global (worldwide),
- continental (pan-European),
- (supra)regional (nationwide; district wide) and
- local

key challenges of rural areas.

Furthermore, a distinction must be drawn between different content levels, namely:

- economic,
- social,
- ecological challenges.

Current key challenges in the (rural) world concern in particular the management of water resources (especially lacking access to clean water and flood or draught prevention); global food supply (prevention of food shortages, food security and safety in the food chain); energy supply (development of renewable energy sources, provision of sufficient power and safeguarding energy security); demographic change ((over)aging, migration and the integration of refugees) and finally climate change (global warming). Across international boundaries the maxim is: Global changes require local responses!

Global key challenges with high impact on rural development are globalisation and the economic crisis (which has led to intensified competition between companies, countries and regions), urbanisation, desagrarisation, population explosion, migration (leading to social destabilisation in many rural regions), desertification, pollution, extinction of species (inducing ecological imbalances and environmental problems).

Especially at European level, we have to deal with economic disparities (resulting in rising deviations of the gross domestic product per head; zones with full employment vs. regions with extremely high unemployment rates; and threats of tensions as well as the strive for cohesion); segregation and local concentration of economic and social activities (yielding to the so called 'welfare banana' as well as to the reduction of remote areas to heteronomous reservations). At the social level, Europe is confronted with demographic change (ageing of the population, a rising share of singles, migration, and refugees – phenomena that evoke brain drain in remote rural zones requiring restructuring and maintenance of infrastructure as well as integration). Massive lifestyle changes (bringing fragmentation of people's everydays lives, increased mobility, tourism etc.) are another facet of social challenges in Europe's rural areas. As a result, there is a threat of disintegration, growing isolation, and discrimination of immobile people. Ecological challenges in European rural areas result from pollution (use of mineral fertilisers and pesticides) which requires the protection of endangered species. Damages to the environment (loss of natural habitats, new kinds of land use) in turn provoke the conservation of protected areas and the maintenance of traditional land use.

The 10th ELLS Summer School addressed rural development issues in interdisciplinary views and aimed to bring students and teachers from various countries and fields of work together to discuss the above mentioned issues, to exchange knowledge, to improve the quality of students' works and to improve the skills of students in a practical project. During the Summer School students presented drafts of their works (PhD theses) and subsequently further refined them.

Within this comprehensive framework the individual papers could only address specific facets of challenges in rural areas. The spectrum ranges from rural business knowledge exchange and innovation to specific aspects of rural development financing and even to the diversification of activities of agricultural holdings. Those papers can be interpreted as response to the massive structural change in the rural area. Also mentioned is the role of social movements in food sovereignty diffusion. One contribution dealing with extensive farming and its impact on the sustainable development raises more fundamental questions. The paper treating economically motivated adulteration of honey is very specific. But it can also be seen as an example for the concretisation of fundamental problems to a specific case study. The issues discussed in the papers vary but also the spectrum of used methods is very broad. Overall the picture shows a remarkable variety.

The compilation of selected papers presents intermediate results of unpublished studies, however considering the feedback given during the Summer School. Nevertheless, the contributions document provisional interim results as the work is still in progress. For this reason feedback and suggestions to the respective author are explicitly welcomed.

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Key Challenges in Rural Development
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The global in the local

The role of social movements in food sovereignty diffusion in the Philippines

Joseph Edward B. Alegado

Supervisor: Dr. Saturnino "Jun" M. Borras, Jr.

International Institute of Social Studies, part of Erasmus University Rotterdam (ISS-EUR),
Agrarian, Food and Environmental Studies (AFES),
The Haag, the Netherlands

jed.alegado@gmail.com

Summary

This paper seeks to examine how food sovereignty as a global political project is being carried out and diffused, adapted, adopted, and popularized in nation-states. Food sovereignty is a social movement-led, alternative paradigm that aims to create new solutions to the global food system. There has been a growing literature on food sovereignty throughout the years since its introduction in 1996. Using the Philippines case, the research attempts to examine how food sovereignty is being diffused in this context. To further answer this research question, the study will present the politics and ideology of transnational agrarian movements and the state-society interaction in agrarian transformation.

Keywords: food sovereignty, social movements, diffusion, Philippines, rural development, agrarian transformation

1. INTRODUCTION

Defined as the "right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems, food sovereignty puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporation" (Nyeleni, 2007: 1). It is a response to the dominant discourse on food security which emerged in the 1970's during the World Food Summit when UN FAO declared that "every man, woman and child has the inalienable right to be free from hunger and malnutrition in order to develop and maintain their physical and mental faculties" (UN FAO, 2006: 1).

Food sovereignty emerged in the 1990's as a bottom-up approach concerned with how people can deal with food for hundreds of millions of peasants by providing a "highly prescriptive agenda" and specific calls. "It is an agenda that centers itself in particular on reducing global

food trade and reorienting food systems around local production grounded in agro ecological principles." (Wittman et al., 2010 as cited by Clapp, 2005, 207).

First proposed in 1996 during the World Food Summit when peasant activists and grassroots organization adopted a position statement titled "Benefits for Some or Food for all" which "states that the measures and activities under the "Plan of Action" would not be sufficient to make significant progress in reducing the number of hungry people in the world.", food sovereignty has since been gaining ground both as a movement and in academic discourse due to the growing literature on this concept and continued adoption in practice.

Recent studies concerned with food sovereignty have attempted to unpack the concept in its various fronts – its policy calls, its contestations, limitations and even its historicity (Edelman, 2015). These pieces of work demonstrate how food sovereignty serves as an alternative framing against the dominance of agro-food chains and how it seeks to problematize and put solutions to issues of global food system dominated by large agrifood corporations.

Robbins (2012, 5) problematized about the role of "local food systems within the food sovereignty movement and as a counter to the logic of global industrial food system." It focused on how geographical and sectoral distances embedded in the global food system are actually being addressed by food sovereignty.

Schiavoni (2013, 7) in an ISS working paper titled "Competing Sovereignties, Contested Processes: The Politics of Food Sovereignty Construction" problematized about the 'competing sovereignties' that shape the construction of food sovereignty. Schiavoni posed the right questions on the political construction of food sovereignty: "Was it the state? Was it communities?" In the event that nation's sovereignties compete with each other in their respective food policies, whose sovereignty will be respected?

1.1. The problem of diffusion

As a bottom-up grassroots-led initiative, food sovereignty is a global development project which diffusion needs to be interrogated and examined. The cross-national diffusion of social movement initiatives like food sovereignty can be examined in different fronts, for example, how social movements adopt, interpret, re-contextualize localize and co-constitute the food sovereignty diffusion in their respective countries. As Desmarais and Wittman (2015: 5) have noted, "While there is a growing body of literature on food sovereignty at a global level, much less is known about what food sovereignty movements look like in specific places and how their expression is largely shaped by local dynamics'

In a 2015 article titled **"**Transnationalism and Diffusion: A Study of the Food Sovereignty Movements in the UK and Canada", Noha Shawsky explored a number of questions surrounding the transnational diffusion of social movements and their ideas through case studies of food sovereignty movements in the two countries. The study concluded that while recontextualization of food sovereignty was done in both UK and Canada, diffusion has yet to be achieved. This is due to the fact that while activism and organizing on food system issues were prevalent in these two countries, social movements' efforts failed to tie the local struggles to the global frame of food sovereignty discourse.

Boyer (2010) has problematized on how food sovereignty and food security tropes were developed in the discourse in present-day Honduras. Although both food security and food sovereignty emerged in Honduras as a result of long-drawn struggle of peasant and agrarian issues the former enjoyed more resonance with deeply held peasant issues namely social reproduction in insecure social and natural conditions On the other hand, food sovereignty failed to connect to the local issues at the grassroots level. Boyer concluded that while "rural

voices from the Americans remind us, there is a vast need for the focus to begin with the local, and to restore deep (local) economies and older communal solidarities" (Boyer 2010, 346).

Another issue which diffusion of a global struggle like food sovereignty which needs to be looked into is the readiness of a nation to pursue this global struggle. What does it look like at the local level? While food sovereignty is a political program which calls for a mode of production controlled by non-state subjects, one must not forget that the role of state is crucial if not dependent on the use of state power to combat the forces of neoliberalism (Clark 2013, 3).

1.2. Social movements and food sovereignty

Transnational agrarian movements have played a significant role in the food sovereignty movement across the globe. In Asia, for example, two broad coalitions of food sovereignty have played meaningful roles in the region namely the People's Coalition on Food Sovereignty and the Asia Pacific Network for Food Sovereignty. In the Philippines, non-government organizations with different ideologies carry the food sovereignty movement whether individually or as part of these broad coalitions in the food sovereignty movement at the regional level. Key actors are the following: PARAGOS which has ties to La Via Campesina and Focus on the Global South (both carrying the Radical Agrarian Populism-Moral Peasant Economy framework); Kilusang Magbubukid ng Pilipinas and the think-tank Ibon Foundation (Marxist-Leninist-Maoist framework); and the Integrated Rural Development Foundation.

These organizations in the broader movement for agrarian justice are more often than not subjected to political dynamics at varying scales. Each have its own dynamics, ideologies, organizational challenges, sectoral focus and tactics which merits research, understanding and interpretation. These transnational agrarian movements and their counterparts at the national level merit further understanding and careful analysis. This is because they are ones who hold the responsibilities and the drive to carry out the task of transmitting global political projects like food sovereignty.

2. LITERATURE: DIFFUSION OF TRANSNATIONAL SOCIAL MOVEMENTS

Recent studies on diffusion of transnational social movements is a key factor in attempting to solve the problematique posed. Sidney Tarrow's Theory of Diffusion of Modularity speaks about the processes of transnational diffusion and on diffusion among the various forms of collective action. In his book, "The New Transnational Activism", Tarrow (2005, 101) provided illustrative examples of two movements in different parts of the world: the nonviolent resistance from India to the United States and then to former socialist countries; and the diffusion of the Zapatista solidarity network from Chiapas to North America.

Tarrow (Ibid.) posits that diffusion travels through well-connected trust networks ("relational"), through the media and the Internet ("nonrelational"), and through movement brokers ("mediated"). To answer the main question, an emphasis on the role of social movements as "mediators" – gatekeepers and brokers will be closely examined.

I will also investigate the appropriateness of the political framework on mobilization proposed by Tarrow (1998). This framework examines the differentiated nature of social movements (1) Class base and origin; (2) Ideology and politics (Frames and Agendas); (3) Political strategies and forms of actions; (4) Alliance building (or not) and (5) Institutional/organizational/ logistical support. These five prisms to look into will be the key in examining food sovereignty

flag bearers in the broad agrarian social movement network in the Philippines: Focus on the Global South-Paragos; Kilusang Magbubukid ng Pilipinas (KMP); Ibon Foundation; and Integrated Rural Development Foundation – all of which have various ideological leanings and nature which may or may not affect their respective positioning and actions in carrying out the roles as "mediators" in the diffusion process.

3. RESEARCH OBJECTIVES

In line with this, this study seeks to examine the question on how a global political project like food sovereignty can be diffused – adopted, adapted, re-contextualized and popularized in different countries. This paper seeks to explore a number of questions surrounding the transnational diffusion of food sovereignty through social movements in the Philippines.

The proposed study seeks to add to the growing literature on food sovereignty specifically on diffusions of global projects and the role of social movements in this initiative.

Research questions

This paper seeks to answer the question, "What does the global diffusion of the political project of food sovereignty look like using the example of the Philippines?

In order to answer this main question, I will also answer the following sub-questions:

- How are the differences in politics and ideologies between and among agrarian social movements affect food sovereignty diffusion in the Philippines?
- To what extent do state-society relations affect food sovereignty diffusion?
- How does a global framework like that of the food sovereignty discourse link to local peasant and agrarian issues in the Philippines?

4. METHODOLOGY AND METHODS

Using value-critical analysis of Schmidt, I will examine how the various groups pushing for food sovereignty are framing the issues on key issues that espouses food sovereignty. Using "framing" as a tool to see what is included and what is excluded and the relationships between or among conflicting frames, I will examine the abovementioned group's key positions on food price hike/rice crisis in 2008 which hit the Philippines and the land reform law extension in 2008 (CARPER vs. GARB). I will also examine how the People's Coalition on Food Sovereignty and the Asia Pacific Network for Food Sovereignty position themselves in the food sovereignty discourse through their policy positions and issuances on food sovereignty.

Semi-structured and key-informant interviews will be conducted among different key stake-holders in the Philippines working on food sovereignty projects (activists, scholars, govern-ment officials) to answer the question on diffusion through social movements, I will employ key-informant interview using Skype and record the interviews via Call Recorder and SoundNote.

Challenges and ethical considerations

The research will be conducted according to the permitted ethical considerations on human subjects by the ISS. Confidentiality, transparency and respect to all the participants involved

will be observed throughout the duration of the research. I will obtain an information letter from ISS to explain the purpose of the study and my role in it and use consent forms to obtain written permission to ask questions and record answers from each informant who agrees to participate.

In doing research work, personal interviews are preferred rather than phone or email correspondence. With the advancement in technological devices and software, interviews using video calls also prove to be effective as the researcher can observe non-verbal cues and maintain eye contact with the respondents.

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Key Challenges in Rural Development
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Extensive farming and its impacts on the sustainable development

The thesis of development of economic activities in rural areas in the context of European Union sustainable development

Veronika Brecklová

Supervisor: doc. Ing. Karel Tomšík, Ph.D.

Czech University of Life Sciences Prague (CULS),
Faculty of Economics and Management, Department of Economics,
Praha, Czech Republic

brecklova@pef.czu.cz

Summary

This paper deals with the influences of sheep and goats breeding on three pillars of sustainable development (SD). The paper begins with historical development of sustainability continuing with the types of SD definitions and concepts. Literature review of pillars prepares the ground for generally analysed influences of farm activities in rural areas. The largest positive effect on SD (namely the environmental pillar) has the pastoralism. Rare species of plants and animals can live on the Oblík national reservation with the assistance of keeping these special conditions on the steppes by the pasturage. The Oblík farm brings the positive influence with so-called Social Agriculture to the social pillar, through which the possibility to become a shepherd at the whole weekend is offered to customers. In general, the economic pillar of farm is based on production its own products, thereby contributing to a share of GDP, further increasing the employment within the offer of season jobs in the Usti region which is the second lowest unemployment region in the Czech Republic. The pillars can be expanded to include international and intergenerational dimensions but it is important to applicate the pillars locally by the SD Strategy, that the obtained positives will be more evident in the SD from an overall perspective of usability strategy. A detailed analysis can show both positive and negative influences of pastoralism on SD or other selected business activities, and it is possible to deduce and propose the changes to improve the efficiency or vice versa suppression of activities within the context of comparison with other farms. The main idea is the transferring of the SD Strategy to local practice.

Keywords: sustainable development, sheep and goats breeding, environmental, social and economic influences.

