

## Cross border protection of the clusters' intellectual property in the agricultural sector

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**Abstract:** The goal of the paper is to analyse the potential for the innovation of cross border clusters from the sector of agriculture. The methodology which is used is the research of intellectual property (IP) of the clusters' members and clusters by using a specific questionnaire for clusters in two countries: Hungary and Serbia. The analysis of results shows a high level of innovativeness within the clusters' members and the need of protection of their intellectual achievements. The similar results were achieved in both countries. They show that the IP rights at the level of clusters should be protected as the cross border trademark and the name of origin. The scientific contribution of this paper is to introduce the concept of the joint cross border IP protection for two or more clusters from different countries which might be applied across the EU.

**Key words:** intangible capital, protection, innovative potential, trademark, geographic origin

Porter (1998) described clusters as geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in the related industries and associated institutions in the particular fields that compete but also cooperate. Clusters are structures which are helping companies to overcome the challenges of severe conditions in the international market. They are facing the point of science and industry where a spill-over effect of the science is getting commercialized (Anselin et al. 1997). Clusters create the local dimension of innovation and require from the policy makers policies customized according to their needs (OECD 2008). Innovation and collaboration can be stimulated by (Asheim and Gertler 2005):

- Developing industry – research collaboration: It should be done through the promotion of the development and transfer of technologies within clusters.
- Promoting enterprise networks: It could be done by stimulating the SMEs to enter some formal networks or to socialize them by some regular frameworks of social meetings.
- Generating spin-offs: It should be a way to ensure the intellectual property rights (IPR) over the results of research from the creators at the research institutions like institutes and universities.

- Promoting joint results: The results of cooperation between enterprises and academic centres should be visible by a better promotion of products which appeared through such joint work (Potter and Miranda 2009).

Clusters are remarkable features of the local economic development. They are the base of the small and medium-sized firms' competitive advantage. They are focusing towards the entrepreneurship and are generating innovation which is the core of vitality in functioning, ensure better results and a higher employment rate (Breschi 2008). Cluster strategies possess the power to move forward the regional economies by boosting the entrepreneurship, business specialization, employment and income with the implementation of permanent innovation processes (Muro and Katz 2010).

The society with good policies and political decisions creates the best path forward which involves the experimentation and evaluation (Chatterji et al. 2013). Without advances in these dimensions, there is no confidence that the policies to promote entrepreneurship will have their intended impact. As clusters are the centres for innovation, they are adding values to products and services of their members and creating the intellectual property on both levels:

the level of the clusters' members and the level of the clusters themselves. The importance of innovation for the development of the European Union is significant and it generates the intellectual property (Kranjac et al. 2013).

There is no general definition of intellectual property in the literature. There are many definitions and approaches that coexist. It usually involves:

- the intellectual property assets of knowledge in a broad sense,
- the capital embodied in human resources (expertise, commitment),
- the innovation capital and the capital of relations between people, companies and other elements of production chain.

Intellectual property rights are the legally recognized exclusive rights to create with the mind (WIPO, 2010). According to the laws for the protection of intellectual property, the owners are granted certain exclusive rights to different intangible assets, such as the musical, literary and artistic works, discoveries and inventions, words, phrases, symbols and designs (Chahal 2013). Intellectual property is not a concrete, material ownership of an object, but a right, or a set of competencies that the legal system of a state or international legal system recognizes to the holder of the intellectual property.

Intellectual property promotes human creation, pushing the limits of science and technology and enriching the world of literature and art.

Some authors discuss that there are two main issues very specific for the clusters which must be taken into consideration when developing an IP policy (IPPo) for clusters (Maggioni and Riggi 2008):

- (1) A professional approach of the cluster IP management as a base for building trust within the cluster what should bring good surroundings for the elaboration of collaborative projects to materialize the vision and cluster strategy
- (2) The distinction between different IPs, like the individual, collective and jointly owned IP.

And further, the authors stress the need of effective mechanisms to protect and legally transfer the IP across international boundaries which is the price of the admission to collaborations (Phillips and Ryan 2007). Some managers are confused about their task in the complicated process of the clusters management. They must have a clear vision, in relation to clusters of IPs. They even should have a cross border,

wider regional vision of the sectoral clusters future (Enright 2003). The extent to which the IP should be defined and how to consider it is highly sector dependent. For example, engineering is largely patent focused, whereas culture and experience would rarely need a patent. They are relying more upon the copyright, trademarks and intellectual assets (Innovation Property Rights for Clusters 2010). Although the sectoral needs are different, the process which clusters should go through to address their IP can be very similar.

