

Takács, István; Takács-György, Katalin

**Conference Paper**

## Challenges, changes, alternatives for SMES (and the theory of "degrowth")

**Provided in Cooperation with:**

The Research Institute for Agriculture Economy and Rural Development (ICEADR), Bucharest

*Suggested Citation:* Takács, István; Takács-György, Katalin (2016) : Challenges, changes, alternatives for SMES (and the theory of "degrowth"), In: Agrarian Economy and Rural Development - Realities and Perspectives for Romania. 7th Edition of the International Symposium, November 2016, Bucharest, The Research Institute for Agricultural Economy and Rural Development (ICEADR), Bucharest, pp. 10-17

This Version is available at:

<https://hdl.handle.net/10419/163347>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

# CHALLENGES, CHANCES, ALTERNATIVES FOR SMES (AND THE THEORY OF „DEGROWTH”)

TAKÁCS ISTVÁN<sup>1</sup> – TAKÁCS-GYÖRGY KATALIN<sup>2</sup>

**Abstract:** *To find and adopt those products, solutions, technologies that are suitable for profitable production and ensure viability at the same time is one of the basic tasks of sustainable economy. Viable enterprise means to earn enough revenue to cover all the costs, including the costs of investment and innovation, to operate in an effective way, to “balance” (equilibrate) with the limited resources, (natural, renewable) notwithstanding the limitation of growth. In the study the new paradigm of “degrowth” is examined along the potential alternatives opened for SMEs, based on thoughts of Serge Latouche. In the paper it is summarized the main characteristics of innovative strategies for SMES in agriculture, too. The new values (Réévaluer – reappraise) suggest the intent of preserving the nature at least in the nowadays condition. Precision agriculture is a tool in this and allows the efficient use of natural resources (Restructurer – restructuring factors of production). Each farming strategy in which the farmers’ cooperation is the base of an efficient machinery use (Restructurer – restructuring of social relationships), each technology that reduces the human-health risk (Réduire – reduction) shows into the direction of degrowth. We believe that we will not be able to carry out sustainable economy without strengthening the SMEs, helping them to find their successful way/strategy on development, being innovative and to cooperate with each other. Values, attitudes, networks, trust, openness are important to both individual and social utility coincidence that promotes the sustainability of being viable, competitive in wider meaning: future orientation, ability to renew (development, imitation, synthesis), economic/social cooperation.*

**Keywords:** *sustainable economy, innovation, SMEs*

**Jel:** M29; Q01; Y50

## INTRODUCTION

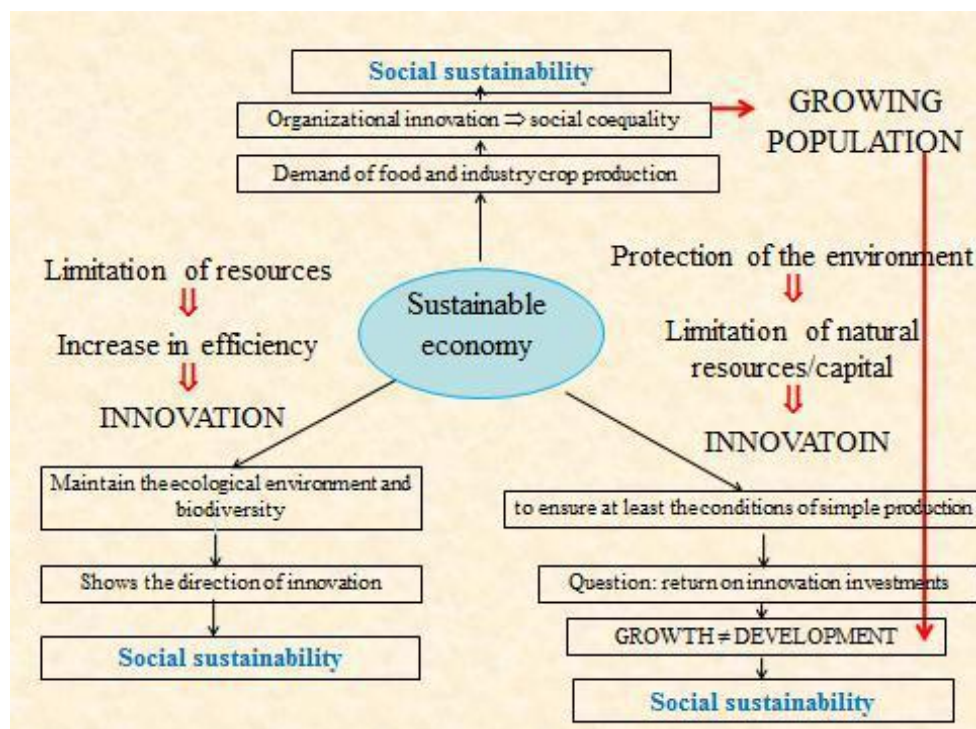
It is frequently mentioned the role of small enterprises (SMEs) in economy, in employment, in rural development ensuring viability for local habitants. The role of agricultural farms, enterprises interested in food industry is not to be questioned when we are dealing with sustainable rural life but several questions have to be answered on the way, how the SMEs can operate, reach the viable economic size and further on, how they can be a profitable participant of the (local) economy.