1. INTRODUCTION

The concept of sustainable development, sometimes also abbreviated called sustainability, has its roots in the second half of the twentieth century. Already in 1969, the UN Secretary General U. Thant invited that the world began to deal with the issue of sustainable development urgently. He was responding to the negative consequences of human activity after another leaving the polluted environment. It focused on the reduction of air quality, depletion of the ozone layer, cutting down rainforests and temperate forests and the associated extinction of some species. Then there were economic and social problems, which needed to be solved and to include them into the joint project of sustainable development. Thus there arose a comprehensive sustainability concept of the economic growth, which stands on three pillars - economy, society and environment. Agriculture as a business activity is controversial in terms of the Common Agricultural Policy (CAP) for many years and it is appropriate to point out the positive and negative impacts of its action on the intended target of the SD, which is another controversial issue on a global scale today.

2. THE GOALS AND THE METHODS

The main aim of the thesis is the analysis of economic activities in selected rural areas. One of the future partial goals is to analyze the agricultural activities of selected farms and to evaluate the impacts on the pillars of sustainable development at the local level. This paper is focus on theoretical background for this analyzation with the use of secondary publishing and Internet data.

Methodology of partial goal is to obtain primary data through interviews with farmers, employees, customers and local institutions for the protection of nature, as well as questionnaires for the local community. Secondary data will be derived from scientific publications and Internet resources of institutions and farms. There will also be a comparison with subsequent evaluation of individual components of a SWOT analysis from derived facts and from data of the Strategic Framework for Sustainable Development of the Czech Republic.

3. THE SUSTAINABLE DEVELOPMENT

In 1972, the group of scientists from the Massachusetts Institute of Technology came up with its study The Limits to Growth in so-called The Club of Rome. The study proves that economic development was characterized by exponential growth in economic output for increasing consumption of scarce natural resources and rising pollution environment in the period 1900-1970. Researchers concluded that economic growth and effective environmental protection are in conflict. All sub-measures are therefore unnecessary and economic growth must be stopped (Meadows et al., 1981). The high prestige of The Club of Rome and the response of the book Limits to Growth certainly contributed to the convening of the Human Environment Conference in Stockholm in 1972. It was the first major conference on the environment that accurately identified the major environmental problems. In the early stages, however, the sustainable development was narrowed only on the field of environmental protection (UNEP, 2005).

In 1983, UN responded by establishing the United Nations World Commission on Environment and Development (WCED) on the controversial conclusion to stop the economic growth. Four years later, WCED announced the results of its activities in the report “Our Common Future” in which the Norwegian Prime Minister Gro Harlem Brundtland has taken a different stance.

Solution consisted not in stopping economic growth, but the adoption of uniform rules for proper guidance that do not destroy natural resources, and therefore not lead to reduced growth in the future. Since it has used the term "sustainable development" (Jeníček, 2010).

In 1992, this term passed in a wide subconscious at the UN Conference on Environment and Development (UNCED) called "Earth Summit" in Rio de Janeiro, which followed the ideological Stockholm conference. The main questions was concerned on the form of sustainable development in various areas of life, in various countries (mainly developing) and how to achieve it. At the opening of UNCED, Mrs. Brundtland said about the need to handle the most important global transformation of the agricultural and industrial revolutions thus the transition to the sustainable development. There were signed two conventions (climate change and protection of biodiversity) and the three documents: the Declaration of Rio de Janeiro on environment and development, forest management principles and Agenda 21 on the "Earth Summit" (Moldan, 2003). In the same year, the sustainable development was defined by environmental law no. 17/1992 Coll. in the Czech Republic. In 1998, the sustainability was declared as a priority of member countries at the Ministerial Meeting of the OECD Council in Paris (MMR ČR, 2012).

Another confirmation concept was called "Millennium Summit" in 2000, resulting in the Millennium Declaration with definition of Millennium Development Goals (MDGs) and another was the Johannesburg summit in 2002. The motto of the World Summit on Sustainable Development in Johannesburg was: "People, Planet and Prosperity". This is symbolically expressed the aim to achieve development that secures a balance between the social, economic and environmental pillars of sustainable development. At the same time, the European Commission proposed a European Union Strategy for Sustainable Development, which is a prerequisite for rational use of resources and potential of the economy to ecological and social innovation (United Nations, 2015).

The first Sustainable Development Strategy of the Czech Republic was approved in 2004, updated in 2010 and with implementation of sustainable development goals in 2016. This document constitutes a long-term framework for policy decisions in the context of international commitments that the Czech Republic adopted in connection with membership of the EU, OECD and the UN. The Strategy serves as the basis for drawing up strategic materials (sectoral policies or action programs), and for strategic decision-making within the state administration and territorial public administration. The Government Council for Sustainable Development compiles the situation reports, which aim is to explore whether they succeed in fulfilling the objectives set out in the strategic framework, and inform policymakers and public about the status and development of the Czech Republic in the area of sustainable development (Ministerstvo životního prostředí, 2015).

By adopting Strategic Framework for Sustainable Development, the Czech Republic subscribes to the conclusions of the Earth Summit in 1992 and of Rio +20 conference in 2012. There were approved the most important intention to embrace global goals for sustainable development (SDGs - Sustainable Development Goals), which follow the Millennium Development goals of the UN Millennium Declaration in 2000. This plan was finally received fulfillment in September 2015, when 17 SDGs were received at the UN Summit. These goals are incorporated with the help of a key issue to mainstream sustainable development thinking into various parts of the Europe 2020 Strategy (OSN, 2016).

3.1. Definitions and concepts

Sustainable development is not clearly defined, but there are many of its basic definitions and concepts aiming at the same meaning, and it currently preservation for future generations. Here are selected definitions:

- "Sustainable development is all about the balance between the three basic areas of our life (economy, social aspects and the environment), also balance between countries, different social groups, present and future, etc." (Sustainable Development Knowledge Platform, 2015).
- "The challenge of the European Union is to create a common market and an economic and monetary union and common policies and activities to promote the harmonious and balanced development of the Community economic activities, sustainable and non-inflationary economic growth that respect the environment" (Baker et al., 1997).
- "Sustainable development is development that preserves the possibility of meeting basic needs of present and future generations while it reduces biodiversity and preserves the natural functions of ecosystems" (Česká republika, 1992).
- "Sustainable development is a complex set of strategies that allow using economic resources and technology to meet human material, cultural and spiritual needs, while environmental limits are fully respected. Make it globally current world possible, it is necessary to redefine the local, regional and global level their socio-political institutions and processes" (Rynda, 2012).

According to the Ministry for Regional Development (2012) it is possible, except in addition to above definitions, to define sustainable development as historically developed three concepts. First concept (defined by the Norwegian Prime Minister Brundtland) which is defined as development that meets needs of current generations without compromising meet of future generation needs and without it goes on the expense of other nations. This definition can be interpreted generally ethically, but faces the problem of defining the needs of future generations. Second concept is based on economic principles, respectively the potential capital assets (capital approach to sustainable development). It is considering the human capital, social, natural, production and finance. If the aggregate capital is growing, the development will be considered sustainable. Third concept is based on a balance of three pillars - economic, social and environmental (definition of the World Summit on Sustainable Development in Johannesburg in r. 2002). Sustainability is understood as a balance between the development of these pillars, i.e. between the economic development and living standards of the population and environmental impact. The goal is to make development a pillar did not develop at the expense of others.

3.2. The pillars

From the above definitions and concepts we can generally say that the goal of sustainable development is to create a balance between the three pillars across generations. In practice, often these three pillars come into conflict (e.g. the protection of nature versus highway construction, etc.).

The environmental sustainability points out that all human economic activities and the associated technological development are happening against the background of natural conditions. People are part of the Earth's biosphere and, like other animals, are completely dependent on natural resources. To be secured from an environmental sustainability, protection is needed,

not overwork and overload the environment. Furthermore, all economic growth is terribly environmentally degrading today (Ministerstvo životního prostředí, 2015).

In 1990, Herman Daly, one of the early pioneers of ecological sustainability, proposed that:

- for renewable resources, the rate of harvest should not exceed the rate of regeneration (sustainable yield),
- the rates of waste generation from projects should not exceed the assimilative capacity of the environment (sustainable waste disposal),
- for nonrenewable resources the depletion of the nonrenewable resources should require comparable development of renewable substitutes for that resource (Daly and Farley, 2011).

The Ministry of environment placed the evaluation of environmental sustainability in the Czech Republic in the field of agriculture on public. The selected strengths are:

- the dynamic development of organic farming,
- existence of a network of specially protected areas with varying degrees of protection,
- design and definition of the Territorial system of ecological stability (USES) as a tool,
- general nature and landscape protection (Ministerstvo životního prostředí, 2015).

Social sustainability is the ability of a social system (a country, family, or organization) to function at a defined level of social wellbeing and harmony indefinitely. There exists universal disagreement on what quality of life goals should be. This means that social sustainability on a practical, implementable basis is undefined. The fulfillment of social sustainability is the foundation of democratic systems. A possible direction for agreement on what the tangible goals of social sustainability should be, can be found in Bhutan's national goal of optimizing gross national happiness (Moldan, 2003).

The economic dimension of sustainability concerns the main economic activity in the monitored area, most of the state. It is based on the need to use only produced a profit and focusing on maintaining a basic capital in any economic activity. Therefore, the economic pillar is looking for ways to achieve sustained growth in the wealth of society, without damaging the environment or disrupting a balance of the economy. The key to this goal is to increase the productivity of human labour using environmentally friendly production facilities and technological progress. In the agricultural sector there are the selected strengths of development activities in the Czech Republic:

- tradition in certain industries, especially manufacturing,
- a skilled workforce,
- a high proportion meet energy needs from its own resources and improving diversification of sources,
- the growing share of services in GDP including environmental and industrial services,
- agriculture provides landscape maintenance,
- agriculture is predominantly mass character,
- agriculture keeps mostly as a single employer the economic activity in rural area (Ministerstvo životního prostředí, 2015).

3.3. An extensive and intensive livestock production

Agriculture distinguishes between two streams of livestock production, intensive and extensive. First an intensive farming takes place in most cases in a large-scale breeding with efficiency target, maximum profit. In contrast, extensive breeding is based on pastoralism on permanent grassland and respect for animal welfare (Pelletier and Tyedmers, 2010).

Animal production (especially intensive breeding) affects the basic natural elements of the environment in many ways. The results of these farming methods can cause irreversible damage and disrupt the renewable or nonrenewable nature resources. In particular, it leads to disturbing atmosphere due to the discharging of harmful gases, significant disturbance of biodiversity, global and regional ecosystems (Evropská komise, 2008), consume vast quantities of water and soil and its damage (Komise EU, 2013), air pollution etc. (Evropská komise, 2008)

According to many experts, the industrial livestock production for ecological stability and prosperity of the planet's means relatively significant risks, both in the short and long term (Pelletier and Tyedmers, 2010; Tilman et al., 2002). Ghosh (2007) even considers the method of meat and milk livestock and production as key factors for future health of the planet. FAO (2006) identified intensive livestock farming as one of the main causes of the most serious environmental problems. The potential negative impacts of animal production on the environment are mainly associated with the intensification of production systems of rearing poultry, pigs and cows for milk (Milne, 2005). Already in 2006, Chief of FAO's Livestock Steinfeld said: "If you do not want to worsen environmental damage above the current level, then there must be environmental costs per unit of livestock production reduced by half. On the other hand, there are also positive environmental externalities of livestock production, it only refers to the extensive method of breeding animals" (FAO, 2006).

4. THE OBLÍK FARM

The Oblík farm is located on the boundary Oblík nature reserve in the Bohemian Central Uplands. These mountains were created by volcanic activity in the northwest Czech Republic where there lies the territory of two regions, Usti and Liberec. It includes the River Elbe, which worked as a major transit route for moving materials and goods in the last century. (CHKO České středohoří, 2013). The flora and vegetation of Bohemian Central Uplands is notable for its genetic and species diversity in terms of wild species. The Oblík specifically reserve provides shelter rare plants, beetles and butterflies (Svoboda, 2014). The area has classified as Protected Landscape Area (PLA) for these main reasons since 1976. The Bohemian Central Uplands are the second largest PLA with around 84 % of the geomorphological unit from the entire territory. There are approximately 140,000 inhabitants, which is more than twice as many as in other PLAs of similar size in the Czech Republic. The area catches every visitor's attention from afar with its landscape of dynamic reliefs consisting of a wavy landscape of volcanic cones and plugs, often topped with the ruins of medieval castles on their peaks. A total of 236 towns and villages lies within the PLA completely and another 99 lie partly within it. Among the hills there are located the historic royal towns surrounded by generational villages with their traditions (baptisms, carnival, maypole, harvest festivals, etc.), which attract tourists together with the historical and natural monuments in the area. It is also interesting to its active sport using (such as cycling and nature trails for hiking). The territory of the PLA contains 43 small–scale Specially Protected Areas. It is about localities with conserved ecosystems of steppe, rock and forest vegetation and important geological formations. The Oblík is one of this localities which is ranked among 5 National Nature Reserves and there is special protected plant species The Species of Community Interest, e.g. with its specifically protected plant species inclusive the feather grass (Stipa pennata) (CHKO České středohoří, 2013).

The farm currently treats approximately 700 sheep and 30 goats. The herd consists of improved valachian sheep which are crossed with a lacaune ram and there are also white goats. (Statek Oblík, 2014) Sheep are czech half coarse breed with a dual purpose: meat, milk, wool. Medium body frame is well adapted to mountain farming method in foothill and mountain

areas. White shorthair goat is a dairy breed of medium to large frame, which is widespread in the Czech Republic. The breed belongs to the republic gene reserves. (Horák, 2004) Outside of sheep and goats on the farm there are a horse breed czech warmblood and two minishetland ponies and also a cow (Statek Oblík, 2014).

4.1. Sustainable influences of the Oblík farm

As it was mentioned above the farm is focused on extensive livestock production. The grazing cattle and especially sheep was typical for economic exploitation of grassland. Over several decades there has been a noticeable absence of pastoralism, though it gradually flourishes to introduce cattle again to the restrictions of procedure high stalk grasses and shrubland. Nowadays grazing cattle, sheep and goats are an integral part of maintenance of grasslands expecially on Oblík hill and its neighboring hills (Národní přírodní rezervace Oblík, 2011).

The farm permanently has a positive effects with their activities on the achievement of all three SD pillars. Economic strengthening of farm consists in producing their own regional products and offerring the service execution by own agricultural techniques. The products are sold directly on the farm, in selected local supermarket and farmers' markets within the region and beyond. The farm is one of the few entrepreneurs which offers local jobs (e.g. a shepherd, a cook). From the social aspect, adults and children can be accommodated to experience mental and physical relaxation within the prepared programs based on experience of farm life and surrounding countryside. From an environmental perspective, the local protected landscape of steppes can be maintained only just by pastoralism. Grazing herds also contribute with its organic fertilizers to improve water retention (i.e. Water retention capability) (Statek Oblík, 2014).

4.1.1. Environmental influences

The pasture has positive impact for nature but the type of impact is dependent on the livestock type because between the groups are not only differences in the weight and load of grassland, but also in the grazing methods. Cattle graze on the whole grassland. Sheep eat the lower floor stand. Goats like to chew on trees, eating the more middle and upper floors of stand. On the pastures there remain ungrazed plants which serves as a host plant to insects. Of ungrazed it is necessary to remove unsuitable plant species such as broad-leaved dock and curled dock. The combination of grazing and mowing helps maintain species richness of plants and animals and create a colorful mosaic landscape. If conditions allow habitat the best alternate is grazing with mowing (CHKO České středohoří, 2013) .