What is a cluster's IP policy?

An IP policy is a statement of how the cluster plans to deal with the IP issues regarding membership, cooperation, secrecy, idea sharing, result exploitation and ownership of the individual and collective IP, among other aspects.

Why should clusters create an IP policy?

The recommendations of some authors (Innovation Property Rights for Clusters 2010) for the IPR management within clusters are:

- The IPPo should be done at the application stage of the potential clusters members and this will ensure the success for clusters and will have an educational role for other clusters.
  - The IPPo guide should be the obligatory literature for new- born clusters.
  - The already developed clusters which have not elaborated an IP policy should do it.
- There is a strong need for the IPR awareness trainings for clusters' members with the aim to establish a certain level of competence for the IPR protection and policies creation.
- Educational activities in the area of the IPR should be permanent (Cooke 2001).

It is recommended that all clusters go through the process of creating an IP policy. It can contribute building trust among the cluster's members, prevent difficult discussions in the future around the issues of ownership and reduce the risks in the commercialization processes. It is specially the case of cross border clusters. Institutional collaboration within border regions that are under the cluster umbrella has created a new form of the institutional interaction model, the elements of which are the industry, university and government. They are included in a united cross border cluster of the two countries (Zámborský 2012; Mikhaylov and Andrey 2013). New technologies could be imported through the transnational clusters (Sikimic et al. 2012)

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The goal of the authors of this paper is to analyse the cross border clusters from the same sector in terms of the innovation potential at the level of the clusters' members and at the level of the clusters themselves and to propose the way of their protection.

The authors performed a research in which they wanted to confirm the following hypothesis:

- H1) The importance to recognize the intellectual property of clusters and to create the clusters' IP policies is high.
- H2a) There is distinction between two levels of IP rights protection in the agricultural sector and food production as:
- the first level is the clusters' members' level
  - the second is the level of the cluster itself.
- H2b) There are intellectual properties rights (IPR) at the cross border level in the sector of agriculture and food production.

## RESEARCH METHODOLOGY

The methodology used in the survey was developed during the activities of the project financed in the frame of the EU Hungary – Serbia IPA cross border cooperation programme. The project title is "Cross-border cooperation in innovation process for the development and harmonization of clusters to increase competitiveness of their SMEs". The research methodology is based on the research of the innovation process in a pilot case of two clusters. The authors propose the IP policies on the clusters' level which include the cross border issue of the intellectual properties rights (IPR) protection. The recommendations presented might be applied in the case of other clusters from regions of different countries which are ready to cooperate.

Clusters which are the object of the research are located in two neighbouring regions of two countries, in Vojvodina and South Hungary, both belonging to the area called Bačka and the sector of agriculture and food production. The Hungarian partner in the project investigated the innovation potential of the Kincses Bácska Food Industrial Economic Development Cluster from South Hungary, established in 2007 with 32 members. The cluster Somborski Salaši, which started its functioning in 2010, was selected from the side of the Vojvodina region. It has 23 members.

The activities of the research are as follows:

- the selection of compatible clusters in the sector of agriculture and food industry in both countries

- the analysis of the value production chain for each company inside the selected clusters with the co-operation of the cluster
- the elaboration of an appropriate questionnaire
- using the results of the analysis, identification of the most appropriate (company specific and cluster-generic) management methods and tools to be integrated into the process of innovation in the production processes
- the elaboration of a policy for the innovation and the intellectual property management both on the company (cluster member) and on the cluster level
- proposing the IP policies at the cross border level.

The analysis was done during the visits of all clusters' members when the questionnaires were filled in by the cluster's and companies' management teams. The questionnaire was developed specifically for this purpose. It had 7 groups of questions:

- (1) Mission and goals of the company.
- (2) Types of innovations that are implemented in the cluster's products and services and which are not recognized as their added value.
- (3) Attitude towards the intellectual property.
- (4) Experience about the intellectual properties rights and the protection of them.
- (5) Experience in using IP rights of others and others using its rights.
- (6) Sharing its IP knowledge with suppliers and others.
- (7) Possibility to buy or share the IP rights and to create the IP policy of the company.

By analysing the production chain of the clusters' members and filling the questionnaire, a good platform for conclusions was created. The results were:

- the list of the potential industrial property protection forms and IP policies of the clusters members
- the list of the potential industrial property protection forms and IP policies on the level of the cluster
- the benefit from the spill-over effect of the IP on the cluster level.

