



LATVIA UNIVERSITY OF AGRICULTURE AS KNOWLEDGE AGENT IN ZEMGALE REGION: EXPECTATIONS AND REALITY

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Abstract:

In the era of knowledge economy, universities are stressed as important agents fostering and promoting development processes at local as well as regional and national levels. At both policy documents determining development of Zemgale and the strategy of university a close cooperation and orientation towards regional needs is emphasized thus eventually expecting that through mutually coordinated activities and cooperation between the university and regional stakeholders these needs will be met. The article focuses on issue whether indeed the current cooperation forms involving the Latvia University of Agriculture and regional stakeholders (policy makers, municipalities, business representatives, research institutes, etc.) reflects orientation towards the needs and priorities defined by the policy makers and university. On the basis of the analysis of policy documents and semi-structured interviews, the authors indicate that to some extent this orientation is practically obvious, but there are many opportunities that currently are not effectively used due to a number of reasons. In general importance and necessity of cooperation is acknowledged by both the university and regional stakeholders; however, cooperation potential is not plenty largely used yet. It is influenced by dense social networks, financial support available (what often is not regular and sufficient), mutual understanding and expectations, some stereotypes that can be met among the stakeholders regarding each other, time constraints, overloaded university staff members, bureaucratic procedures, etc.

Keywords: university, cooperation, regional needs.

1. INTRODUCTION

Within a framework of the reform of the system of higher education in Latvia, there is ongoing debate about the role and necessity of the universities in regions. Arguments for knowledge and resource centralization or decentralization have been provided from both sides: those who try to lessen the importance of universities in regions by approving that their effectiveness and resources are not adequate and those who stress absolute necessity of presence of the universities in regions. One of the arguments of those who belong to the second group is that universities in regions respect local needs; they concentrate regional technological, scientific and human resources and are vehicles also for local socio economic development.

Thus *the main task of the article is to show*, whether particular needs of Zemgale region are defined and how Latvia University of Agriculture (further in the text LUA) as a unique knowledge centre responds to them.

In order to realize it, the authors theoretically look at new demands to universities and regions, give an insight in policy documents for identifying regional needs and analyses how the university reflects them in its operation.

The paper presents the results of the action research carried out within the framework of the research project “Promoting the Utilization of the Research Potential of regional Universities for Regional Development in Latvia” (25.02.2009–30.04.2011), funded by the Norwegian financial instrument.

2. THEORETICAL ASPECTS OF THE UNIVERSITY ROLE IN REGIONS

Universities have a number of functions which among the other include dialogue with industries, policy makers and public. As Drucker and Goldstein (2007) stress, today regional economic development initiatives are based around the existence of major research universities. The authors affirm: “It is becoming more evident that policies for regional development of innovation systems need to be tailored much more specifically not only to the available intellectual and physical resources but also to take into account the local cultural background, social structures and history, and *weltanschauung*” (Drucker & Goldstein, 2007, p. 21). Therefore universities are core knowledge-producing entities in many regions that can enhance and drive innovation and development processes when they act as key elements of innovation systems (Huggins, Johnston & Steffenson, 2008).

The transfer and commercialization of university-generated knowledge is also taking a stronger role within government policies (Lambert, 2003), “with many governments and their agencies turning their attention to the role of HEI (Haier Education Institutions) knowledge commercialization in developing innovative, sustainable and prosperous regional and national economies” (Drucker & Goldstein, 2007, p. 23). Authors conclude that there is still a lack of understanding of how to create effective impacts through knowledge transfer from universities, and the role of regions as part of these processes.

Universities have been seeking to strengthen and expand into new knowledge niches, which is transdisciplinary, collaborative, and undertaken in a context of application. This interdisciplinary research agenda has spilled over into new curricula programmes designed to provide graduates with the new skills required by industries in the knowledge economy (Huggins, Johnston & Steffenson 2008).

S. Reichert within a framework of the research „The Rise of Knowledge regions: Emerging Opportunities and Challenges for Universities” (2006) of the European University Association shows that interest on creation of widely accessible knowledge becomes widespread between universities and regions (see Table 1.). The main expectations towards universities and regions have been divided into four essential fields which are knowledge and technology transfer, research, educating students, and creation of attractive knowledge environment. In order to meet these expectations or in other words to realize new requirements so closely related to development of knowledge economy of the country, even development of all these fields is significantly important as well as involvement of all stakeholders.

