



**The new solutions of the CAP 2013+ to the challenges of the
EU member states agriculture**

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Innovation in Hungarian agriculture and rural development: opportunities of the CAP 2013+



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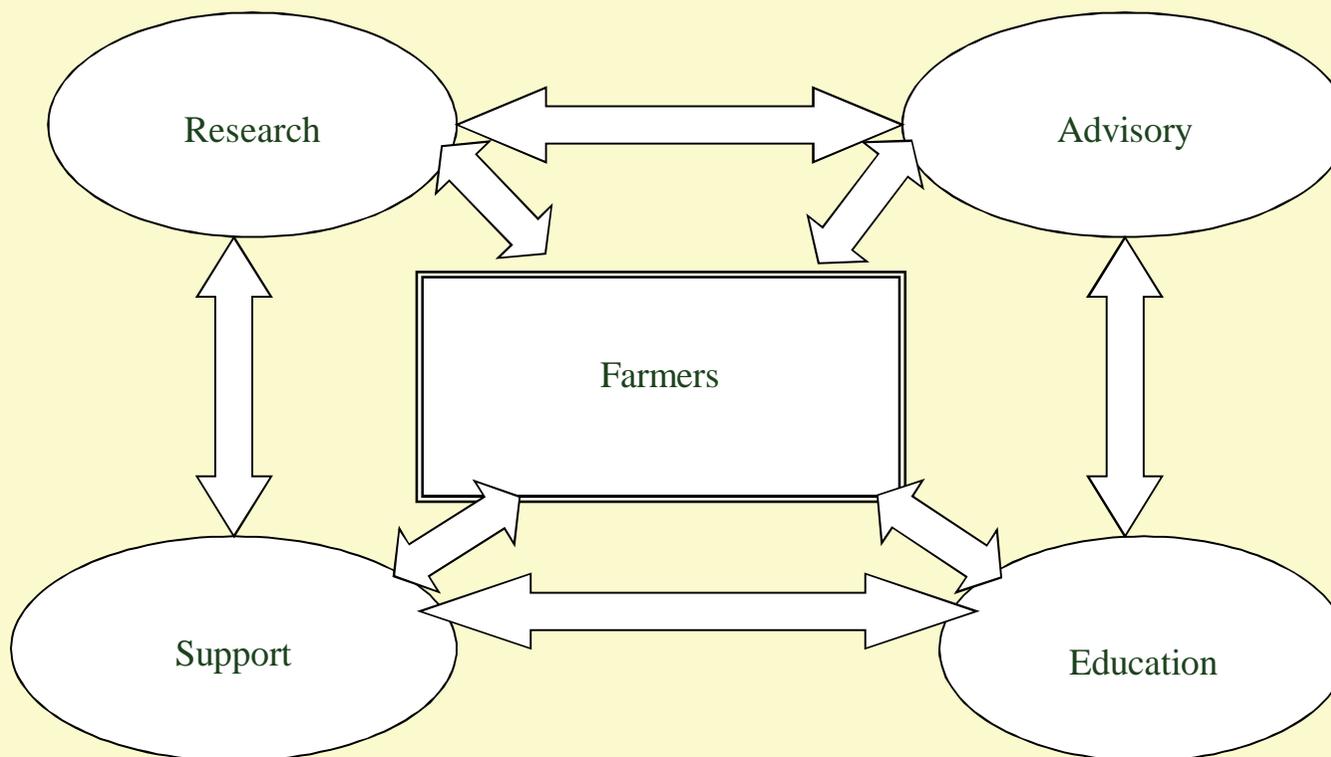
- Innovation is a strategic field regarding the economic development of Hungary.
- For rural development the establishment of a competitive and successful rural economy based on innovation and knowledge transfer is vital.
- In order to improve the conditions of rural subsistence it is required to make use of the potentials of agriculture and to increase rural activities.
- The measures of innovation in the rural development programme for the period of 2014-2020 are of the utmost importance for making rural areas viable.
- Research source: AKI Rural Development Policy Department Identifying the potentials of innovations and opportunities in hungarian agriculture and rural development.