## RESULTS AND DISCUSSION

The results of some questions for the cluster Somborski Salaši are visualized in graphs and discussed, as follows:

The cluster members are mostly entrepreneurs (80%) who hire their family members to work in the company (Figure 1). They are too weak to employ more people, officially.

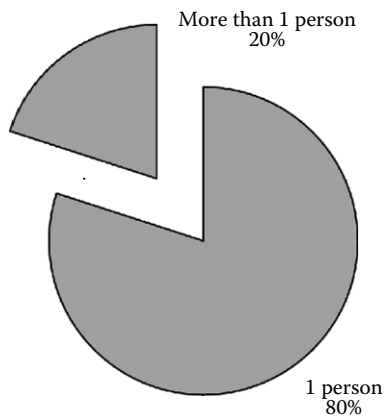


Figure 1. How many employees does your company employ?

Source: Authors

Decision-making and strategies and the business and finance are obviously associated to the owners and only they are dealing with these important topics. They do not want to delegate these rights. In the production and R&D, they feel less competent and less important and they include other people employed in resolving topics in these areas (Figure 2).

Trademark or geographic indications are the most common types of the IP, then there follows the know-how in the written or unwritten form by 24% and

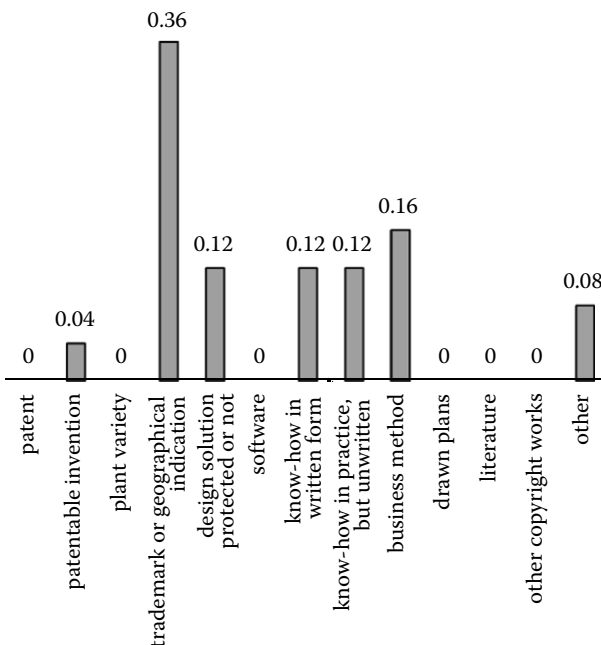


Figure 3. What kind of intellectual property can you identify in the products, services or business model of your company?

Source: Authors

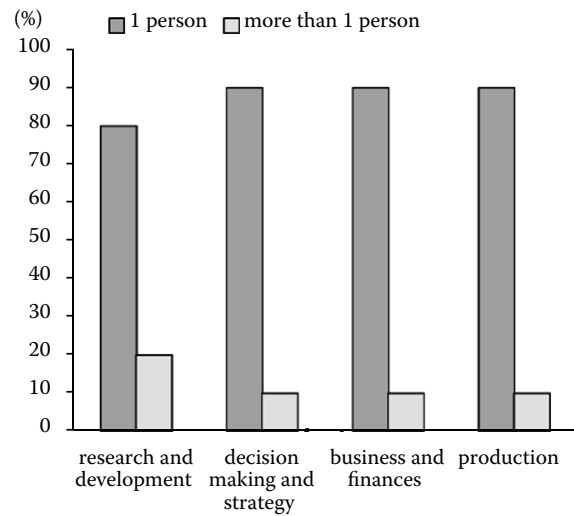


Figure 2. How many of them (employed) deal with the research and development, decision making and strategies, business and finance, production?

Source: Authors

business methods by 16%. This means that the location and heritage are very important and that the companies' owners have original solutions for the production management. Trademark might be used in two ways: as a collective or certification trademark defined on the cluster's level, owned by the cluster itself. It could be used by its members identifying themselves with a level of quality or accuracy, geographical origin, or other characteristics set by the cluster (Figure 3).