The definition of sustainability of environment comes from the Burtland Report (1987). According to Pearce and Atkinson’s (1995) understanding, is that the natural resources and man-made capital are complementary to each other in the production process, so that natural resources are creating the limiting factors to increase production, and at the same time, they should be used rationally during the production. By the turn of the millennium, sustainability has a broader interpretation. The new paradigm of agricultural research and development has been built on the interaction of three factors: ecological sustainability, economic efficiency paired with equal opportunities, and mutual assistance of governmental and non-governmental sectors in order to improve the performance and profitability of farming systems. The term "sustainable development" includes the current and long-run sustainable production and the controversies of environmental protection that assurance the right quality of life, and hard-preventable, but rather tolerated conflicts. In the realization serious regional, national, social (and of course, political) interests, momentary, short and long-run visions clash, they often confront. (Chilinsky, 1998; Behnassi et al., 2011; Turek, 2013; Valkó et al., 2013) Social sustainability includes the necessary food production, industrial based energy production, also from the farmer's point of view, compliance with the profitability criteria, and the responsibility of sustaining the environment. (Figure 1) It should be emphasized that both ecological and social sustainability can only be realized if economic sustainability is reached during farming, and also on every level of human needs. So the question for the enterprises (farms) is

<sup>1</sup> Prof. Dr. Takács István, Óbuda University, Keleti Faculty of Business and Management, Institute of Economics and Social Sciences, e-mail: itakacs1957@outlook.hu

<sup>21</sup> Prof. Dr. Takács-György Katalin, Óbuda University, Keleti Faculty of Business and Management, Institute of Management and Organization, e-mail: takacsnegyorgykatalin@kgk.uni-obuda.hu

how to operate efficiently, over the viable size. Under the viable size we consider that farming size (at certain production structure and yield level) when the given economic environment allows to reach at least such income that covers all the production costs, including the necessity investment and ensuring the standard living for the farmer. (Takácsné, 1994)



Source: Own construction, based on Burtland Report; 1987; Chilinsky et al., 1998; Ryden, 2008; extended by Takács-György – Takács, 2016

Figure 1. Sustainable economy in the context of innovation

In sustainable agriculture and rural development, the security of natural resources and the security of food – taking into consideration the growing number of humanity – appear together by presuming and reinforcing each other. The responsible behaviour of all participants (producer – consumer – society) have to find a degree of intensity and technology of production matched with a form of farming technology that is appropriate for the environment (such as organic, conventional, integrated and precision (a further developed form of integrated) farming strategies. (Mawapanga – Debertin, 1996; Caffey et al., 2001; Stull, 2004; Takács-György – Takács, 2011)

The aim of the paper is to summarise the “degrowth” theory from the point of view of small participants of economy, to highlight some new farming strategies (like technology of site-specific crop production, to summarize and define its characteristics from the point of view of thoughts of Serge Latouche). Furthermore it was also in focus to highlight the role cooperation as one of the key factors of further success of farming.

## MATERIAL AND METHODS

The paper summarizes the thoughts of sustainable economy in connection with the new theory of “degrowth” from the point of view of agricultural SMEs. Based on literature and on our former research results, a content analysis was carried out and some new farming strategies were examined from the point of view of sustainable economic behavior.

## RESULTS AND DISCUSSION

### *Sustainable economy and innovation*

Sustainability includes sustainable economy itself: without higher income than costs sustainable life cannot be expected. But why for the earnings? – The answer is rather development than growth. But what is growth? Formerly we thought “the growth means higher profitability, increasing result after taxation for an enterprise, increase in GDP, in GDP/capita for a country.” One part of the result from economy went for investment, development of the business but the other part went as dividend to the owners for personal consumption. Of course an increase in consumption will increase the business, but how long? Today we knew that is a dead end. In further economy, the growth should not mean the growth of the profit of the owners.

The term "sustainable development" goes further on the future: it includes the current and long-run sustainable production and the controversies of environmental protection that assure the right quality of life, and hard-preventable, but rather tolerated conflicts. The literature background of the question of limited natural resources and the growth is very wide, the scientists, economists, politicians are not on the same platform. There can be differentiated two opposite groups. One can be considered as pessimists (most of the ecologists, those scientists, economists who do not believe that the earth can support more people. They are convinced the number of population is over the capacity of earth, see the concept of foot print, water print and somehow the question of embodied energy also belongs to here). Others believe in innovation in positive future development. They think that humanity is adult enough to develop and implement new technologies, new market incentives and appropriate policies, to change customer habits (less consumption, share resources), to use substitutive products, to re-use waste, to innovate into new technologies. Due to their opinion the present need can be satisfied without depleting the future's demand for limited resources. Here appears the role of innovation for sustainable development. (Kerekes – Szilávik, 1996; Hartwick – Olewier, 1998; Caffey et al., 2001; Mensah – Castro, 2004; Behnassi et al., 2011)