Structure

- Theory of innovation
 - ó procedure, participants
 - ó implementation, dissemination
 - ó innovation in rural areas
- Practice of innovation
 - ó Experience of international organisations
 - ó Innovation in the EU
 - ó innovation in rural areas
- The present state of innovation in Hungary
 - ó The role of the government
 - ó R+D financing, grants
 - ó human capital, enterprises, entrepreneurial environment
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- Innovation potential
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- Conclusions, recommendations

Theory of innovation

Agricultural Knowledge and Information System (AKIS)



Source: Rivera *et al.* 2005 SCAR (2012): Agricultural Knowledge and Innovation Systems in Transition ó a reflection paper. Brussel

Procedure and participants

- According to the theory innovation is an important factor of economic development.
- For becoming successful it is especially important for the individuals, enterprises, regions and countries to acquire new knowledge and competences because knowledge may become obsolete fast.
- In the innovation process the enterprises are motivated by profit / to become market leader.
- For the implementation innovation chain is organised.

entation and dissemination

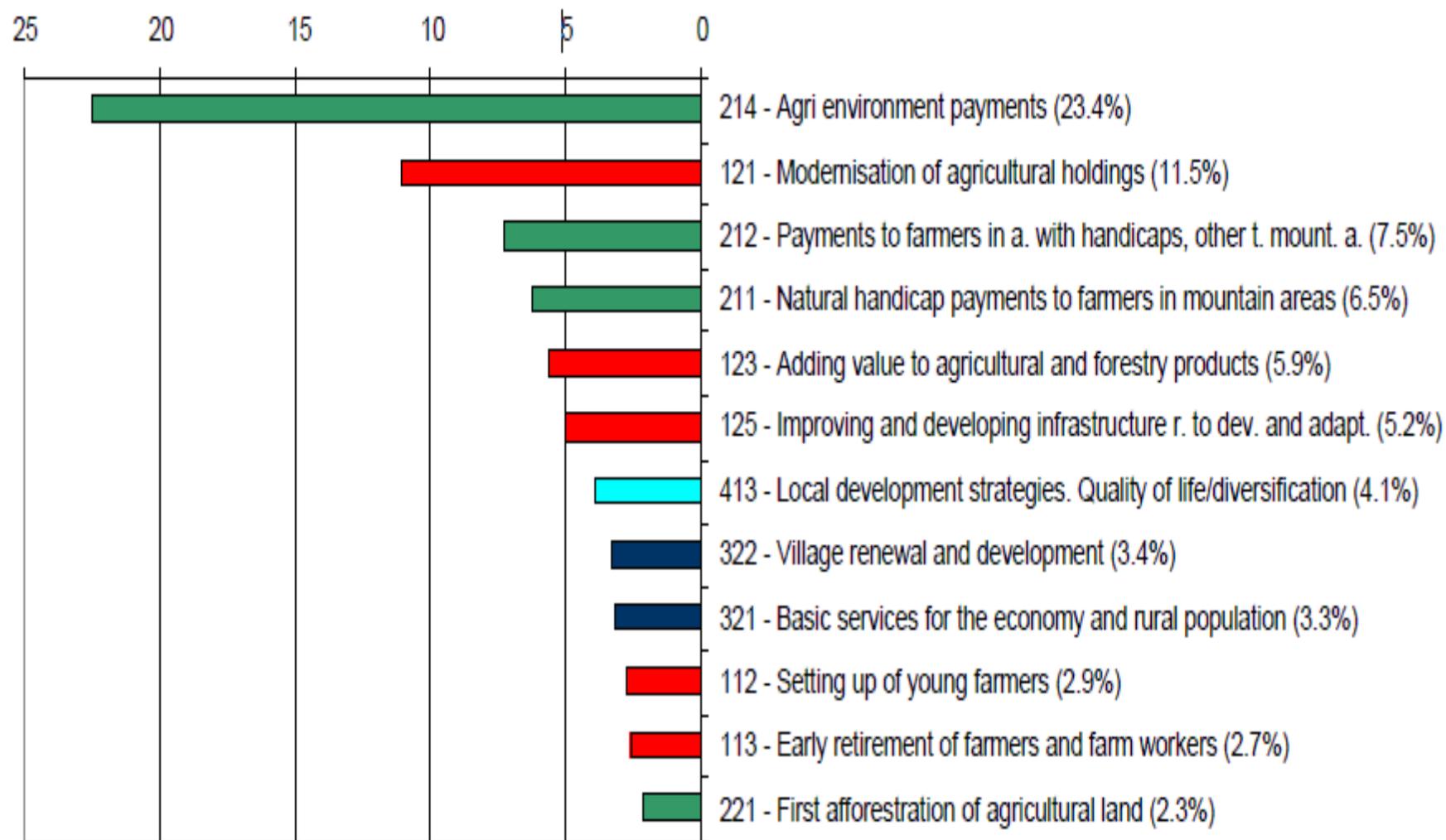
- Influenced by the advantages, the expenditures, the accessible information, the size and environment of the market as well as cultural factors.
- Today innovations are supported not only by technological developments but also by well organised innovation systems for decreasing the risks and by network cooperation.
 - ó Globalisation, business concentration, sector interdependence and openness are innovation trends in which the driving force is knowledge transfer.
 - ó In the comprehensive assessment of innovation not only the direct economic benefits are important, but also those long-term effects, which lead to the development and restructuring of the society.