Expecially on Oblík hill, these activities lead to conservation areas for rock and steppe vegetation that would have in other circumstances (grassing) had no chance to survive. There is the frequent occurrence of specially protected species: spring pheasant's eye, purple mullein, milkvetch, named above feather grass and so on. These growing conditions supported just the pasture provide habitat to 81 species of vertebrates. There are founded for example smooth snake, northern wheatear and the hoopoe among the protected species of vertebrates. Quite exceptional and extremely rich invertebrate fauna is also represented many protected and very rare warmth and xerophyte species, for example purseweb spider and nickerl's fritillary. The preservation of mentioned fauna and flora is the reason why Oblík along with neighboring hills (Srdov and Brník) became part of the Natura 2000 network as a site of European importance designed to protect steppe communities and to protect grasshopper too (Národní přírodní rezervace Oblík, 2011).

4.1.2. Social influences

European farmers have always been proud of their ability to provide the right kind of care their land, animals and cultivated crops. This skill is now extended by another service which the farm can offer, and it is offering a farm as a facility for providing health care to people affected by mental, social, mental disorder or other physical disabilities. Social agricultural activity often provides relatively straightforward services such as helping patients to take responsibility for animal care, care for crops or care for wildlife. These routine rural activities are beneficial for social tourism and combined farm that offers an alternative to several different social agricultural. This type of farming is financially supported by the Rural Development Programme which mostly help to adapt farmhouse to provide services (European Commission, 2014).

The main offered activity of the farm is program called "Be shepherd for the weekend!." Visitors can check out the daily activities related to shepherd´s work, for exapmle: farm technology and processing their production during the grazing season (around May to October depending on weather). The first day, the excursion of farm is prepareted with expert commentary. The second day there takes place the morning milking, animal care and feeding. Afternoon, visitors put the herd out to the pasture, and if they are interested they can milk in the evening too. The content of the third day is outing on the Oblík hill with guidebooks or expert guide. An acommodation is located in apartment directly on the farm and breakfast of farm-produced products are included in the price of this service (Statek Oblík, 2014).

After completation of the reconstruction the farm preparing to expand the offered activities. There will be fully equipped apartments with a kitchen for visitors who are not local or want to spend a longer time. As mentioned above, the Bohemian Central Uplands is known for operating the active sports, so the farm intends to recommend the walking routes or bike paths with the possibility to rent a bike. The main objective is to create an interesting program for children: "Learning about the farm and the life around it". The basis is to show children the true life on the farm, identify animals, their physiology and needs. The difficulty of the program will depend on the age of the child and, ultimately, allow the rest to their parents. This program will be inspirated from educational trips for children which are organized by Ecocentre Dymnivka, with which the farm cooperates (Statek Oblík, 2014).

4.1.3. Economic influences

Since 2004, the Agri-environment Program (AEP) has been an important contribution to the sustainable management of the environment under the Horizontal Rural Development Plan. The program includes organic farming, Grassland and Landscape Care Program. The farmer is rewarded for it, that does not perform any activity with a negative impact on nature and the countryside or on the contrary, it must take actions to implement positive impact (Jongepierová, 2012). The farm is environmentally focused and profiting mainly from sales of own products. The farm is also financially supported by the state just for organic farming and maintaining the PLA territory by the pastoralism. Here is a list of organic products:

- sheep cheese matured - the bronze medal at the national contest cheese in 2014 and special award in 2016,
- cow fresh cheese – a flavour is sour and salt with the opportunity to taste the olives and chives,
- white yogurt – a dense consistency, at the top with a layer of cream containing bifidus cultures, no preservatives or emulsifiers,
- yogurt with maple syrup – sweet taste thanks to maple syrup, the award in the competition "The best product Usti Region - Region of Přemysl Ořáč" in 2015,
- sheep whey – low energy and high protein content,

- BIO lamb – high content of protein, calcium, vitamins, iron and other elements, fat, juicy and very fragile meat,
- cow cheese,
- cow string – cheese flavour thanks to a very weak salinity,
- cow milk – whole milk is gently pasteurized at 63 °C and thus the important nutritional value and natural sensory properties are retained (Statek Oblík, 2014).

In 2014 the farm was restored with vineyards and orchards, which will enrich their range of wines, apricots and walnuts in a few years (Statek Oblík, 2014).

The public can also take advantage of other services offered in the field of agricultural technology such as field work (plowing, sowing preparation), a comprehensive haylage (cutting, turning, stamping, packaging, etc.), rolling and harrowing grassland and handling, transportation and disposal of packages (Statek Oblík, 2014).

The farm needs the employees during grazing season (a shepherds and a cook), to prepare products (a cheese producer) and to use of agricultural machinery (a tractor driver). This provides at least seasonal jobs for people from the labor office in district of Louny or Most, which belong to the Ústí region with the second highest unemployment rate in the Czech Republic (Statek Oblík, 2014).

5. CONCLUSION AND FUTURE OUTLOOK

The evaluation of the received information indicates that the selected organic farm contributes positively to fulfilling the sustainable development pillars at the local level. Within the SD pillars, the activities for maintaining steppes seems to be the most effective in the protected area. Furthermore, the farm expanded public relations with own services within the framework of the so-called Social Agriculture. An integral part of activities is also creating its own regional products, which increases the GDP of the state. Farm also offers seasonal jobs and agricultural services, which affect on the social perception and on the maintaining of local natural conditions.

Another part of future research will expand the location with the occurrence of farms and their contribution rate of their activities to improve all three pillars. What obligations the farms must fulfill and conversely the benefits they can draw in the CAP (Common Agriculture Policy). Further to focus on other business activities in the selected location and analyzing them to determine the level of achievement of the sustenability objectives. The basis of research will be united indicators for the ability to make a comparison of their fulfillment or non-fulfillment among the farms, other business entities and state in the SD Strategy.

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Key Challenges in Rural Development
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The role of local government in the financing of rural development for the example of Garwoliński district

Marcin Chciałowski

Supervisor: Prof. Janina Sawicka

Warsaw University of Life Sciences – SGGW,
Faculty of Economic Sciences, Department of European Policy, Public Finance and Marketing,
Division of Agrarian Policy and Law.
Warsaw, Poland

mchcialowski@gmail.com

Summary

The progressive processes of decentralization have led responsibility for the creation of development on their territory on local governments. Nowadays, the local authorities are most responsible realizations of investment, and in particular for searching for fundraising to finance them. The article represents forms of financing for development in rural areas on an example of local government – Garwoliński district. There are also presented ways of realization of investment activity as the main indicator of local development in units of local government. The main features of the impact of local governments of local development with particular emphasis on rural areas as sites of specific investment needs are also very important part of the research. The empirical part contains an assessment of the promotional activity and investment activity in Garwoliński district. The article provides a summary of a study conducted in the master's thesis.

Keywords: rural development, local government, investment, Garwoliński district

1. INTRODUCTION

For many years, the essence of space as a place of certain specific characteristics distinguishing it from places that surround it was not so firmly embedded in the literature as it is today. The development of self-government and progressive decentralization have contributed to the dissemination of research on local development. In the history of Economics there were created theories and models explaining the causes of development of various regions. The basic group of theories that explain the diversity of value of the land as a factor of production are those built on the basis of the model of land rent, the theme of which have developed, inter alia, D. Ricardo, J. H. Von Thunen and E. M. Hoover. A milestone in the study of land rent turned out to be a work of J. H. Von Thunena-"Isolated State". The author had presented how the price of agricultural land changes according to a hypothetical city which is the main market outlet(Szewczuk, Kogut-Jaworska and Zioło, 2011, 14). Nowadays developed and fast

transport marginalises the role of land rent in rural areas. Thereby, the importance of power in creating development in these areas increases as well as the local government authority's. One of the important factors of local development is development of business and, which to a large extent depends on the units of local government. Due to the nature of the public support the issue of the creation of local development by local government unit turns out to be a complex and used not often enough. Local government units have the ability to impact on development with (Campion, 2012, 263-279):

- *Financial instruments*. The most important financial instrument in the Community's budget, as plan of sources and expenditure for the financial year, together with a multi-year financial forecast give the image of finances for potential investors as well as provides some sort of stabilizing element. A very important instrument in the creation of enterprising development is tax policy.
- *Investments, as area of development*. There is a strong relationship between the investments carried out by the local government and the development of entrepreneurship. Thanks to the implemented investment projects local enterprises may be contractors of these projects. The formation of new infrastructure brings with it the need for its support, which creates additional jobs. Implemented in the form of public-private partnerships contribute to the development of entrepreneurship in the most tangible way. It is worth noting that the implementation of investment projects has a positive effect on improving the technological infrastructure in the area.
- *The management of the property of a self-government*. The property should be treated, as a tool for the creation of development by communities. It is possible, for example, to put a land in a perpetual usefruct to an entrepreneur or to sell investment areas.

Economic activity of a unit of a self-government is to be carried out in such a way as not to affect the activities of private entities.

2. MATERIALS AND METHODS

In the theoretical part there have been used most important publications from the scope of investment activity in units of local government. There have been also overviewed available methods of financing investments according to legislative acts. Empirical studies contains the data from a local data bank (BDL), the Central Statistical Office in Warsaw (GUS) as well as reports of the implementation of the budget of Garwoliński district. Collected data of the activities of Garwoliński district came from in-depth interviews with representatives of the local environment. The work uses comparative analysis between investment activities of Garwoliński district to districts both in Masovian Voivodeship and Poland. Valuable investment approach was presented in graphs in the Polish currency – Złoty, which corresponds to about 25 eurocents.

3. THE FORMS OF FINANCING DEVELOPMENTAL INVESTMENTS IN GARWOLIŃSKI DISTRICT

In Polish local government system there are several forms of implementation enabling investments. the following parts will discuss the basic sources of financing investment activity on the example of the Garwoliński district.

Garwoliński district is a typical rural district that is composed of 14 communities, 2 of which are urban, 2 urban-rural, and other communities are typically rural areas. This area is characterized by relations of low urbanization (less than 30% of the population lives in towns). In addition, towns are a small percentage of a surface of the district, in itself. This is a typical rural region, as evidenced by the participation of agricultural land in the general area-63%, as well as high employment in agriculture (mrm.wrotamazowsza.pl). The municipalities included in the Garwoliński district are not homogeneous in terms of spatial. There are communities of typical plant technology such as Wilga or Maciejowice, rural municipality of farm: Trojanów, Żelechów, Miastków Kościelny. The district is located 60 km from Warsaw, which is one of the main determinants of development (Gnat-Wieteska, 2013, 8-10).

Own funds are the most common to be analysed in the scientific sphere group of funds belonging to the local authorities. They decide about the autonomy of local government units. Their main feature is the lack of government interference in the size of income and the way in which they are levied. this income group may include: taxes and local fees, fees for services provided by the local property income (Misterek, 2008, 24). P Swianiewicz formulated the three basic conditions that must be met in order for the transfer so as to call it someone's own income (Świaniewicz, 2004, 29-30):

- submitted as a whole and permanently accessible to the government,
- should be augmented by local government through economic contribute to activisation region in addition to maintaining a relationship with the local economic base
- should show the level of autonomy of local government in the implementation of this source of income, what best illustrates the tax powers of communities.

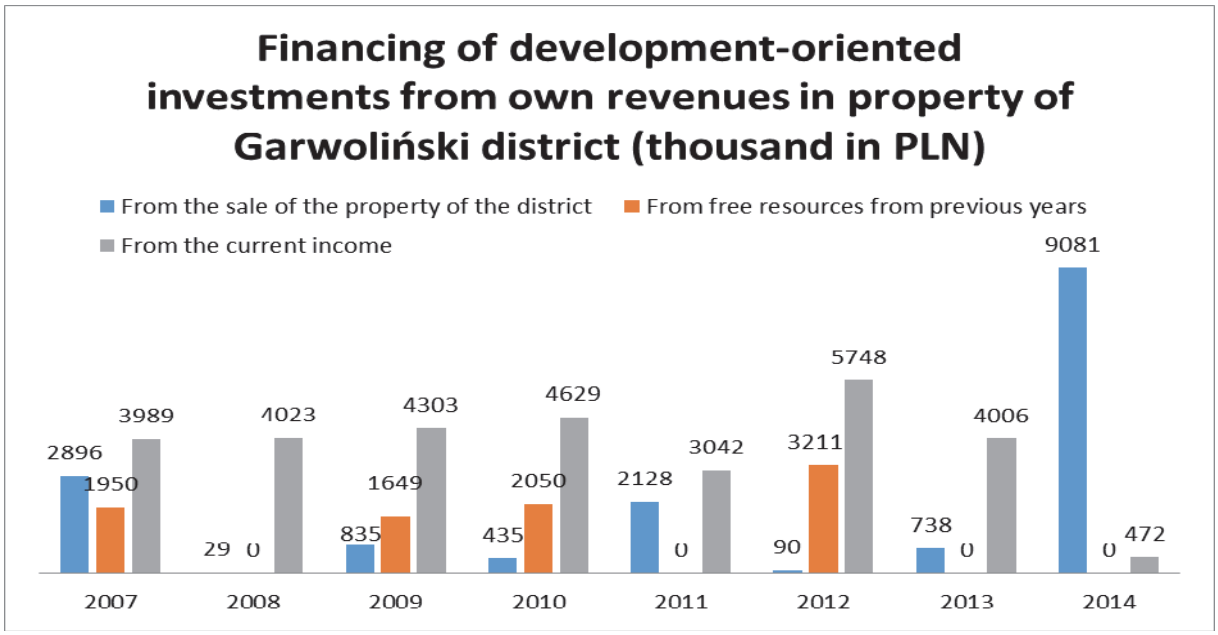

Fig. 1: Financing of development-oriented investments from own revenues in property of Garwoliński district (thousand in PLN) (own research).

Own resources are necessary for the implementation of investment projects in almost each of the methods of financing. It becomes much more difficult to get credit or funding of the EU without a corresponding contribution. Analysis of the budgets of the district will determine what is the level of its income and what is the need for funds reflected in the expenditure. From its own resources in the years 2007-2014 were financed more than 31% of the expenditure in property of the Garwoliński district. Because of limited help from the central authorities as well as the lack of ability creating their own income, in particular, of districts and communities, it is essential to find additional opportunities to raise funds. The help is being offered by financial institutions, which create lending mechanisms of investment activity of the self-government as well as municipal bond markets. Although they are magnifying a debt of a self-government, it seems to be in many cases reasonable to run up debts for the implementation of sensible investment purposes.