Collective trademarks are different issue from the certification marks. Collective trademarks may be used

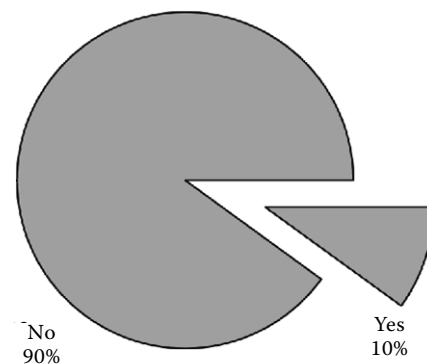


Figure 4. Does your company value the intellectual properties?

Source: Authors

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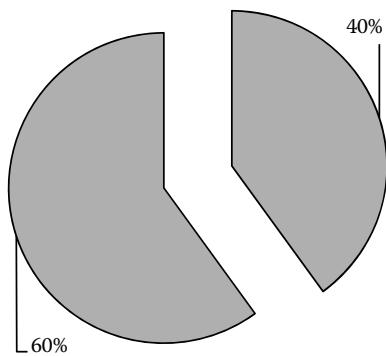


Figure 5. Do you think it is reasonable?

Source: Authors

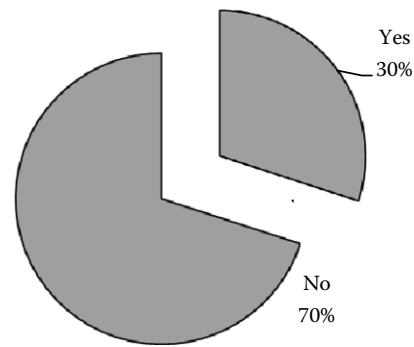


Figure 6. Does your company offer any compensation to the employed creative people, innovators?

Source: Authors

by the particular members of the organization which owns them, while the certification marks may be used by anybody who complies with the standards defined by the owner of the particular certification mark.

Only 10% of the clusters’ members recognize the value of the IP within its company. The other answer shows that 60% would buy an innovation, what is a contradiction, the consequence of nescience (Figure 4).

60% of respondents think that the valuation of the IP is not necessary. The reason is the lack of knowledge. They need an intensive education and training in the area of IP (Figure 5).

Only 30% companies stimulate innovation. In case this percent increases, it will bring more inventions.

Question: Have you ever been claimed to commit an infringement of intellectual properties by others? (Figure 6).

No company has such an experience.

Half of the examinees had a problem with “stilling” of the IP. This shows how important is to set up the IP protection policies and to regulate the relations among the owners of IPs (Figure 7).

60% would buy an innovative technology, what is good, but they do not recognize that they have the possibility to create it within their companies. They only have to stimulate the innovation by the compensation and well done IPs (Figure 8).

The answers of the members of the Hungarian clusters are very similar and will not be separately presented.

The discussion of the results is showing the following:

- The clusters’ members are generally entrepreneurial and micro companies
- The mission of the majority of the clusters’ members is the production of food by using the tradition in

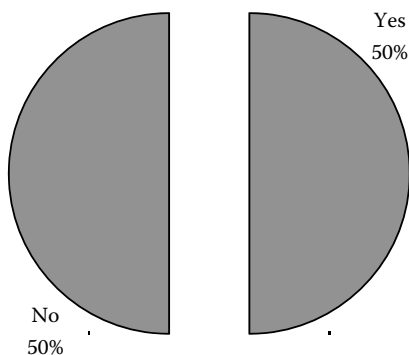


Figure 7. Have you ever experienced that others infringed your intellectual property?

Source: Authors

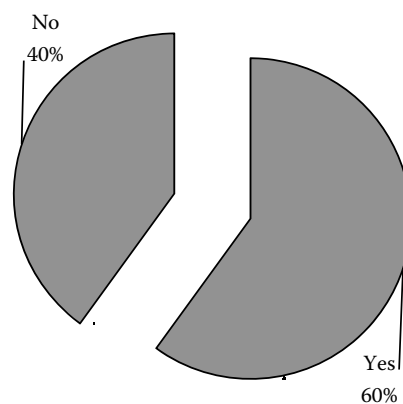


Figure 8. Would you purchase an innovative technology/ intellectual property?

Source: Authors

- a modern way with the inclusion of tourism and observing of the ecological principles
- The clusters' members have impressive potential for innovation in the form of:
    - the mark that can be protected as a trademark,
    - the designs solution
    - the business method and model
  - The clusters' members have a minimum knowledge of the intellectual property and its protection
  - Most of them have not evaluated neither registered the IP and consider that as unreasonable
  - The majority includes the IP in their development plans
  - The majority is monitoring the research and development activities in their area of interest
  - Most of them have experienced the violation of IP
  - Most of them would buy an innovative technology
  - Almost everyone wants to develop policies to protect the IP and to act according to the EU standard

H1: The previously said confirms the hypothesis H1 that the intellectual property of clusters is important but neglected.