tics of innovation in rural areas

- Innovation infrastructure is lacking, the qualification level of rural population is low, the economic background required for applying the innovation are limited, downstream initiatives in innovation development are not general, local knowledge is not acknowledged.
- The attitude of the farmers to innovation developments also vary.
 - ó The information flow to the producers is rather slow due to the isolation among the stakeholders of the agricultural sector and the occasional relationships.
 - ó The innovators are early adopters, looking for opportunities.
 - ó Most farmers do not deal with innovations, they concentrate on the operation of their farms, on the daily work and do not take the risk, they apply the good, old methods.

Practice of innovation

Main RD measures 2007-2013



Source: European Commission (2011) RD in the EU, 2011.
 Agrárgazdasági Kutató Intézet | www.aki.gov.hu

International organisations experience

- The good practices of innovation are the main tools of increasing awareness and dissemination.
- By increasing the number of participants in the innovation chain inclusivity increases, the unused capacities are identified, and new groups of the society are involved in the developments.
- International organisations playing key role in the design of innovation policy focuses on the presentation and assessment of good, applicable examples.
- Organisations see further innovation potential in modernisation of the innovation policy
 - ó connecting research with practice,
 - ó increasing capacities and cooperation,
 - ó applying the systems of communication,
 - ó innovation-friendly and encouraging environment.

Innovation in the EU

- The EU plays as a catalyst in the innovation process. With multilevel intervention system,
 - ó from strategy development, innovation investment support
 - ó to operating community level initiatives and to acknowledging projects of outstanding innovation.
- In the RD for intensifying the innovation activities the enlargement of the innovation capacities - such as the modernisation of AKIS developed for improving of knowledge transfer of farmers - are required. For this:
 - ó the involvement of as many farmer as possible,
 - ó meeting their practical requirements,
 - ó improving the innovation processes and the information activities of AKIS assisting the dissemination are necessary.
- The horizontal intensification of innovation in RD is supported by the establishment of the European Innovation Partnership).

Innovation in rural areas

values of public goods in the economic development leads to the increase of innovation.

- In the developed countries social enterprises established for performing social tasks implement the goals of the community.
- The other direction of the development effecting rural economy aimed at solving the social problems related to the healthy environment is ecological innovation, which
 - ó provides environment-friendly products and services,
 - ó ensures a clear production process,
 - ó is an innovation system based on the social requirement to protect the environment and the health of the population.
- Cooperation and networks are created to solve the social problems of rural areas
 - ó The development is implemented in partnership with the government, the business sector and civil society as well as the agricultural producers.
 - ó Operates at international, community, regional and local levels.
 - ó Its establishment is a social innovation since the development is implemented in a comprehensively new form.

ate of art in innovation



Foto: UZS

Source: http://www.vagy.hu/tartalom/cikk/3462_debrecenben_keresik_a_megoldast_az_agrariac