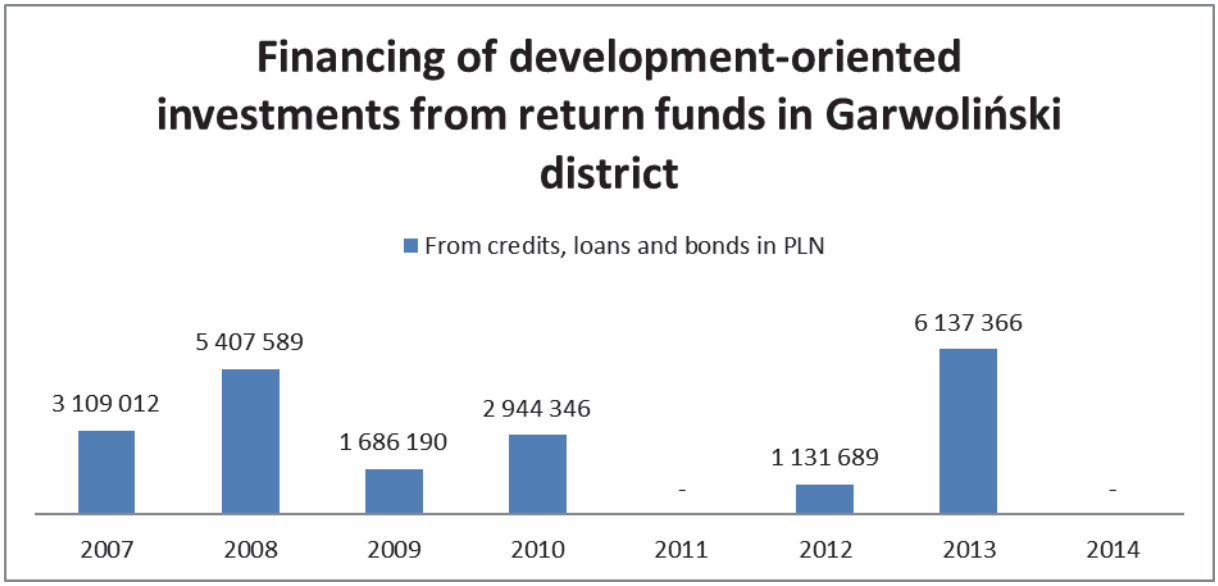

Fig. 2: Financing of development-oriented investments from return funds in Garwoliński district (own research).

The above chart shows how were debt obligations taken out during the period 2007-2014. Noteworthy is the irregularity in reaching back measures in financing tasks of the Garwoliński district. High bandwidth up to more than 6 million PLN (1,5 million Euro) means that different were the demand for cash and various expenses during the period. After careful consideration, you may notice a certain relationship between the amount of contracted debt obligations and the income from the property of the district. The correlation coefficient was for the interested period -0.55, which means quite a strong negative Pearson correlation. This shows that the revenue realized from the sale of an area an important group of income in Garwoliński district. Property income, are the only group of revenue that districts can shape on their own.

3.1. Recourses of the European Union

With the entrance into the European Union, Poland has become a beneficiary of the European funds, which sailed wide to the Polish Government. At first they were called pre-accession measures designed to help prepare the country to join the ranks of the European Union and to improve the condition of the Polish economy. Signing of the accession treaty on April 16, 2003 allowed for full integration with the Eropean Union and opened additional opportunities to raise cash and hence increased opportunities in financing investment.

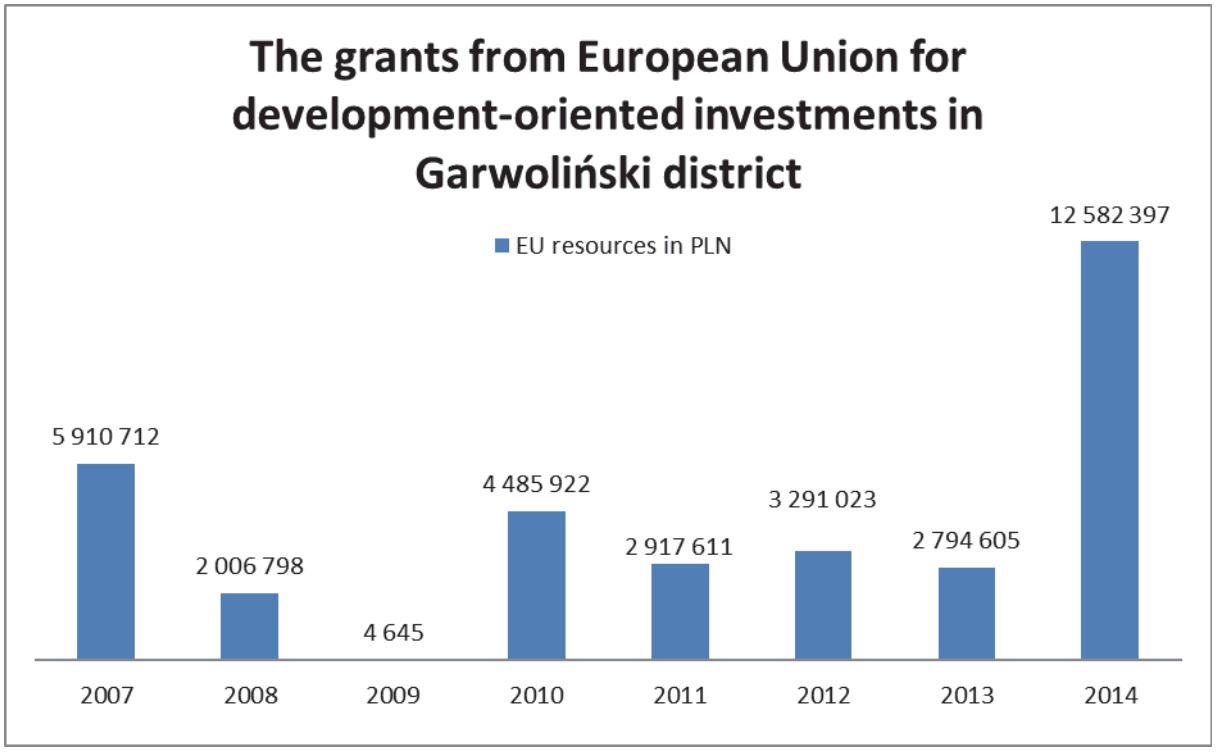

Fig. 3: The grants from European Union for development-oriented investments in Garwoliński district (own research).

During the period the Garwoliński district made the investment for almost 35 million PLN (8 million Euro) from the European Union. The money was mostly used for the implementation of the enabling infrastructure investments. Very important to the financing of activities in rural areas is the European Agricultural Fund for Rural Development. It allows to finance the changes and transformations in agriculture and in rural areas. This is one of the most important tools of supporting the development of rural areas in Poland.

3.2. Financing of investments of Garwoliński district with resources of the communities

In the last decade, there is an increase in participation in the investment costs of other local government units than those that pursue the project. Not unlike is the situation in Garwolin district, where a large part of the funds for road investments comes from the community in which lies the renovated road. This state of affairs is due to the specifics of the evaluation of projects for funding, usually for the co-financing of the investment communities are awarded ranking points. An example of this is the National Programme for Rebuilding Local Roads where for working units and other entities in the implementation of the investment, self-governments can get 5 points ranked 40 possible (NPPDL, 2015).

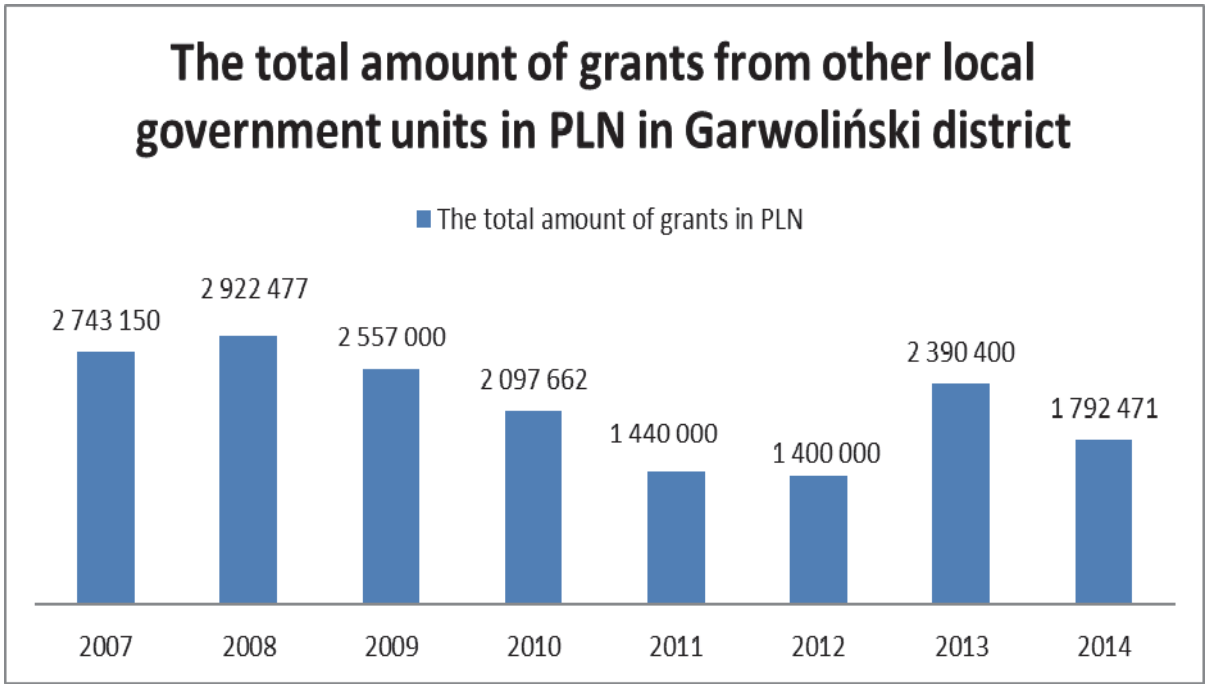

Fig 4: The total amount of grants from other local government units in PLN in Garwoliński district (own research).

The above chart shows participation in the financing of projects by communities that make up the district. Over 8 years the amount of co-financing on the part of communities was different and depended on the implementation of rebuilding local roads. Much, because almost 3 million PLN (700 thousand Euro) were provided the other municipalities in 2008, by contrast, the least in 2012 - 1,4 mln PLN. The average amount of funds obtained in this way was almost 2.2 million PLN (0,5 million Euro) for the period 2007-2014. This source of funding was almost 10% of the expenditure of total assets in Garwoliński district during the period (Ministerstwo Finansów, 2014).

3.3. The assessment of promotional investment activity

Self-government of Garwolin have well fulfilled the required tasks, which demonstrates the number of tasks completed. It shows also involved investment expenditure in the total budget expenditure, which is higher than the average for Mazowieckie voivodeship districts and the average for districts in Poland. Investment expenditure districts in Poland in the period 2007-2013, were on average 16% of total expenditure, districts of Mazowieckie voivodship -18%, whereas in Garwolin investment accounted for an average of 22% of all expenditure.

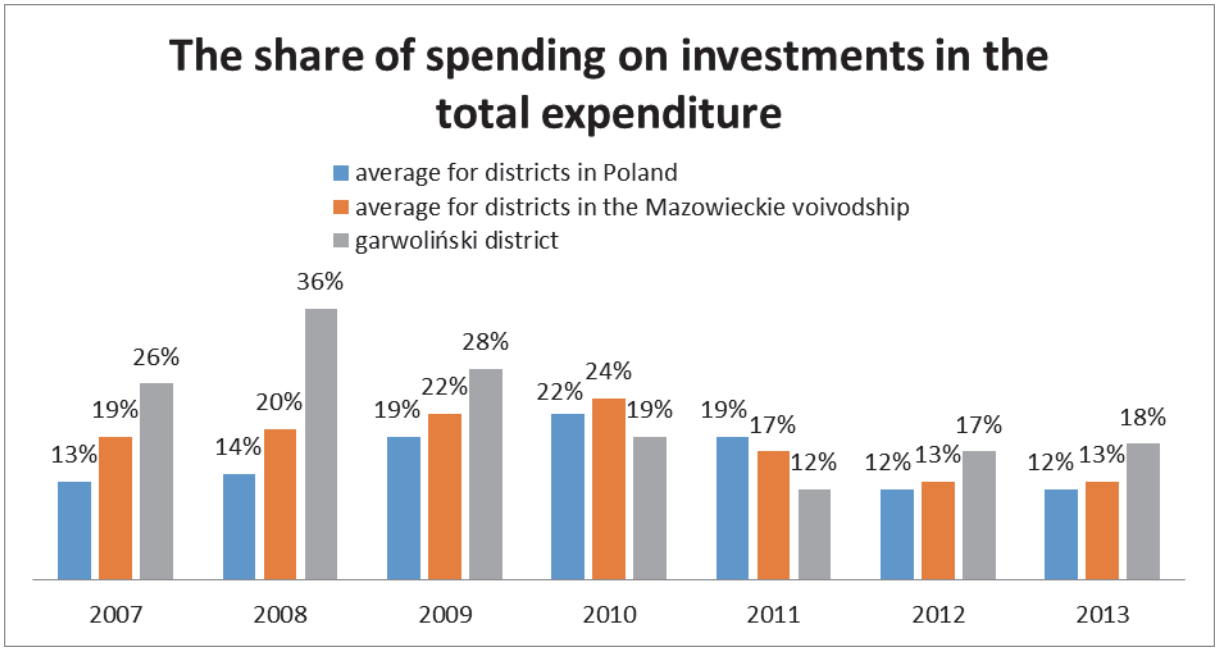

Fig. 5: The share of spending on investments in the total expenditure of the Garwoliński district in the period 2007-2013 (own research based on BDL, GUS).

The self-government of Garwolin in the period has made many important investment from the point of view of inhabitants, although not used all potentially possible sources of investment financing. The most commonly used sources of outside income were fundings from other units of local government (communities), grants from the Fund for Environmental Protection and Water Management and the European Union. Very little money spent to property came from sources. There was no used the lease of municipal or private capital-based methods, however, it did not affect the size of the investments both in terms of quantity and quality.

4. CONCLUSIONS

Presented in this article studies allow us to draw a few basic applications. Funds from the European Union are an important source of funding for investment activities in rural areas in the Polish units. Garwoliński district in years 2007-2014 issued a total of 35 million PLN from this source. However, it should be noted that the use of this method of financing in different years varies. At the same time, it has contributed to the increase of indebtedness among communities and districts. This was due to the necessity of having an own contribution. The collected data allow you to determine the relationship between the income from the sale of property and debt obligations. Presented study enables to establish that Garwolin district had made a reasonable promotional policy investment, as evidenced by the higher rate of expenditure of the assets compared with the average of both the districts and national.

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Key Challenges in Rural Development
Bringing economics, management and social sciences into practice

Diversification of activities of agriculture holdings

A discussion of the theoretical basis

Veronika Eretová

Supervisor: Vít Jančák

Charles University in Prague,
Faculty of Science, Department of Social Geography and Regional Development,
Prague, Czech Republic

veronika.eretova@natur.cuni.cz

Summary

The changing character of the countryside, changes in agriculture, is explained as the post-productivist transition. One of the features of this is the transition from specialization to diversification of agriculture.

The purpose of diversification is to create and also keep new jobs in rural areas, keep or even increase farm income and contribute to the recovery of the villages. It may lead to stabilization of the rural population, increase quality of their lives and the competitiveness of agricultural holdings.