Table 1: Implication of New Demands for Universities and Regions

<i>New demands</i>	<i>Implications for universities</i>	<i>Implications for regions</i>
<i>Educating students and researchers:</i>		
More attention to research skills, interdisciplinary, international and communication / team skills demanded by globally competing employers.	Increasing dialogue with employers on skills needs, at subject level, at institutional level.	Regional and national-level needs can be defined with the help of regional institutions / stakeholders. Institutional responses will differ depending on type of institution.
<i>Conducting, managing and supporting research:</i>		
Politicians and policy-makers are becoming aware of global competition for mobile knowledge resources (businesses, students, researchers, managers) and expecting universities to be able to compete.	Since research intensive institutions are highly recognized and more readily resourced, institutions compete in increasing their research capacity. Research infrastructures have to be shared as much as possible.	Research infrastructures can be regionally based projects. Regional platforms for knowledge intensive firms (e.g. science and technology parks) and for particular sectors (clusters) can help regional innovation capacity.
<i>Transferring technology and knowledge:</i>		
University research and education has more to offer society than new technology or product-relevant research results. From updating skills of employees in knowledge intensive professions to identifying and solving social problems, university expertise is needed in an increasingly large range of professional and political	Tech Transfer offices have extended their portfolio of core competences and tasks which ranges from IP protection, support for filing licenses and patents, and helping with industry collaboration contracts, to technology scouting, matchmaking firms and university experts, mobilizing university researchers'	University / industry collaboration has to overcome differences of interests, values, and cultures, all of which can be bridged more easily through building a basis of trust with the help of regular meetings, which in turn are more easily supported at a regional level. Knowledge transfer is built on communication and

fields.	interest in innovation activities and contacts.	contacts which are most easily fostered in geographic proximity.
<i>Creating an attractive knowledge environment:</i>		
To be competitive, knowledge economies and societies, regional agencies, knowledge based enterprises and universities all seek to create environments which attract and foster creative individuals and can support each other in these attempts.	Qualified individuals are not just attracted by good infrastructure and resources that allow them to realize their ideas but also by their intellectual environment, as characterized by colleagues in the institution, and possibly also other institutions in the area, and by the ambient communication culture.	Regional actors can do a lot to enhance the “creative environment” for different institutions by fostering interinstitutional exchange, thereby increasing the number of relevant partners in different sectors, by organizing events that allow experts to learn from each other and engage in joint learning (new relevant scientific areas) or foresight activities.

Resource: Adapted from and transformed by the authors on the basis of Reichert S. (2006). The Rise of Knowledge regions: Emerging Opportunities and Challenges for Universities. European University Association.

There is some debate surrounding the extent to which universities should focus on knowledge creation or knowledge diffusion. Universities should focus on building research capacity (knowledge creation) if they want to increase technology commercialization, while others argue that developing more effective mechanisms for transferring knowledge to both private and public sectors (knowledge diffusion) is more important.

Development of linkages between universities and the private sector is a relatively new phenomenon in Latvia, with far less experience accumulated compared to many developed countries and an even shorter national record of accomplishment than integrating education and research, both of which can be treated as a precondition for bringing forth the ‘third mission’. Nevertheless, efforts to establish and strengthen university–business cooperation have been quite active in recent years, which must be viewed in the light of the fact that private sector development as such in Latvia has a track record of less than 20 years. (Adamsonė-Fiskovica, Kristapsons, Tjunina & Ulnicane-Ozolina, 2009).

Universities, their affiliates and research institutions as science centres concentrate important human resources both geographically and institutionally. In regional context, they attract young people thus strengthening and renewing demographic structure and contributing to human capital. Local social fabric becomes more complex; people express multiform needs and experience different life chances.

In recent years, encouragement of university– business cooperation has been prioritized by the government as one important step in building a knowledge-based economy, which was set as a strategic policy goal to ensure the competitiveness of the national economy, which had so far relied mainly on cheap labour and natural resources.

The need to facilitate these linkages is emphasized in many policy documents, and since 2005 concrete aid schemes have followed, including financial support for the establishment of technology transfer offices at universities as well as support for applied research infrastructure as an important precondition for universities to be able to offer advanced technological

solutions for companies. Several new support measures facilitating collaboration (e.g. competency centers, clusters, researcher placements) are envisaged in 2007–2013. Largely in response to this policy orientation, universities have begun to take more focused actions to pursue industry linkages, spurred also by the need for additional sources of income and comprehension of the need to share their scientific and technological competence. Specific administrative units were established at various universities to elaborate measures for partnerships with the business sector. Cooperation with business is also emerging as one of the selection criteria when researchers apply for research grants (Adamsone-Fiskovica, Kristapsons, Tjunina & Ulnicane-Ozolina, 2008).