The authors propose that each cluster should protect its own collective trademark and the name of origin.

H2: Clusters in the cross border regions should generate the name of origin and the collective trademark as the cross border intellectual property rights owned by two cross border clusters functioning in the same sector: agriculture and food industry.

The name of origin, for example the “Bačka”, and the collective trademark, for example the “Salaški-farms”, might be tagged to both clusters as the cross border sign of their products and services, thereby breaking down the barriers of borders.

Given the above, it confirms the hypothesis H2 that there are two, resp. three levels of the IP rights protection in the sector of agriculture and food production.

- The first level is the clusters' members' level (business model, design...)
- The second is the level of the cluster itself (collective trademark and name of origin)
- The third level is the cross border level (the cross border trademark and the cross border name of origin) as it is presented in the Figure 9.

The authors of the paper are comparing their results with the authors of the Innovation Property Rights for Clusters from 2010, who are distinguishing three types of the IPRs (Innovation property rights for clusters 2010):

- Collective IP: the IP generated and owned by the cluster organization and applied for the good of the cluster.
- Individual IP: the IP generated and owned by an individual member of the cluster
- Shared IP: the IP generated and owned by two or more members.

The authors' explanation is that these IPRs ensure SMEs to benefit from the collective reputation of a product and being a part of the economy of scale.

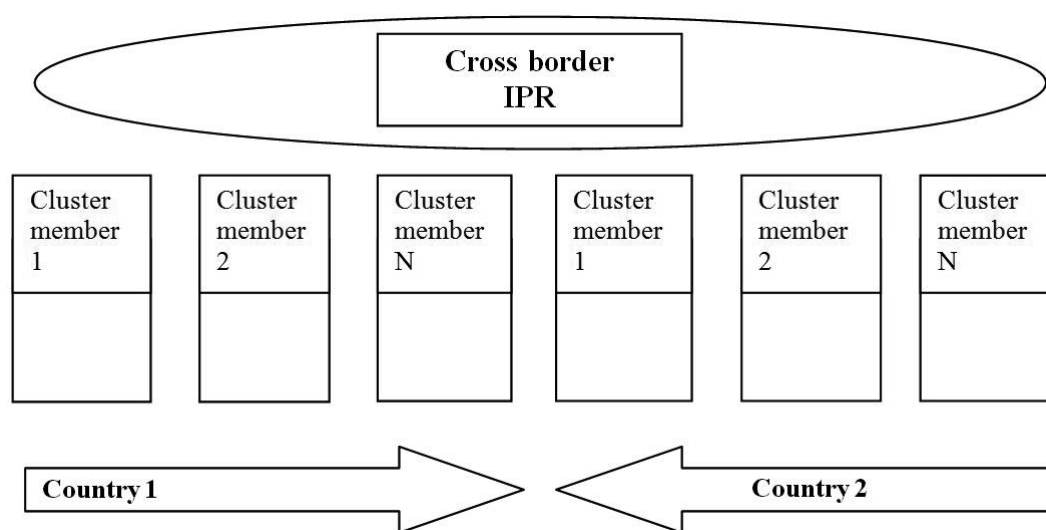


Figure 9. Cross border (transnational) intellectual properties rights

Source: Authors

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Collective marks are often used to promote the products characteristic of a particular region and, as they are characteristic of the cluster itself, the collective trademarks are forming the cluster's identity. This may be relevant for tourism and long lasting clusters.

Some authors (Kranjac et al. 2012) were discussing the cross border innovation, but not in the terms of clusters.

The proposal of the authors of this paper is to define a new concept of the cross border IP rights. It is collective and shared, but not only among the cluster's members. It should be exploited at the level of clusters from two or more neighbouring countries. The members of these clusters should use it as a transnational tag and gain the transnational competitive advantage from this.

Good and timely IP policies will be if the experts are involved in the IP process. It should be done systematically from the moment of the application for a new cluster. Strong cooperation is a driving factor in the successful innovation and must be based on collaborations between enterprises, research organizations, universities and bridging organizations and even a wider level in cooperation over the borders with a clear goal to be recognizable as the cross border brand.