This paper deals with the diversification of activities of agricultural holdings (legal entities, private farms), the theoretical basis of the theme, given objectives and possible methods of research.

Keywords: agriculture, post- productive, diversification, methods of research, Czechia

1. INTRODUCTION

Agriculture, as a sector in the national economy, focuses on the cultivation of strategic materials, foodstuff production and sustenance of people. The essential significance is emphasised by its irreplaceable character, indispensability of foodstuff and pervasive nature of production. The influence that agriculture has on shaping of the image of landscape, rural space and rural society also plays a very significant role.

Recently the role of agriculture has undergone significant changes. In the past, agriculture comprised one of the main components of rural space. Nowadays, so-called ´out-production functions´ of agriculture have gained greater significance. In this way agriculture can, due to its multifunctional activities, contribute to the development of rural space and also strengthen the territorial cohesion of the countryside.

From this perspective, it is possible to see farmers as "potencional multifunctional rural entrepreneurs", who could provide a variety of outputs and could contribute to the sustainable rural development.

The changes in agriculture are explained as a postproductivist transition – from productivist to post-productivist agriculture (Almsted, 2013, Konečný, 2012, Ilbery and Bowler, 1998). One of the main features of this is the transition from specialization to diversification in agriculture. The diversification of activities of agriculture holdings became an integral part of the debate on rural development during the late nineties (Möllers, 2006). Blad (2010) describes the 1990s as an era of searching for new activities and new possibilities for how to ensure the future income of agricultural holdings.

The purpose of diversification is to create and also maintain jobs in the rural areas, maintain or even increase income of the economy and contribute to the recovery of villages. Diversification can help to stabilize rural population, raise the quality of the life and increase competitiveness of agricultural holdings. Diversification represents one of the strategies of maintaining the countryside as a vivid and living space.

This paper represents an introduction to the topic of diversification. Its main objective is to provide an insight into the research of diversification – it deals with the transition from productivism to post-productivism, the term diversification, its typology. The paper also outlines the objectives of the research and methodology.

The whole research is realized in context of czech agriculture, which has been effected by many changes that have been influenced by the political situation and economic development of the country. After 1948 czech agriculture underwent collectivization. From this time to 1989 the life and also the agriculture were influenced by the centrally controlled economy. After 1989 situation changed, the transition led to application of the market economy and stabilization of the conditions. Before 1989 more than 80 % of agricultural holdings in Czechia operated the non-agricultural activities and generated high profits (Czech Statistical Office, 1990). During the transformation period the part of non-agricultural activities was separated from the agriculture and these activities went over to the secondary and tertiary sector, the other part of the activities came to the end. During the 1990s agriculture holdings started again to realize this type of activities and the number of holdings, which have realized diversification, has been risen up to the present (Czech Statistical Office, 2000, 2010, 2013).

Due to the constant debate about the adjustment of the Common Agricultural Policy, the focus on diversification as a topic is very timely. The ambition of the research is to contribute with its conclusions to the debate and to apply them in practice.

2. DIVERSIFICATION

2.1. Concept of post-productivism

There has been intensifiying discussions about the weakening role of conventional agriculture in the rural areas. The traditional concept of the countryside as rural area is somewhat outdated. The changing character of the countryside and changes in agriculture are understood as a transition from a productivist to a post-productivist era (Konečný, 2012).

The concept of post-productivism first appeared in 1990s as an attempt to explain and to theorise the changes of trends in the agricultural sector. It substitutes productivism which is mainly characterised by intensification, concentration and specialization of the agriculture (Almstedt, 2013; Ilbery and Bowler, 1998).

The goal of productivism is to reach the biggest production and the highest yield. According to Woods (2011 in Amstedt, 2013) this concept presents a certain discourse of the organisation

of the agriculture when the production function of the agriculture becomes prominent (production of foodstuff and raw material) and all other functions are overshadowed. The negative aspects of management (overproduction of foodstuff, decreasing significance of family farms, environment harm, weakening relation between the place of food production and the place of its consumption, etc.) aroused a demand for reforms both in agriculture politics and practise. In 1990s, the concept of post-productivism emerged. It is closely linked to the new perspective of rural areas – to the new rural paradigm (OECD, 2006). The emphasis changes and the production function of the agriculture looses its predominant position while measures for a wider development of the countryside are taken. This is called the productivist transition towards the post-productivist era (Almstedt, 2013; Konečný, 2012; Bowler, 1998).

The era of the post-productivist agriculture is described by the transition from intensification to extensification of the agriculture, from concentration to dispersion of the economy and by the transition from specialization to diversification of the agriculture. Post-productivist agriculture is sometimes understood as a complete departure from the previous era of productivism.

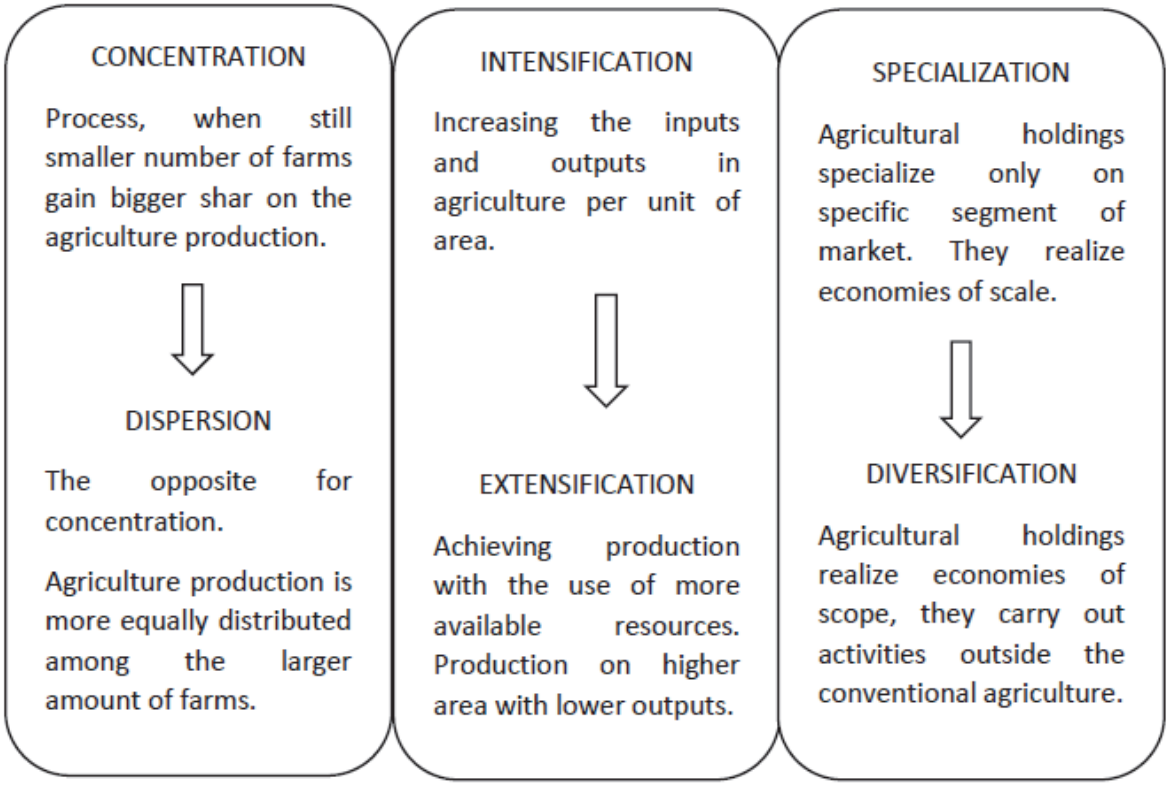

Fig. 1: Processes of transition from productivism to post-productivism (Konečný, 2012; Konečný, 2010; Ilbery and Bowler, 1998).

Evans et al. (2002, 317) summarize the characteristic features of post-productivism initially into 5 categories. The categories include: a shift from *quantity* to *quality* in the food production; growing *diversification* through activities both on the farm and outside the farm (through pluriactivity); extensification of and support to *sustainable farming* based on agro-environmental politics; dispersal of the production structure; environmental regulation and change of government support to the agriculture.

The term and concept of post-productivism is often uncritically used in publications dealing with the topic of development of the rural areas and agriculture but it bears a lot of weaknesses. Almstedt (2013) states the most significant critique of the concept is the lack of empirical evidence that the post-productivist transition has even occurred. Mather et al. (in Almstedt,

2013) views post-productivism as a mere shift in emphasis and not as a complete change from material production to service. Evans et al. (2002) criticise the bipolar division between productivism and post-productivism; the two concepts are not strictly divided. Agricultural holdings and also private farms can show some post-productivist signs through certain activities while they are still focused on the production function connected with productivism. The unclear definition has also been criticised as the concept is defined too broadly and vaguely. Moreover, as the critics stress, the concept is more convenient for countries in Western Europe, mainly Great Britain, where it emerged, and is not fully applicable in other countries (Almstedt, 2013; Chaplin et al., 2004). Not all of the countries of the EU have undergone the productivist stage, some have experienced it only partly, while other countries are based on the concept of post-productivism. This means that post-productivistly focused politics can be applied in the states with productivistly focused way of thinking and practise within the shared agricultural politics of EU (Almstedt, 2013). The concept of post-productivism is focused solely on the agriculture – on one hand we can observe a very narrow sector-focus and geographical focus, on the other hand we can notice quite a big elasticity and flexibility of the definition (Mather et al., 2006). Post-productivism is focused on the situation before and after but does not deal with the process of the change.

Nevertheless, post-productivism is a contributive concept that can help understand changes in the development of the rural areas and agriculture.

2.2. The term diversification

The term diversification comes from Latin (diversus, facere). In general it is understood as diversifying. The term is used across scientific disciplines and refers to most of human activities – the term is often used within the different fields of economics (financial management, strategic management, investment decision making and others).

Diversification of agricultural activities can be understood within broader process of rural diversification (Robinson, 2004). The wide range of activities which can be assigned to the term diversification makes it difficult to give one definition of diversification (see Tab. 1). Experts tend to think that the term comprises business activities realized in the enterprise and activities that are dependent on agricultural land and capital assets of the enterprise (Ilbery, 2006, 2009; European Commission, 2008). For a better understanding of the term, it seems more effective to specify, what the term does not cover, namely conventional agricultural production (Ilbery, 2009).

Because of undervaluing and insufficient use of production factors, space for other business activities and for implementation of additional income arises. According to Hron (2008) three basic perspectives of diversification can be presented:

1) diversification as the use of production factors of the farm for purposes out of the conventional agriculture with the goal to use most efficiently existing production factors of the company.
2) diversification of the sources of income when farmers are forced to look for another source of income because they do not reach a sufficient level of income from the sale of agriculture production and from subsidies.
3) diversification as a new business activity with the goal to use the identified profitable opportunity while use of the existing production factors and the connection with the existing agriculture activity is not significant. This type requires investments that can lead to incomes but do not guarantee a profit from the activity.

Robinson (2004) interprets diversification as an answer to changes to the internal and external environment. The primary sector undergoes a development towards the secondary and tertiary sector that offers new opportunities for applying of production factors of the enterprise. Diversification means a connection between the agricultural activity run in the enterprise and other sectors of the economy that contributes to the ensuring of the income level for the agricultural entrepreneurs who face the decrease of prices and increase of costs.

Diversification of activities can be specified as a portfolio of activities which lead to diversification of both the risk and the incomes of the enterprise. That means that an interruption of one of even more activities does not cause a slump or decline as the loss can be compensated by the more successful projects.

From the economic point of view, diversification can be defined as the use of "economies of scope" that arise when the production of certain goods decreases costs of production of other goods, e.g. by using of the same technology (Hron, 2008; Sucháček, 2005). Marsden (2006) defines economies of scope as an opportunity for the participants in the rural areas to make real savings by extending their range and values of their production and services.

The use of the term diversification appears mainly in the special-purpose use and depends on the given author, time and topic which is the term used for. The final decision if it is a case of diversification or not have to be made in each individual case in the given time and on the given place.

3. TYPOLOGY

The literature dealing with the topic offers various typologies of diversification. The most commonly used typology is based on Ilbery (1991) and distinguishes structural, agricultural and passive diversification.

Tab. 1: Typology of diversification (Hron, 2008, 6; Robinson, 2004, 135).

STRUCTURAL DIVERSIFICATION
Tourism
• Accommodation – bed-and-breakfast, self-catering, camping
• Recreation – farmhouse teas, open days, farm zoo, water-/land-based sports, horticulture, craft centre, nature trails, country parks, farm museum
• Combined – activity holidays
Adding value to farm enterprises
• By direct marketing – farm gate sales, farm shops, delivery round, pick-your-own scheme
• By processing – potato packing, flour milling
• By selling skins, hides, wool
AGRICULTURAL DIVERSIFICATION
Unconventional enterprises
• Crop products – linseed, teaseed, evening primrose, triticale, fennel, lupins
• Animal products – fish, deer, goats, horses, llama, rare breeds, rabbits
• Organic farming
Farm woodland
• Energy forestry, amenity/recreation, wildlife conservation, for timber
Agricultural contracting
• For other farmers
• For non-agricultural organisations
PASSIVE DIVERSIFICATION
• Leasing of land
• Leasing of buildings

The original typology of Ilbery has been subjected to strong criticism (Walfored, 2003, Carter, 1999 in Ilbery et al., 2006). The criticism points at the age of typology, critics argue that the activities considered as diversification change over time. Consequently, some authors (e.g. Turner et al., 2006) excluded for example organic agriculture from the typology. Ilbery himself (2009) disputed the perception of some activities as diversification (accommodation on the farm, agricultural contracting) – some of the activities have become commonly provided within the conventional agriculture.

It is necessary to point out that it always depends on conditions and environment of each country and also on the development of its agrarian sector.

Geography of agriculture and rural geography lies aside the main stream of interest of Czech geographers. For a long time, studies focused on the transformation of the agriculture dominated this field (e.g. Věžník, 1995; Bičík and Jančák, 2005) and later works were linked to the entry to the European Union. Nowadays, news topics have emerged that warrant our attention. It is mainly the out-production function of the agriculture that influences the character of the landscape significantly. Farmers should be seen as active keepers of the landscape than only as its users and caretakers.

4. THE OBJECTIVES OF THE RESEARCH

The goal of the research and its main contribution is to analyse the range of and significance of diversification of agricultural holdings in Czechia and to identify the dominant trends of diversification. The author also tries to suggest an opposite methodological apparatus for the evaluation of diversification.