Authors conclude - the universities jointly with regional stakeholders should envisage vision of regional development, they can influence these processes and promote innovations; however, several preconditions have to be present:

- identified regional needs and purposeful respond to them,
- dialogue between stakeholders within and between disciplines, where the last is especially crucial precondition when thinking about regional development and resolution of problems in integrated way and respecting interrelationships rather than focusing on issues narrowly and solely within a framework of one discipline,
- greater mutual understanding about competences, functions and opportunities to influence direction of different development processes, for example, within a context of regional socio economic development or particular economic activity,
- awareness of synergy of interdisciplinary cooperation,
- established and developed institutionalized and informal cooperation forms,
- environment and resources (finances, human resources, infrastructure, topicality of the problem, time) that facilitate and maintain sustainable cooperation,
- motivation of regional stakeholders and interest in cooperation that in fact is primary and most important precondition for other to be fulfilled.

3. LATVIA UNIVERSITY OF AGRICULTURE AS KNOWLEDGE AGENT IN THE ZEMGALE REGION

The action research was carried out from November 2009 to April 2010. Document analysis and semi-structured interviews (19 individual and 6 group interviews) were implemented for information gathering purposes. The LUA performance strategy, Zemgale Planning Region strategies and other planning documents related to the regional development were analysed in order to identify regional needs and to understand the role of the LUA in regional development accordingly to the point of view of the policy makers. The semi-structured interviews were conducted to identify diversity of institutional cooperation forms and informal networks, and to identify factors that promote and hinder cooperation between the university and the regional stakeholders in knowledge transfer processes. The research sample was made of the representatives of cooperation agents (interviews with heads of different structural units at all faculties of LUA).

The following documents were analysed:

- the LUA Acting Strategy for Planning Period 2010–2016,
- the Development Programme of Forestry in Zemgale planning region (elaborated in 2005),
- the second redaction of the Programme for Development of Entrepreneurship in Zemgale for 2006–2011,

- the Programme for Development of Tourism in Zemgale Planning Region 2008–2013,
- the strategic target of the Programme for Development of Zemgale Planning Region 2008–2014.

2.1. Analysis of policy documents of the Zemgale Region

The document analysis shows that knowledge transfer from academic environment to regional and national economy is emphasized in both strategies of the LUA and policy documents that envisage directions of development of ZPR and define the main activities for meeting the aims stated in the documents (Bite, Kronberga & Paula, 2010). The LUA appears in policy documents as:

- a great advantage of the region and as only technical institution of higher education in Latvia's regions;
- a factor diminishing the flow of work force from regions, which is achieved by adequate opportunities of both education and work in a local labour market,
- a research and science centre providing knowledge and technologies for economic activities that are important for Zemgale region such as agriculture, food technology, textile industry, metal-fabricating industry, engineering industry, chemistry (2005:66-69), construction and wood-processing sectors, tourism, and food processing,
- an institution providing real support and contribution to entrepreneurs by carrying out researches.

In the Programme for Development of Zemgale Planning Region 2008–2014, development of knowledge economy is one of the priorities (the second one in particular), which determines activities for development of entrepreneurial environment, for example, promotion of information and knowledge transfer by creation and maintenance of the support system of coordinated information and knowledge transfer as well as promotion of linkages between education, research, and entrepreneurship. In order to realize it, some activities are emphasized:

- necessity to facilitate cooperation between academic environment and practitioners,
- increasing of commercialization of research results developed by LUA students,
- promotion of understanding in wider society on the role of innovations in raising the level of welfare, what would be achieved by informing society on innovation issues via involvement of local activists, NGOs, and representatives of mass media as well as by popularization of particular scientific achievements (2008, p. 58).

Since the regional development planners consider the LUA as an important force promoting regional development, the policy makers express concrete expectations in regard to the university. Common expectations that are reflected in the documents are:

- qualitative study programs based on the needs of labour market,
- research and science activities based on innovations and practical applications,
- scientific activities that provide technologies with a high applicability in the national economy,
- involvement of the students of all study levels in researching topical problems for business and society,
- active cooperation with the practitioners and users of knowledge and technologies in the region.

Because of these expectations the LUA is mentioned in all the analysed documents, emphasizing the uniqueness of the university in Latvia. This is concluded both in the analysis of current situation and in outlining the future development of the region and economic sectors in Zemgale region (Bite, Kronberga & Paula, 2010).

All the documents envisage strong orientation towards closer linkage between science and practice, which means integration of higher education and researches in particular sectors what in its turn would provide implementation of innovative and knowledge intensive technologies in Latvia's economy (ibid.). The documents stresses the idea of closer collaboration of stakeholders, quality of education, unity of science and practice in development of new products and technologies in Latvia, significantly greater involvement of local municipalities, mass media and local society.