The role of the state

- In Hungary the national institutional system of innovation is well organised and the role of the government is strong in it.
- The harmonisation of the innovation processes is performed at national level by the ministries and by their background institutions, at regional level by the regional development agencies financed partly by the government and partly by own business services.
- The coordination of the agricultural innovation is performed by the Ministry of Rural Development.
- The R+D institutional background is provided by research institutions financed by the government and operating as partnerships, by research teams of universities .
- For applying the results of the R+D in practice and for ensuring knowledge transfer the
 - ó the agricultural extension service,
 - ó in addition the training institutions,
 - ó local system of farm advisory, and
 - ó the FarmersøInformation System mainly providing information on the application for tenders also participate.

R+D financing, grants

- The source for financing the innovation is ensured from the budget, the grants provided by the government and the EU and by the R +D funds of the enterprises.
- In Hungary the regional and sectoral differences are significant, the investments are continuously decreasing, however, the R +D expenditures are gradually increasing but lagging behind the EU averages.
- Institutional background well-organised but is still lagging behind the EU Member States significantly regarding the following aspects:
 - ó R+D providing a practical base for innovation,
 - ó innovations implemented by the enterprise by itself,
 - ó implementation of the innovation,
 - ó the innovation performance of the enterprises and
 - ó establishing relationships among the participants of the innovation.

tal, enterprises, entrepreneurial environment

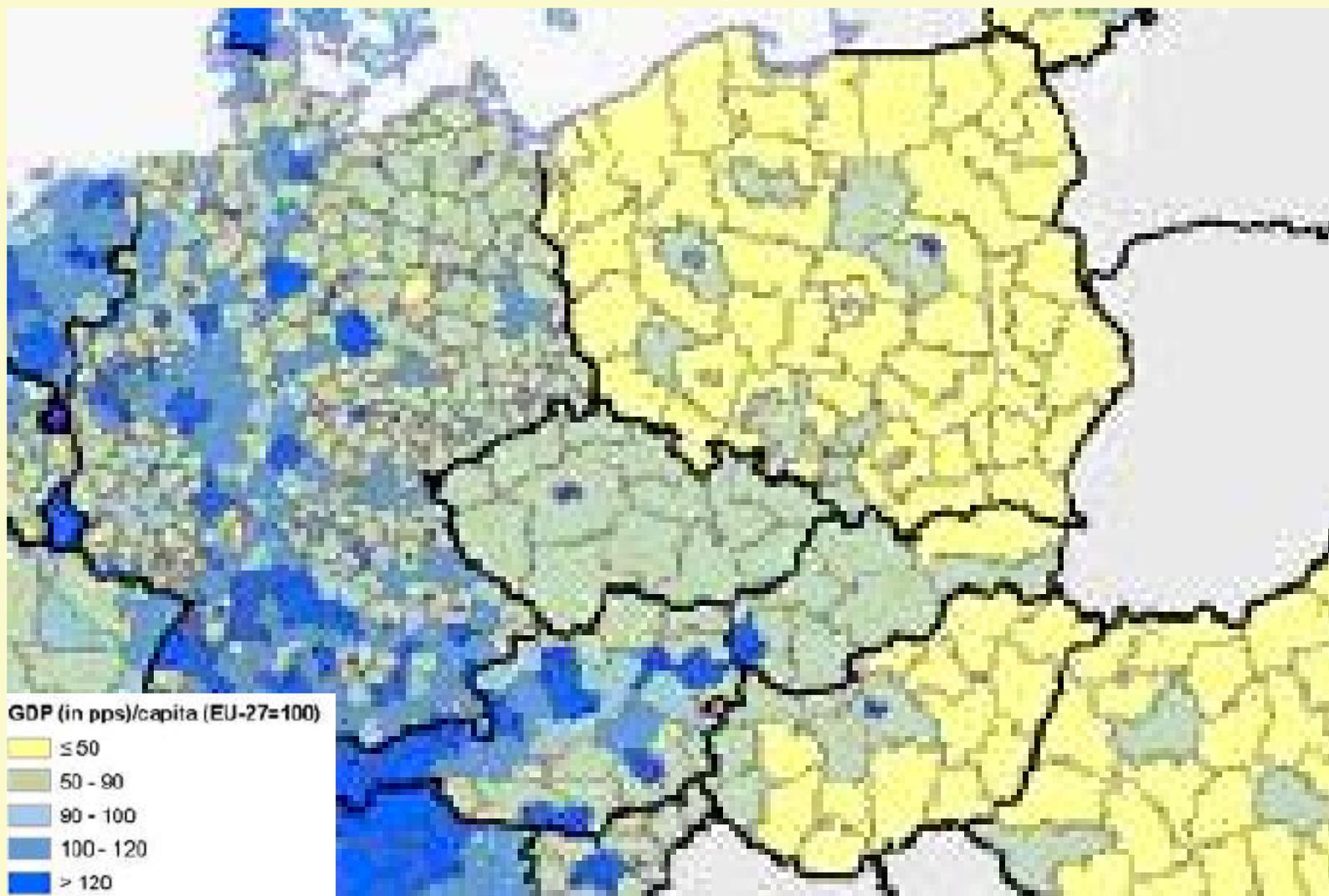
- As for innovation the only relative advantage is the quality of the available human capital.
- Among the weaknesses we can find the
- Theory-oriented research,
 - ó occasional cooperation among the participants of the innovation chain,
 - ó moderate innovation activity of the enterprises,
 - ó lacking relationships, and secure financing background.
- Besides low entrepreneurial activity innovation hindered by
 - ó uncertain economic environment,
 - ó legislative and administrative burden,
 - ó lacking external resources required for innovative developments, and
 - ó lacking confidence among the business partners.
- To economic difficulties the market reacts mainly by the restriction of innovation expenses.