## CONCLUSION

The proposal of the authors of this paper is to define a new concept of cross border IP rights. It is collective and shared, but not only among the cluster's members. It should be exploited at the level of clusters from two or more neighbouring countries. Members of these clusters should use it as a transnational tag and gain transnational competitive advantage from this. Good and timely IP policies will be if the experts are involved in the IP process. It should be done systematically from the moment of the application for a new cluster. Strong cooperation is a driving factor in the successful innovation and must be based on collaborations between enterprises, research organizations, universities and bridging organizations and even wider in cooperation over the borders with a clear goal, to be recognizable as the cross border brand.

## REFERENCES

- Chatterji A., Glaeser E., Kerr W. (2013): Clusters of Entrepreneurship and Innovation. In: Innovation Policy and the Economy Forum. National Bureau of Economic Research, Cambridge.
- Anselin L., Varga A., Acs Z. (1997): Local geographic spillovers between university research and high technology innovations. *Journal of Urban Economics*, 42: 422–448.
- Asheim B., Gertler M. (2005): The geography of innovation: Regional innovation systems. In: *The Oxford Handbook of Innovation*. Oxford University Press, Oxford: 291–317.
- Breschi S. (2008): Innovation-specific agglomeration economies and the spatial clustering of innovative firms. In: Karlsson C. (ed.): *Handbook of Research on Innovation and Clusters*. Edward Elgar, Cheltenham: 167–192. Available at: <http://didattica.unibocconi.eu/mypage/index.php?IdUte=48944&idr=9918&lingua=eng> (accessed June 2014).
- Chahal M. (2013): Intellectual property rights for intangible assets. *International Multidisciplinary Journal of Applied Research*, 1(3).
- Cooke P. (2001): Regional innovation systems, clusters and the knowledge economy, *Industrial and Corporate Change*, 10: 945–974.
- Enright M. (2003): Regional clusters: what we know and what we should know. In: Bröcker J., Dohse D., Soltwedel R. (eds): *Innovation Clusters and Interregional Competition*. Springer, Berlin: 99–129.
- Innovation property rights for clusters (2010): Innovasjon Norge, Oslo. Available at <http://distriktssenteret.no/wp-content/uploads/2013/04/ipr-innovasjon-norge.pdf> (accessed August 2014).
- Kranjac M., Dickov V., Sikimic U. (2012): Cross-border innovation process within the EU economy. In: *Actual Problems of Economics*. National Academy for Management, Kiyev: 157–165.
- Kranjac M., Henny Ch., Sikimić U. (2013): Effect of specific factors on innovation outcomes in the European Union countries. *Anali Ekonomskog Fakulteta u Subotici*, 49: 225–239.
- Maggioni M., Riggi M (2008): High-tech firms and the dynamics of innovative industrial cluster. In: Karlsson C. (ed.): *Handbook of Research on Innovation and Clusters: Theories, Cases and Policies*. Edward Elgar, Cheltenham: 54–78.
- Mikhaylov A., Andrey S. (2013): Features of the triple helix model in cross-border clusters. *World Applied Science Journal*, 21: 1734–1738.
- Muro M., Katz B. (2010): *The New 'Cluster Moment: How Regional Innovation Clusters Can Foster the Next Economy*. Brookings Institut, Washigton.
- OECD (2008): *OECD Territorial Reviews: Poland*. OECD Publishing, Paris.

doi: 10.17221/130/2014-AGRICECON

- Phillips P., Ryan, C (2007): The role of clusters in driving innovation. In: Intellectual Property Management in Health and Agricultural Innovation: A Handbook of Best Practices. Oxford and PIPRA. Available at [www.ipHandbook.org](http://www.ipHandbook.org) (accessed June 2014).
- Porter M. (1998): On Competition. Harvard Business School Publishing, Boston.
- Potter J., Miranda G. (2009): Clusters, Innovation and Entrepreneurship. OECD Publishing, Paris
- Sikimic, U., Frattini F., Chiesa V., Kranjac, M. (2012): Process view of licensing as a new market entry mode: The case of leading Italian pharmaceutical and biotech companies. In: 18<sup>th</sup> International ICE-Conference on Engineering, Technology and Innovation, Munich : 1–11. WIPO (2010): Available at <http://www.wipo.int/about-ip/en/> (accessed May 2014).
- Zámborský P. (2012): Emergence of transnational clusters. Journal for East European Management Studies, 16: 464–479.

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