The document analysis shows that university and other regional stakeholders are aware of the role of the university in development of the region. During the interview, the rector of the university J. Skujāns stressed that university already purposefully work in order to meet regional needs: *"We are ready to prepare specialists that are necessary for the region and Jelgava. We develop a lot of what is related to engineering industry - the city has interest in that and the Faculty of Technology evolves in this direction."* About cooperation at the regional level witnesses also other examples such as production of cellular plastic in Dobele, research and production of biogas in Vecauce, development of new technologies and knowledge in Latvia State Institute of Fruit-Growing. It should be emphasized here that great part of the existing cooperation practices are notable with creation and implementation of innovative technologies that could lead to positive benefits at regional as well as national and international levels. A good example of cooperation between regional agents and university is the Scientists' Night organized by the LUA. During the interactive activities, science becomes closer to society, because academic staff introduce visitors with their laboratories and technologies, and during public lectures in an attractive manner they tell and show what universities do.

2.2. Some examples of knowledge transfer in the Latvia University of Agriculture

The research results indicated differences between the faculties regarding cooperation at the regional level (particularly the research interest was focused on issue to which extent the faculties focus on needs of Zemgale and thus develop cooperation networks in this region). The faculties that realize unique study programmes in Latvia's context pay lesser attention towards cooperation with regional agents particularly in Zemgale, because their task is to develop and widespread knowledge at national scale. Also their cooperation partners often are of a national importance. Even then, Zemgale in general and especially Jelgava as a city benefits greatly from the situation that the university is geographically allocated in Zemgale. For example, the Faculty of Veterinary Medicine has contract with Jelgava municipality on maintenance of animal home. Also research institutes choose local producers as their cooperation partners, because they know each other. Geographically small distance is important that allows economizing resources. All these arguments approve theoretical considerations that universities besides their basic functions concentrate human resources and contribute to economic development.

Those faculties providing study programmes that are not unique in the country, more likely are oriented towards cooperation with regional partners. For example, respondent representing the Faculty of Information Technologies admitted that the faculty in its work is oriented

towards potential students and adult education in Zemgale region: *“I believe that the faculty plays a great role in the region. When information technology centre is near, it is much easier to educate local people and to improve their information literacy than in the case when these opportunities would be concentrated, for example, in the capital city.”* Also the Faculty of Social Sciences and the Faculty of Economics orient to Zemgale region by providing study programmes that prepare specialists for the region, contributing to elaboration of development plans for local municipalities, conducting researches for Zemgale Planning region etc.

Great part of informants stress the necessity to decentralize the process of knowledge creation and transfer arguing that knowledge transfer should be maximally approximated to regional inhabitants and their needs. To meet this it is important to strengthen already existing cooperation practices, social ties, knowledge creation clusters by involving new agents and improving preconditions for both formal and informal knowledge exchange between scientists and knowledge users.

Although examples of successful cooperation between regional stakeholders are identified, it should be noted that several factors impede knowledge transfer. The results of the interview show that often there is a lack of ties or intermediates between creators of knowledge (structural units of the university) and potential user (regional stakeholders). In many cases scientists work on particular innovative solutions, however, impermanent funding, time constraints (lack of time), lack of confidence in results slow down the process of knowledge transfer to potential users. From the other side, users are not informed on many possibilities and do not know where they can address their problems. This indicates that intermediate institutions are crucial for bringing together knowledge creators and users. Again, it should be emphasized here, that such institutions are already established and to some extent they do their job quite well; however, during the interviews respondents expressed their lack of knowledge, for example, about where the knowledge and technology transfer centre of the university is allocated and how it might help: *“[...] Speaking about the cooperation, we do not know where the knowledge transfer centre is and what exactly it does!”* That means that all stakeholders should be more aware about each other and should think about improvement in process of mutual information exchange, information and procedures should be easily accessible, understandable and useable. Currently cooperation often is based on particular personal contacts (at least in its begging phase), but cooperation forms should involve also new agents.

4. CONCLUSIONS

The policy documents analysed in the research reflects that presence of the LUA in Zemgale region is seen as a great advantage of the region that contributes to regional development, and policy makers do relate particular expectations towards the university.

Particular activities are envisaged in documents to meet these expectations; however, the interviews showed that many of them are not regularly implemented or coordinated in a way that maintains sustainable knowledge transfer and long term cooperation.

In general importance and necessity of cooperation is acknowledged by both the university and regional stakeholders; however, cooperation potential is not plenty largely used yet. It is influenced by dense social networks, financial support available (what often is not regular and sufficient), mutual understanding and expectations, some stereotypes that can be met among

the stakeholders regarding each other, time constraints, overloaded university staff members, bureaucratic procedures, etc.

Increased motivation of regional stakeholders and also structural units of the university in cooperation as well as better coordinated information exchange would increase an amount of good cooperation practices and purposeful respond to regional needs.

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