The secondary goals of the research are following:

- to determine the impact of diversification of activities of the agricultural holdings on the peripheral rural areas and their development. Peripheral areas are regarded as the space which is economically weak and disadvantaged in the long run (Hampl 2005). An economically weak area does not necessarily need to present a weak area with respect to the social and natural environment and the cultural and historical tradition. These "strong" characteristics of the peripheral countryside can be used as an advantage by farmers and translated into diversification. These activities can help the region in its future development and stabilization. Therefore, diversification can be understood as one of the opportunities how to activate the unused potential of the rural areas. In case of peripheral areas, this strategy can lead to decrease of the economic and social differentiation of the space. Another question that arises is whether it is possible to define peripheral areas on the basis of absence/presence of out-production activities and a higher share of people employed in the agriculture.
- To compare the significance of diversificated activities in Czechia and other countries of the EU. Czechia shows, because of its historical development, because of the structure and size of the holdings in the agriculture, a lot of particularities that also influence diversification of activities of the agricultural holdings. After 1989, the land was not parcelled out and there was no wave of family farms establishing as it is typical in other countries in the EU. The era of the 40 years centrally planned agriculture covers two generations that did not have the possibility to run the farms on their own. They live on places far away from their land and property and they have lost the relation which bound their ancestors to the land. Czechia also distinguishes in the amount of the hired land, both to entrepreneurs and to private farmers. In comparison to other states of the EU, the average size of holdings in Czechia is larger than in other countries of the EU (Zelená zpráva 2013, Eurostat 2003).

A field research in the chosen regions of Czechia is a part of the study focused on the diversification. The goal is to evaluate the range and significance of diversification in the individual model areas and to define the main activities for diversification of the holdings. Besides, the research will show motives leading to diversification and barriers that hinder the realisation of the out-production activities. The goal is to evaluate the importance of diversification for new job opportunities and for the development of the area where the enterprise is located. The research will show if diversification is connected with the size of the holding, the form of farming and other features, mainly the personality of the farmer or the management of the holding (qualities, abilities, education, origin, inclination to risk, etc.).

We also have to consider the influence of the location of the agricultural holdings (legal entities) and private farms on the decision to diversifiy. This is to determine if location influences the practical activities used within diversification of the enterprise.

5. METHODOLOGY

Diversification of activities of agriculture holdings is based on the concept of post-productivist agriculture, which deals with the transformation of agriculture and rural space (Konečný, 2012; Wilson, 2008; Woods, 2005).

In the research both primary and secondary sources are/will be used.

The data about agriculture in Czechia come predominantly from the Agrocensus survey (realized by Czech Statistical Office in 1995, 2000, 2010; the next one will be held in 2020). The surveys of Agrocensus are followed by the Farm structure surveys in agriculture that were undertaken in 2003, 2005, 2007 and 2013. The next one is planned in 2016. But the comparability of the data is quite difficult because of the changes in threshold values of agricultural statistics.

Agriculture holdings in the EU are characterized by great diversity of their activities. After the comparison of structural and economical results of groups of holdings, a classification system was created. The holdings are classified according to their production specialization, economic size and importance of other gainful activities (Agrocensus, 2010). The category called "other gainful activities" expresses the share of other than agriculture activities on the total production of the holding.

The definition of non-agriculture activities in agricultural surveys as well as in the research proceeds from the Commission Regulation (EC) No 1200/2009, which specifies the following activities:

- tourism, accommodation and other leisure activities,
- handcraft,
- processing of farm products,
- production of renewable energy,
- wood processing,
- aquaculture,
- contractual work (using production means of the holding) – agricultural, non-agricultural,
- forestry,
- other.

This definition does not include organic agriculture into the non-agricultural activities. However, it is a part of the most often used typology based on Ilbery (1991, see the Tab. 1). Its categorization among diversified activities appears to be a matter of dispute and has been questioned several times. Organic agriculture is examined independently within Agrocensus and Farm structural surveys in agriculture in Czechia, too.

The comparison of diversification in Czechia and in other countries of the EU will be based on the data from Eurostat and its regular publications. The research of Agrocensus follows the rules and standards applied in all the countries within the EU. This means that the same rules are valid for the chosen period, threshold values, used methods and way of examination in the countries of the EU. This offers a unique file of data for a further comparison.

The topic will also be approached with the use of qualitative methods of the research that can serve as a supplement to the commonly used quantitative method; e.g. individual transitions of the holdings and farms can be covered up by making the aggregated data files (Wilson, 2008). It is not enough to rely on the secondary data from the agricultural statistics while studying diversification. Primary data have the predominating function for the theme.

Diversification plays a significant role in the agriculture and life in the countryside, nevertheless, research on the micro-regional level has been very limited in Czechia.

As a part of the study interviews with representatives of agricultural holdings, private farmers and people who have worked in this sector for a long time will be used to the qualitative analysis. The target group of respondents from the leading managers and farmers was chosen with respect to their decision-making position in the business orientation, the influence on the way of management and on the resolution to diversificate or not.

The model areas for the field research are peripheral areas of Czechia. The research can be either comprehensive when all units in the area are examined (all agricultural holdings), or selective.

The areas of interest will be chosen on the basis of results of the statistical analyses and a subsequent quota selection. The size of the areas of interest will comply with areas of municipalities with extended power. The selection of the individual respondents should copy as accurate as possible the basic file, from the point of view of the business structure, production focus and size. The respondents will be selected subjectively in respect with the conditions mentioned above. Once the selection file is determined, a pilot study will be made on a small range of holdings to test the clarity and simplicity of the questions. To evaluate the field research, methods of statistical analyses will be applied and the results will be also presented in the form of maps, figures and tables. The data from micro-regions will be a big contribution of this field research as they are less easily accessible (or even inaccessible). The gained data can be used for calculation of indicators of inequality because in contrast to aggregated data they show the inequality within the group in a better way. Micro data will be compared with each other and the comparison of the results reached from the aggregated data and individual data will be presented, too.

6. CONCLUSION

Agriculture belongs to the most significant users of rural areas. However, its function has changed in the last years. The emphasis is put on so-called out-production functions which are related to transition from specialization to diversification of agriculture. Diversification is a significant opportunity for stabilization of rural economy, farmers´ incomes and rural development.

Diversification represents one of the strategies of maintaining the countryside as a vivid and living space. The research aims to the influence of diversification on the rural development, on creation of new jobs in rural areas, on motives and factors, which could influenced farmers in decision whether diversify or not.

To conclude, it is necessary to realize that diversification cannot be seen as a nostrum. It can help solve many problems but in case of unsuccessful enterprisers, farmers, there is a low chance that it would be a successful strategy.

The paper represents an introduction to the topic of diversification. Its purpose was to outline the theme of diversification, main objectives of the research and proposed methods. The topic of diversification will be developed and the results of research will be reflected in the preparing articles.

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Key Challenges in Rural Development
Bringing economics, management and social sciences into practice

Rural business knowledge exchange and innovation

The contribution of rural enterprise hubs

Ian Merrell

Supervisors: Jeremy Phillipson, Matthew Gorton, Paul Cowie

Newcastle University
School of Agriculture, Food and Rural Development/Centre for Rural Economy,
Newcastle upon Tyne, UK

i.merrell@newcastle.ac.uk

Summary

This paper is the beginnings of a larger PhD thesis that is attempting to focus on the core aspect of a multidisciplinary project. Rural enterprise hubs are a relatively new policy initiative in rural regions that are currently being used across England to stimulate innovation and knowledge exchange between (often micro) businesses in the area. The paper sets out what the PhD project shall entail with a tailored literature review and research objectives all presented.

Keywords: Rural enterprise hub innovation knowledge

1. CONTEXT

This paper is an early attempt at framing the first six months of a PhD thesis. The project is multidisciplinary in nature, covering concepts commonly studied in economic geography, rural sociology, business and planning. The research intends to contribute both theoretical and practical outcomes. Due to this broad scale, *this particular paper* has had to be tailored to only consider the central (and practical) aspect: - Rural Enterprise Hubs.

These are business premises that offer a diverse range of services to actively encourage firms to innovate and grow (Bergek & Norman, 2008). A company operating within one of these premises can gain both tangible and intangible benefits – collecting evidence of these benefits can help to inform future UK policy on the development of Rural Enterprise Hubs.

This paper shall begin with a short introduction (that will *very* briefly touch upon all of the underlying themes of the larger PhD project), followed by a heavily tailored literature review (the literature review for the PhD thesis is largely concerned with the theoretical aspects) that shall provide the backbone of the paper. The PhD thesis has the potential to make a significant theoretical contribution to the field but for this paper, the underlying theories included in the literature review have been simplified.

2. INTRODUCTION

Recent regional development discourses emphasize the importance of knowledge creation and consider how to facilitate the growth of the knowledge-based economy (Asheim et al. 2011; Bathelt et al. 2004). Research identifies the importance of Small and Medium Sized Enterprises (SMEs) in exploiting economic value from knowledge based assets (Teece, 1998). However, in the UK to date, growth focused economic development policies have been concentrated on urban economies, bypassing much of the rural economy. Rural areas possess a disproportionately high number of home based businesses but suffer from geographical isolation and limited choices in terms of available premises, employees and access to innovation networks and knowledge. Whilst they face a constellation of growth challenges, rural economies are also increasingly recognised for the contribution they make to economic development and that they may be a source of unrealised growth potential (Phillipson et al. 2011). The Department for Environment, Food and Rural Affairs (DEFRA) has recognised this problem and is now working towards solutions following its Rural Growth Review in 2011.

One DEFRA initiative has involved granting £165 million of funding to five pilot programmes across England, the so-called Rural Growth Networks (RGNs) (DEFRA, 2013) and has since been granted further funding for its continuation. This initiative is to support the creation or upkeep of Enterprise Hubs in rural regions to complement growth as well as providing business support and advice. Enterprise Hubs, by definition, are central focal points in a network and in these circumstances provide a combination of *physical infrastructure,* that supports developing businesses by offering flexible office space and rent, and *social infrastructure,* by enabling *networking opportunities* for businesses to cooperate, collect clients and share expertise.

DEFRA's rationale for funding the hubs is to:

- correct market failures (such as high rental prices or insufficient flexible lettings available) that have led many businesses in rural areas to cease trading, restrict growth or retreat to working from home; and
- to overcome barriers to innovation and enterprise experienced by rural businesses (such as lack of opportunities to share knowledge).

The approach is (theoretically) driven by Territorial Innovation Models (TIM) that conceptualise mechanisms to promote growth on a regional scale, through clusters, agglomerations and learning zones (Moulaert and Sekia, 2003). The approach involves competing and complementary firms gathering in close vicinity to share knowledge and drive forward innovation. The TIM approach is the underlying theoretical framework for this research.

3. LITERATURE REVIEW

3.1. Theoretical underpinnings

'Territorial Innovation Models' (TIM) is the umbrella terminology for the collection of theoretical models that consider the geographic nature of the innovative process (Moulaert and Sekia, 2003). Considering that these models have their theoretical and epistemological roots in distinctively separate areas of theory a generic definition is hard to construct. However one of the most detailed definitions of the main characteristics of a TIM is provided by Wolfe (2011):

> "the concept of *the region* as a meso-political unit with some capacity to support economic development; the concept of *innovation* as the process whereby new knowledge is taken up and introduced to the market as new products, processes or forms of business organisation; the concept of the *network* as a set of reciprocal linkages amongst ac-

tors that coalesce to pursue common economic interests; the concept of *learning*, particularly the institutional aspect, whereby new knowledge, skills and capabilities are incorporated in the routines of firms and innovation support organisations; and finally, the concept of *interaction* through which firms and relevant supporting organisations associate to pursue collective practices and projects of individual economic or commercial benefit" (Wolfe, 2011, referencing Cooke, 2006, 49, emphasis added).

This definition introduces the key theoretical underpinnings of all the TIMs (geography, innovation, networking, learning and interaction). The definition also stresses the importance of companies and their their contribution to learning, networking and interaction within the system.

The evolution of the TIMs is a complex one. They have progressed as our understanding of innovation (as an academic concept) and the business environment have also improved. In the circumstances of this paper it was not deemed necessary to include a full discussion of this evolution. The table below presents the most popular TIMs and are listed roughly in the order of their evolution (earliest carnations first with the most recent additions later).

Tab. 1: Overview of different TIM.

TIM	theoretical underpinnings	critical assumptions	evolution from previous TIM	key empirical work	role of public policy
innovative milieu	Perroux, Endogenous development (Friedman and Stöhr)	Firms are not in isolation and are instead part of a milieu. There are three key functional spaces a firm operates in: the production, the market and the support space	N/A	The GREMI school: Aydalot (1986), Ratti (1992)	To encourage the expansion of the milieu
industrial districts	Marshall (1920), Sabel and Piore, Economic Geography, Territorial Innovation	Institutions are considered as 'agents' that enable innovation. Learning and sharing as a network which also has the potential to regulate activity	Similar aspects to both the 'Innovative Milieu' and 'clusters' but goes further to consider trust and opportunism. The 'Local Production Systems' literature takes influence from the Industrial District but with a closer focus on governance	Bagnasco, 1977 Italy - Emilia-Romagna (Brusco, 1982). Germany - Baden Württemberg (Cooke and Morgan, 1998)	Spatially focused to develop a particular industry/sector
cluster	Economies of Agglomeration (Marshall, 1920 & Porter, 1998), Californian School of Spatial Division of Labour	A firm's (and therefore region's) competitive advantage is gained through co-location	Inspired by the Innovative Milieu but with a focus on economic advantage	Silicon Valley - Saxenian (1996), Bathelt *et al*.'s (2004) 'Buzz and Pipelines' perspective	To provide the necessary environment for clustering to occur at various levels of governance. Policies should aim to help clusters establish Pipelines to external networks
National System of Innovation (NSI)	Theories of technical change (Freeman, 1994), Evolutionism	Knowledge as a fundamental resource. Learning is conducted through interaction and is therefore socially embedded in institutions and actors. Innovation is the starting point of research	Took concepts from Industrial Districts but in an evolutionary economics framework	Edquist (1997)	To provide the necessary environment for innovation and learning to occur on a national scale
Regional Innovation System (RIS)	National System of Innovation (NSI), Regional Science, Economic Geography, Innovation Systems	As with NIS but innovation is now considered uni-lateral and is no longer a starting point. A region evolves through 'path dependency'	There are two sub-systems which interact with each other to foster regional learning: A 'production subsystem' mainly consisting of firms and a 'support subsystem' that aids the formers ability to learn	Cooke (2001)	As with NSI but with a stronger focus on endogenous potential of a region
Learning region	Network theory (Grabher), Institutional - evolutionary economics, innovation systems, learning processes	As with RIS but social capital is now of greater importance and the inclusion of universities	Peripheral Regions are included in the model to promote regional learning	Asheim, Morgan and Cooke. (RTP) and Wales Development Agency (WDA) - Morgan (1997)	To promote regional learning, knowledge transfer and spill-over effects. Strengthen the relationships between universities, public and private sectors

The two most recent evolutions – the Regional Innovation System and the Learning Region – are the most advanced models and take into account a range of mechanisms to promote regional innovation. It remains to be seen, however, whether and how the TIM approach is transferable to the context of rural areas which are made up of dispersed populations of mainly isolated micro-firms. Academics are beginning to realise the innovative potential of rural areas (Cooke, 2011; Shearmur, 2012; Shearmur, 2015) yet little work has been done to understand where rural areas are placed within these larger innovation 'systems'. If policies to support the growth of rural enterprise hubs are to succeed, a better understanding of this relationship within the system is required.

Enterprise hubs

If the TIM is a theoretical modelling of a regional innovation system then an enterprise hub is one of the practical mechanisms a policy maker can use to implement these designs. These hubs have been in existence for some time in urban settings but are only a recent addition to the rural landscape. This section shall therefore present some of the generic literature on enterprise hubs before focusing directly on rural areas.