Innovation in rural areas

- The institutions engaged in knowledge transfer without local relations have only a minimal role.
- Only those input material producers/traders profit from the innovation dissemination within a sector, which have a foreign parent company and sell the own products by themselves.
- In the Hungarian agriculture and rural development there is no operational market-based innovation system, the innovation chain is limited and incomplete, the farmers do not know the advantages of innovation.
- A further significant disadvantage is that the lack of coordination of financing funds designed to promote innovative developments of enterprises (Economy Development and Regional Operative Programmes) do not provide assistance neither to agricultural nor to rural development investments.
- In the New Hungary Rural Development Programme ÚMVP no financing is provided for R+D, from the resources only small-scale investments available.

Innovation potential

GDP (PPS/capita)



Source: European Commission (2011) RD in the EU, 2011. (2006-2008 average)

Objectives of the EU

- In the development policy of the programming period of 2014-2020 innovation will play a central role.
- European Agricultural Fund for Rural Development (EAFRD) will provide assistance to the increase of the innovation performance at community level; innovation and knowledge transfer will have outstanding roles and will be priorities.
- The development aim to increase the innovation chain,
 - ó by improving the relationships and cooperation and experiments among the participants ,
 - ó by improving education and the popularisation of innovation.
- In agricultural innovation the primary intervention fields are:
 - ó the innovative projects for increasing the competitiveness of agricultural holdings,
 - ó the use of renewable resources and
 - ó developments of info-communication
- In rural development the partnerships established for the dissemination of the innovation are the key factor of development.

portunities in Hungary

- In Hungary, similar to the EU, for starting up the economic growth the implementation of a consistent innovation policy is required.
- In agricultural and rural development ó in spite of the fact that the role of production integrators will remain determinant in the field of innovative business investments -
- Our interviews showed that R+D, enterprise innovation, education and training as well as cooperation have all important potentials for innovation.

usions, recommendations

- The intensification of R+D may be the first step in the adaptation to the changing economic conditions.
- The income of innovators may increase even by less successful innovations.
- Both education and training encourage innovation and employment generation.
- Producers' cooperation may improve the transfer of innovative knowledge significantly and by EU subsidies they also might assist the dissemination among their members.
- The innovative activities of clusters could cover the innovation process from sharing the information to generating joint innovation.
- The rural development partnerships may generate significant value added in diffusion of innovation by representing the social values and interests and by assisting the take up of local initiatives.

Value added in RDÍ



Sower with Setting Sun, 1888, Van Gogh



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