Bergek & Norman (2008) suggest that 'enterprise hubs' differ from regular business premises in two ways. Firstly the physical character or design of the enterprise hub offers services that other premises cannot supply. These can include shared office spaces (which are often flexible for a business to expand or shrink when necessary), shared support services (that will reduce overheads for all parties), business advice or support (to help develop the businesses) and some form of network provision (whether this be internally or externally) (Bergek & Norman, 2008). These represent the tangible characteristics of an enterprise hub – the physical or direct benefits of firms clustering together in one of these enterprise hubs.

Secondly there are also a suite of intangible benefits that Bergek and Norman (2008) state differentiate enterprise hubs to other business premises. These intangible benefits are concerned with the fostering of knowledge transfer (or flows):

> "This knowledge brokering is a key source of additionality which enterprise hubs can provide. It adds value over and above the physical bricks and mortar of the building. Enterprise hubs become key nodes in the transmission and use of knowledge within the rural and regional economy" (Cowie et al, 2013. p.9)

Both tangible and intangible characteristics are of importance in the context of the current research. Tangible assets can be investigated with relative ease as office spaces can be mapped and broadband speeds measured for example. Surveys and desk studies can capture these characteristics. The intangible characteristic however are considerably harder to capture – no study has attempted to track and evaluate the networks and flows of these intangible assets in a rural context before. The creation of the TIM models have attempted to explain and map these intangible benefits yet have never been considered strictly in a rural setting.

Cowie et al (2013) theorised over the potential role that enterprise hubs can play in the fostering of knowledge networks by providing a visual model that represents four levels of networking:

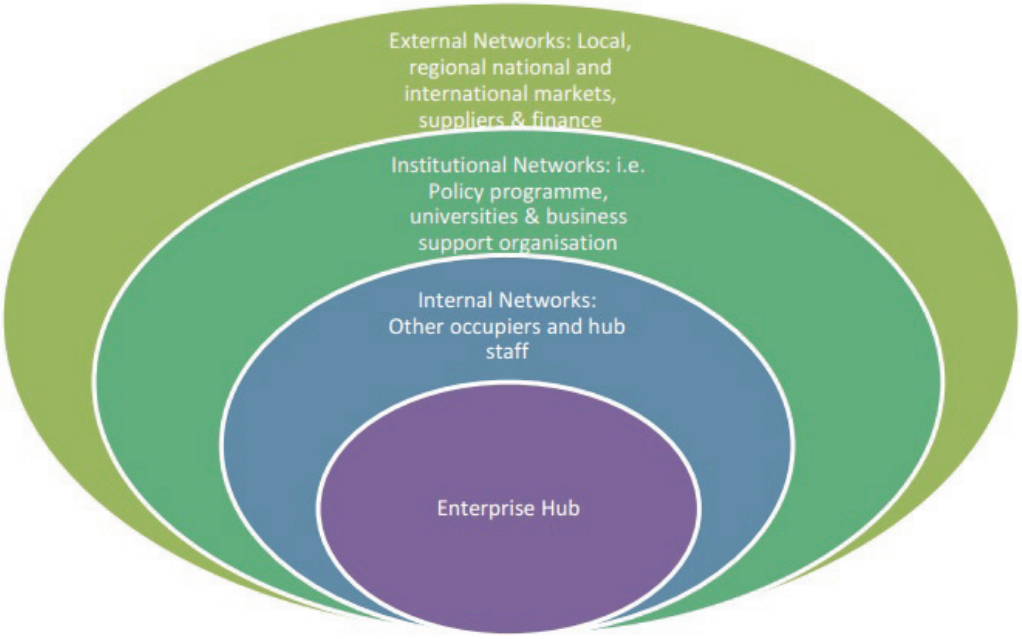

Fig.1. Four levels of networking potential within an enterprise hub (Cowie *et al.,* 2013).

This model demonstrates the various 'scales' of networking opportunities within the enterprise hub ranging from the extra-local and internal to larger and external networks. The physical design and the services provided by the enterprise hub itself is the first level at which networking can be promoted. Secondly the internal networks of hub occupiers and staff can provide co-working opportunities as well as more informal encounters. Thirdly the connectivity to the institutional networks provided can improve levels of knowledge dissemination considerably and is considered of crucial importance.

Cowie *et al's* (2013) model demonstrates the importance of networking within an enterprise hub to help promote knowledge transfer and the innovative potential of the firms operating in these premises. It gives the company opportunities to become involved in networks that it may not have necessarily encountered or in some cases actively encouraging the participation in these network structures.

3.2. Rural enterprise hubs

One important aspect that the Cowie et al (2013) report raised was the sheer diversity of hubs present within the rural economy. They range in size from one enterprise hub offering only 7 units to 35 units in another. The flexibility of the rental agreements offered ranged from traditional inflexible contracts to new flexible 'easy-in-easy-out' agreements. Some enterprise hubs actively attempted to manage the mix of firms operating on the premises to best maximise knowledge spill-overs whilst other hubs did little management. Importantly there is mixture of which sector owned or managed the premises – there are private, public and third sector ran enterprise hubs.

In their initial study into the rural enterprise hubs that the North East RGN (NERGN) were working alongside, Cowie et al (2013) provided a typology of different rural hubs. The classification combined levels (or intensity) of management within the enterprise hubs with the client base that the hubs attract.

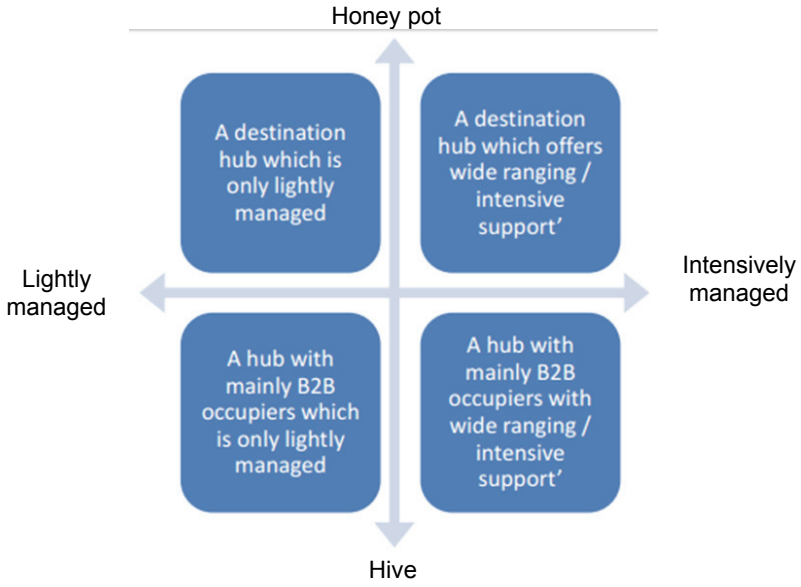

Fig. 2. Typology for rural enterprise hubs (Cowie *et al.,* 2013).

Lightly managed hubs offer few additional benefits whether tangible or intangible to businesses operating on their premises. This implies a lack of flexible office spaces, communal areas, business advices services and networking opportunities. At the other end of the spectrum are hubs that offer a vast collection of both tangible and intangible benefits – these are the hubs that actively foster knowledge transfer and improve innovative potential the greatest. These benefits (both tangible and intangible) are outlined fully in Bergek and Norman's (2008) best practice for incubation paper.

Cowie *et al*'s (2013) vertical axis captures the differences in clientele and choices of market that enterprise hubs promote and the types of businesses that they attract to operate on their premises. This spectrum measures whether firms chose to sell products largely to customers or to other businesses and produces new considerations on how to best manage these differences.

A 'honey pot' enterprise hub aims to attract custom on to the premise for the businesses to sell directly to a customer base. These are often already tourist attractions that have had enterprise hubs created within their business structures. Often these 'honey pot' hubs attract businesses from the creative sector which has been highlighted as an important sector for growth by Central Government (Mahroum *et al*, 2007). The creative industries are of particular importance as they often act as an 'input' for innovation (Mahroum *et al*, 2007) – in other words the sector can act as a knowledge spill-over within itself. The creative arts often have synergies with the tourism sector whereby the art can draw in additional visitors to an area or vice-versa.

A 'hive' enterprise hub tends to serve business-to-business (B2B) firms that do not require their customers to visit the site. These businesses could be involved in the marketing or financial sectors that tend to use higher levels of ICT. As long as the levels of technology required for these businesses to operate is present, these firms could be established anywhere – they are not strictly an 'urban' or a 'rural' business (Mahroum *et al*, 2007). Many firms operating within the financial sector have allowed staff to work remotely from the countryside and are often economic in-migrants to an area. The 'hive' hubs have distinctly different managerial needs to that of the 'honey pot' hubs. The tangible benefits of being in an enterprise hub are focussed around high levels of ICT rather than shared exhibition spaces for example. The

intangible benefits are potentially more important to 'hive' hubs as many of these firms thrive in well-connected inter-firm networks.

The work on rural enterprise hubs is rather underdeveloped and still in its embryotic phases. However, considering that the program is to be 'rolled out' to other rural areas, a full and systematic investigation into the hubs is required. There are considerable gaps in the literature about the potential the rural enterprise hubs have to transfer knowledge through, for example: How and why might processes of knowledge exchange differ between hubs? How is knowledge exchange facilitated and brokered and what conditions and incentives need to be in place to encourage it? Who are the critical knowledge intermediaries? To what extent are business owners engaged in co-generating knowledge (Fazey et al. 2013)? To what extent is it possible for enterprise hubs to expand rural business networks into the wider regional business and institutional networks (Ward et al. 2005)?

4. RESEARCH OBJECTIVES

The (heavily tailored) literature above has highlighted gaps in the literature that the research objectives were informed by. The research objectives are for the remaining PhD project. The design of the research was inspired by the traditions of qualitative research and is therefore inductive and exploratory in nature. The methodology shall involve the cross-sectional comparison (Bryman, 2012) of multiple case studies (Yin, 2009) by using participatory observation and unstructured interviews with hub owners and businesses operating within these premises.

The research objectives can be placed in to three categories of investigation:

1. To evaluate the application of Territorial Innovation Models to rural development and the generation and sharing of knowledge among rural firms

   The first objective is to provide theoretical context and insight into the functionality of Territorial Innovation Models to rural areas. Very few of the models place rural areas directly into consideration, often with only piecemeal referencing. The TIM models have evolved through time as our understandings of regional development, the business environment and the nature of innovation have all moved forward. The phenomenon of rural enterprise hubs can be considered against this backdrop of innovation. TIMs are now contextualised to promote *regional* innovation but there are substantial gaps in our understanding of how these relate to rural areas. Can it be expected that the structure of the TIM can simply be extended into areas that may possess considerable differentiation to urban counterparts or is there a need for a specific rurally tailored approach? To what extent do rural business hubs represent a rural tailoring and what can be learnt? All TIM models require a degree of networking between firms to best foster innovative potential. But previous research has highlighted the challenges in establishing business networks in rural economies, with implications for business resilience, innovation activity and competitiveness (Roper et al. 2009).

2. To explore the operation and impacts of rural enterprise hubs and their role in stimulating innovation and inter-firm knowledge exchange, networking and collaboration.

   The second objective is focused on the rural enterprise hubs themselves and is also a conceptual contribution. To date, there is a gap in the literature as to how knowledge and expertise might, in practice, be shared and developed within rural enterprise hubs. In the case of the Rural Growth Networks, early evidence suggests that knowledge ex-

change and collaboration is highly variable across the hubs, between public and private sector driven and hive and honey pot hubs (Cowie, 2013).

Rural areas often experience lower levels of proximity (socially, cognitively, institutionally and/or geographically) than urban areas whether this be between firms or between individuals. Considering that dominant TIM discourses point towards proximity as the critical characteristic in the growth of innovative potential, this needs to be fostered better in rural areas. Rural enterprise hubs could provide a central focal point for networking, knowledge exchange and collaboration through both tangible and intangible benefits – but these still need to be discovered, analysed and presented to further our knowledge.

3. To compare a selection of 'honey pot' and 'hive' categorised hubs to analyse any emerging differences in management techniques and consequential success rates of businesses

   Considering the only theoretical contribution that has made to the field of rural enterprise hubs is that of Cowie *et al*'s (2012) 'honey pot' and 'hive' theory, it would appear logical to further test this empirically. This however, is such an underdeveloped theory that the research shall be conducted in an inductive fashion. This grouping of classifications was chosen to investigate further although other groupings were considered, for example: ownership (public, private or third sector), performance (under-performing or over-performing) or geographic location(distance to an urban core). This objective is of interest because 'honey pot' hives are largely concerned with the demand side of businesses and the benefits of co-locating together to achieve this. The 'hive hubs, on the other hand, are concerned with (possibly) business-to-business interaction and largely deal with the supply side of the market. These two categories could potentially require drastically different management techniques and business models to succeed. This objective shall identify the determinants of success of these two groupings and provide an analysis of their spill-over effects.

At the heart of the overall methodological approach will be an aspiration to stimulate and contribute to processes of knowledge exchange within and between hubs. Researchers have typically regarded businesses as research subjects rather than participants, and mere suppliers of data, with the most common means for data collection being postal or telephone surveys. The 'engagement' is typically one-off with minimal dialogue or recognition of the knowledge held within firms. Response rates in turn are unsurprisingly low and declining. Approaches to low response rates have typically been to seek 'technical fixes', such as follow up mailings or monetary incentives, but more radical solutions are needed which recognise the role of the research method itself in enacting social learning. There is a need for a more open approach based on reciprocal learning. This implies that the project should encapsulate meaningful two way communication throughout between the student, collaborative partner and businesses.

5. CONCLUSION

This paper has attempted to explain the central aspect of a larger PhD thesis. Rural enterprise hubs are a new addition to the rural development landscape that require further attention.

Much work has been conducted on these hubs in urban or metropolitan contexts with a considerable body of theoretical grounding and empirical data to support such claims. These theories have been built into system of innovation that typically operate on a regional scale. However, if the 'rural' is to be treated in a heuristic manner alongside the rest of the region, then the literature appears to currently have a large gap. Regional innovation systems have

little to say about rural areas – there is either an assumption that they behave in accordance with their urban counterparts or there is a complete lack of focus on them. Either way, this hole needs to be filled.

Through studying the rural enterprise hubs themselves it is hoped that empirical evidence can be gathered to support or build upon the theory of the TIM. Data will be collected that can not only map how the RGN has grown (using several indicators) quantitatively since 2012, but also gather qualitative data for the first time. This is particularly important as the knowledge flows and other intangible benefits of operating within an enterprise hub are hard to capture without rich data sources and analysis.

An initial exploratory study was conducted by Cowie *et al.* (2013) on rural enterprise hubs and results suggested that the hubs may be behaving in a different manner than their urban equivalents. In addition to this, both 'honey pot' and 'hive' hubs have been introduced that appear to operate in inherently different fashions to each other. Both of these types of hub are present in rural areas but both require distinctly different strategic managerial plans to further their innovative potential. Complexities like these demonstrate that the theoretical groundings of urban agglomeration may well need readdressing.

By sharing this paper, I hope to stimulate discussion and feedback which will enable me to critically reflect on my research objectives and methodology. Hopefully this will enable me to effectively investigate the importance and contribution of rural enterprise hubs. I also hope that attending summer school will expand my network of peers who I can consult with throughout the project.

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Key Challenges in Rural Development
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Economically motivated adulteration of honey and its incidence in EU-28 in 2002 – 2015

Petra Šeráková

Supervisor: Miroslav Svatoš

Czech University of Life Sciences Prague (CULS),
Faculty of Economics and Management, Department of Economics,
Prague, Czech Republic

serakovap@pef.czu.cz

Summary

Economically motivated adulteration (EMA) refers to the problem of food fraud for the purpose of economic gain. Due to the globalization process and the complexity of food processing industry and food supply chain this phenomenon has become a significant problem with regard to the food safety issues. Since EMA is motivated by economic profit, specific categories of food ingredients are put at the risk of adulteration – e.g. honey. At global, European and national levels there exist various mechanisms designed to eliminate the presence of adulterated food on the market nowadays. The European one is the Rapid Alert System for Food and Feed (RASFF), which database is used for the purposes of this paper.

Keywords: adulteration, economically motivated adulteration, EMA, food fraud, food safety, honey

1. INTRODUCTION

Food fraud is considered as an actual problem, even though its origins can be dated back to the antiquity. As a result of globalization and the complexity of the food processing industry and food chains becomes EMA an important contemporary issue. Honey is a common target of economic adulteration – it can be diluted with syrup or sugar solutions, or it has deceptive label referring to the country of origin.

1.1. History

Food adulteration originated in ancient times and along with the food fraud principles the adulteration detection methods have been developed. German chemist Fredrick Accum is considered the founder of analytical procedures for food fraud detection in the context of his publication "A Treatise on Adulteration of Food, and Culinary Poisons" (Čížková et al., 2012; Fennema, 1987). Herein Accum publicly proclaimed the health hazards of food adulteration (Accum, 1820). While the earliest fraud actions have been similar to those occurring nowadays (Čížková et al., 2012), there was a substantial difference in affected geographic area.

Modern food supply chains have extended their impact; hence the risk of food adulteration has become the problem for global population (Helferich et al., 2010).

1.2. Food fraud and economically motivated adulteration

Food fraud represents premeditated act for the purpose of economic gain that concurrently leads to adulterated production. Although the purpose or motivation is economic or financial, the effect often becomes a public health hazard (Spink and Moyer, 2011). Product counterfeiting for financial gain or competitive advantage is called economic adulteration. Its negative side-effect is undermining the trust of consumers, which can influence their preferences and become a threat to the economic viability of producers providing high-value food products (Fairchild et al., 2003). Various types of food fraud can be identified, while many of them overlap one another – for example: substitution of high quality input for a cheaper one; misuse of well-known brand; misrepresenting the country of origin, production method or content and mislabelling (Čížková et al., 2012).

1.3. Health risks

Food fraud may not inevitably be unsafe to consumers. Nevertheless in recent years several cases of health damage resulting from the adulteration of food occurred (Everstine et al., 2013; Lipp, 2012). The melamine incident in 2008 in China showed the vulnerability of international trade of food products and food ingredients, when 47 countries worldwide received adulterated products containing melamine (Gossner et al., 2009). Another example of serious consequences due to the exposure to an adulterant represents mass methanol poisoning in 2012/2013 in the Czech Republic. The outbreak of accidental poisonings was caused by alcoholic beverages adulterated with methanol (Urban et al., 2016). EMA is often designed to avoid detection by regular testing and it is crucial to point out that most of EMA incidents were uncovered as a consequence of unwholesome effects to consumers' health (Lipp, 2012).

1.4. Subjects of adulteration – Honey example

Specific categories of food ingredients may be put at greater risk on account of diverse factors as consumer demand, economic value and the incidence of analytical testing gaps (Lipp, 2012). Since the food counterfeiting is motivated by economic profit, the most frequently adulterated items are expensive and luxurious products or products sold in large volumes (Čížková et al., 2012). As already reported by Accum (1820), not only food is object of adulteration, which can put human health in danger. They are also for example low-quality titanium implants (Pouliot, 2014) or pharmaceuticals and dietary supplements (Rocha et al., 2016). This paper focuses specifically on the economically motivated adulteration of honey.

Accum (1820) had already mentioned honey in food fraud issues, but it had been presented as a product used for beer and wine adulteration. Later, British physician Arthur Hill Hassal in his book[1] had presented honey as a commodity which had been counterfeited. Hassal (1857) had described different methods of honey adulteration – e.g. adding starch and sugar canes. Honey represents a relatively high-priced product, which can be considered extremely valuable and vulnerable. The value is concealed in its image as a natural, wholesome and pure product. The vulnerability is likewise in that image which may potentially be damaged by negative publicity (Fairchild et al., 2003). Because of this and also for its potential profit margin becomes honey an attractive target for EMA.

[1] Adulterations Detected; or, Plain Instructions for the Discovery of Frauds in Food and Medicine (1857)

1.5. Objectives

The objective of this paper is to provide an overview of honey adulteration incidents in the EU-28 in 2002 – 2015 in context of RASFF notification system.

2. MATERIALS AND METHODS

The data were obtained from the Rapid Alert System for Food and Feed (RASFF) online database (EC, 2016). The only search criteria for the purpose of this paper were the product category "Honey and Royal Jelly" and the time span 2002 – 2015. Some common characteristics among the incidents, their frequency and relevance are described.

RASFF Portal is a tool which provides latest notifications on food products withdrawals and public health warnings throughout European Commission, EU-28 national food safety authorities, Iceland, Liechtenstein, Norway and Switzerland. It enables information exchange as any risks to human and animal health are detected within the food and feed chain (EC, 2015a).

There exists the EU standard of honey identity in Council Directive 2001/110/EC. When the honey is placed on the market or used in any product which is intended for human consumption, it must meet specific composition criteria – e.g. sugar content, moisture content, water-insoluble content, electrical conductivity and so forth (Council of the EU, 2001).

It is applicable to consider the sum of notifications and controls regarding to the amount of honey imported to EU-28. For this purpose the data from the United Nations Commodity Trade Statistics Database (UN Comtrade) were used. Imports are classified here as flows coming from the rest of the world or from custom transit (UNSD, 2016).

3. RESULTS

The final number of cases generated from RASFF database for the time period 2002 – 2015 is 352. The search within product category "Honey and royal jelly" revealed incidents referring to bee pollen and propolis too. There were 86,08 % of total notifications linked to honey, 12,78 % were related to royal jelly, only 0,85 % referred to propolis and 0,28 % concerned to pollen. Majority of notification alerts originate from the UK and Germany (60 events notified by each of them), Spain (47) and Italy (40). The chart diagram in Figure 1 displays annual notifications frequency in 2002 – 2015 in EU-28.

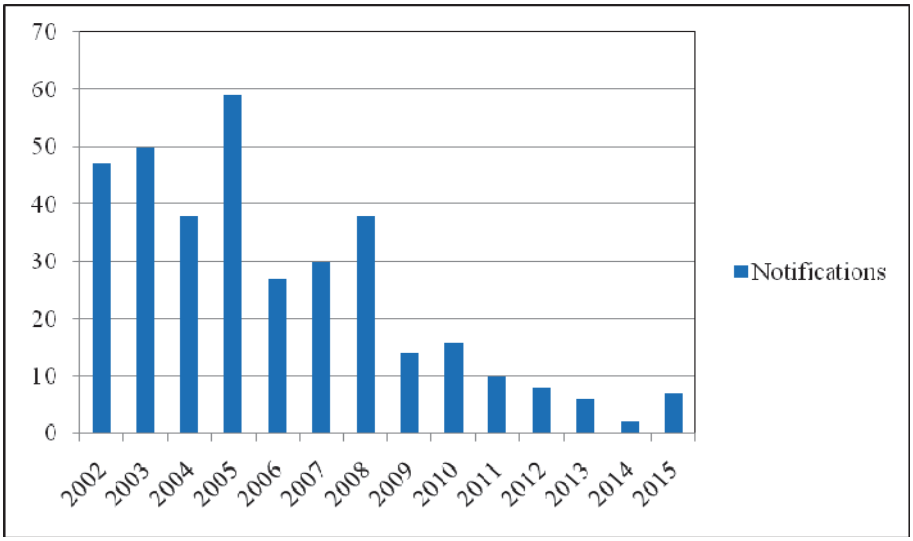

Fig. 1: Product category "Honey and royal jelly" notifications in 2002 – 2015 (EC, 2016).

The decreased numbers of documented notifications from past seven years do not inevitably signify that bee products are being less adulterated, or that the regulatory system controls do not work efficiently. It is essential to remark, that fraudsters are developing adulteration methods to make the final fraudulent product undetectable to control procedures (Čížková et al., 2012).

3.1. Honey

Multiple notifications of chloramphenicol-tainted honey entering the EU-28 countries were documented. Chloramphenicol residues were found in 18.48 % of total honey incidents. The presence of streptomycin was identified in 15.51 % honey notifications. Other recurrent agents detected in honey samples were for example sulphathiazole (10.23 %), tylosin (6.27 %), tetracycline (5.28 %) and oxytetracycline (4.62 %). Vast majority of notifications referring to honey came from the UK (56), Germany (50), Spain (42), Belgium (22) or Italy (21). According to the CBI Trade Statistics (CBI Market Intelligence, 2015) Germany is the largest European importer of honey. Other main European importers are the UK, France, Belgium and Spain (CBI Market Intelligence, 2015). Therefore the major part of notifications comes from major honey importing countries.

In 2015/2016 the European Commission has organized a coordinated control plan at EU level to assess the prevalence of fraudulent practices in the marketing of honey (EC, 2015b). The amount of 2 237 samples of honey intended for human consumption were collected. The preliminary results suggest 19 % of products controlled were not compliant with EU regulations and standards. Sugar adulteration was indicated in 6 % and mislabelling in 2 % of all samples. In addition 11 % of all samples were classified as "suspicion of non-compliance" due to the possible adulteration with sugar (EC, 2015c). This recent action pointed out the important role of authorities in combating the adulteration and their interest in making changes in food policy and standards with regard to the problem of food fraud. Figure 2 shows the volume of honey imports (in tonnes) to EU-28 countries.

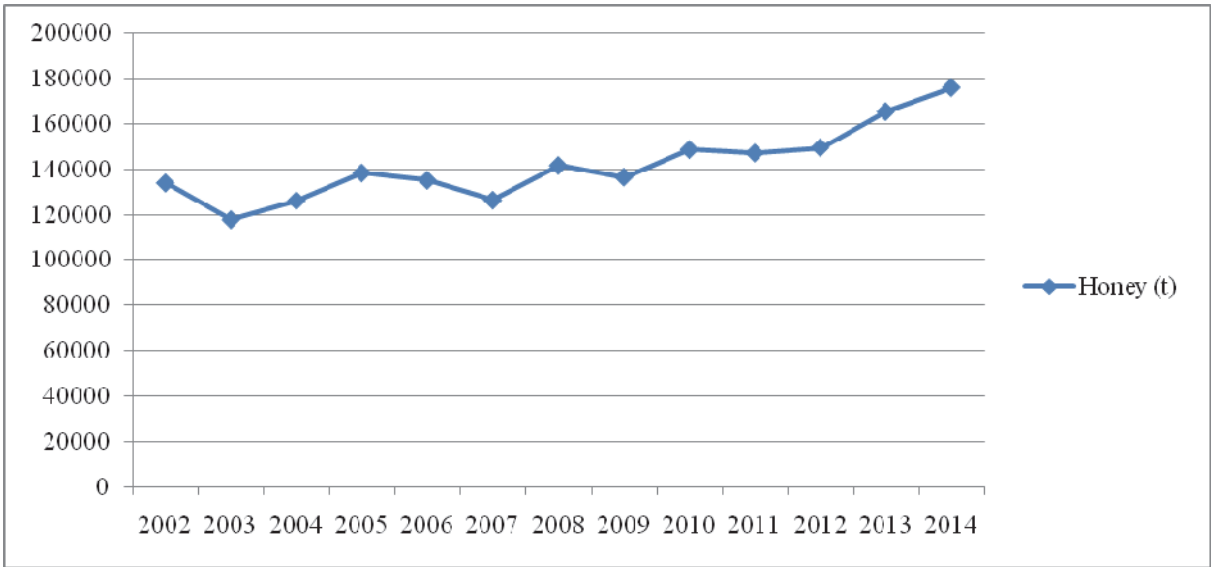

Fig. 2: EU-28 imports of natural honey 2002 – 2014 (UNSD, 2016).

Honey imports increased significantly between 2012 and 2014, to a level of 176 thousand tons (UNSD, 2016). The continuous increase in honey imports is primarily attributed to the substantial decline of the European beekeeping and to diverse problems in major honey producing countries. It is essential to point out, that the consumption had remained stable between 2009 and 2013 and that circa 40 % of Europe's consumption needs are met through honey imports (CBI Market Intelligence, 2015).

4. DISCUSSION

Accomplished research assessed the functional example of international cooperation at multinational level. Early-warning system enables to spread alerts within a broad area. The collaboration between food safety authorities globally is essential as soon as multinational consequences are conceivable (Gossner et al., 2009). Nevertheless international collaboration places demands on the common dialogue, communication, terminology clarification, defining restrictions, staffing and so on. It is necessary to distinguish adulteration from contamination, though both them consist in the presence of something that should not be in a food product (Lipp, 2012). Some other propositions concentrate on consumers and their preferences, noting that food fraud incidents may easily undermine the confidence of the consumer. The number of fraud opportunities can be reduced by higher risk of detection, or increasing the costs of the necessary technology for counterfeiting and/or by developing quality standards attractive for consumers (Spink and Moyer, 2011). There is increasing trend of consumers who are interested in the history of their food including chemical inputs, additives, manufacturing processes, handling and storage and environmental impacts (Fairchild et al., 2003).

5. CONCLUSION

Economically motivated adulteration presents an increasing substantial issue which is propelled by globalization and the complexity of the industry and food chain itself. Food fraud can have a negative impact on the overall image of agriculture and food industry, hence it can influence consumers' preferences. Honey represents a common target of economically moti-

vated adulteration, because it is considered a relatively high-priced product. This paper emphasizes the importance of international cooperation in order to detect food fraud and improve food safety regulations. Public apprehension about the safety of the available food will continue, therefore the research on food safety and development of more regulations will probably intensify. The major outcome of this paper was to provide an overview of the incidence of economic adulteration of honey in EU-28 countries in the present condition. Even though the amount of notified incidents has decreased since 2009, the preliminary results of the European Commission control plan have shown that the situation on the honey market is definitely not satisfying. The further research may proceed with the final results of European Commission control plan concerning the honey adulteration.

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Department für Wirtschafts- und Sozialwissenschaften
Institut für nachhaltige Wirtschaftsentwicklung
Feistmantelstrasse 4, 1180 Wien
Tel: +43/1/47 654 – 73600
Fax: +43/1/47 654 – 73109
e-mail: Iris.Richter@boku.ac.at

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