### *Theory of 'degrowth' and business*

There occurred a new theory connecting to the question of sustainable future in economy at the very beginning of the XXI<sup>st</sup> century: the theory of 'degrowth'. The main meaning of 'degrowth' is not unknown for the society, it is a movement towards the sustainable future, combining ecological economics, anti-consumerist and somehow anti-capitalist thoughts. The roots of the movement go back to the antecedents: the report of Club of Rome in 1971 titled "Limits to Growth" report. The estimations expect over 9.2 billion the population till 2050 so it is projected to increase demand for food production by 50-70%, also the inside structure of the consumption is under changes into towards high quality food. The Earth's growing population generates increasing demand not only for the limited natural and artificial resources, especially food, energy, drinking water but for the livable areas. It must be added the question of the migration due to climate changes. For agriculture the main task is not only to ensure the food safety but the safe food and the viable rural areas as well. In maintaining the above mentioned aims economy, agriculture and environment management have a significant role. (Mészáros, 2011; Ryden, 2008, Popp et al., 2013; Takács-György – Takács, 2016)

Serge Latouche (2011) summarised the principles of degrowth which is necessary to autonomy society ('8R') in the book of 'Farwell to growth' (first published in French: *Petit traité de la décroissance sereine*). According to these principles the population growth is not the only causer of the ecological problems. The allusion of this hides the ethical and moral questions which need common society action. In opinion of Latouche the revolution in culture and behaviour is need to degrowth. Some of the latest economic trends content to these principles. The necessary steps for degrowth are the following:

- Re-evaluate: in our age the individualist megalomania, a rejection of morality, a liking for comfort, and egoism is agreed and we feel it normal. [Belpomme 2007 p. 220] It is necessary to go back to the old 'bourgeois' values of honour, public service, the transmission of knowledge, 'a good job well done', frankness and mutual trust, the respects for human rights,

and nature and society. It is necessary to re-evaluate the idea of poor or rich and developing or developed.

- Reconceptualised: 'We must for instance and redefine the concepts of wealth and poverty; deconstructing the infernal couple of scarcity/abundance on which the economic imaginary is based, is a matter of urgency.' [LATOUCHE 2011 p. 50, in Hungarian]
- Restructure: adapt the productive apparatus and social relations to changing values. Make equitable policies in production tools and social sources. For example the some care factories need to be converted into product for recuperating energy through cogeneration. The question is how much does it cost and who will pay for it.
- Redistribute: it mean the redistribute of access of natural heritage in global, social, generational and individual levels. Direct effects of redistribution weak the power of 'world consumer class' and especially the power and wealth of the big predators. [LATOUCHE 2011 p. 51] It helps to solve the problem of distribution between North and South and pay back the earlier ecological dept. Thanks to the redistribution the developed countries can give an example and avoid the resistance of North countries.
- Relocalize: producing on a local basis. Relocalization is an economic, political, culture issue. Fortunately there are more and more positive examples for growth of local economic. For example: direct marketing, short supply chain and local service net. The free movement of ideas are not restricted but it is necessary to minimize the movement of physical sources. All production needs should be carried out at the local level. [LATOUCHE 2011] The 'Think global- Act local' philosophy is match to relocalize principle.
- Reduce: Reduce our habitual overconsumption and the incredible amount of waste. [LATOUCHE 2011] Think the products which goes together a social demand and artificial enkindle needs. Need to reduce the health risk and the prevention need to be place in the foreground. Recommended to change the 'mass tourism' to regional travel.
- Re-use: we have to reduce conspicuous waste, fight the built-in obsolescence of appliances, and recycle waste that cannot be re-used directly. Olympic Stadium of Basketball in London (2012) gave a good example because it was the biggest temporary building and after the Olympic Games it dismantled and sub-divided for reuse elsewhere.
- Recycle: recycling is part of our everyday life. There are lots of good examples for it. For example refurbishing part program for Peugeot. In this program the parts planned to be able to renew so the price of service will be low but the quality is the same. Other example is the waste-cloth which made by paper waste. The secondary use of biomass energy is also a good example for it.
- These principles could lead our life for another society where free cooperation and self-imposed rules are not an utopia. The re-evaluation is emphasis because this is the base for the other seven principles. Co-operation should be exchange the competitive methods in the business and everyday life too. Although Latouche do not use the phrase of 'coopetion' but the idea what he wrote is equal with this. The egoism need to change for the altruism, the hedonism need to change for chivalry. It is necessary to change the aim of our life. The new aim will be the share of assets and not the getting property. The tone could be on the social links and not on the consumption. To realize the degrowth very important is to reduce consumption, reasonable production recapture, increased free time (and intelligent activities under the free time). According to Latouche the localisation is a very important issue. His aim is to spread the ideology of local production and local consumption all over the world.

Due to the limitation, the concept of "Consume less share more" is mentioned only, without any discussion. Telling the truth, decades before the (re)appearance of the moral economists an etologist, Konrad Lorenz wrote his novel: *Die acht Todsünden der zivilisierten Menschheit* (1973, in English: (1974 Civilized man's eight deadly sins). The environmental, ecological and social processes the Author is speaking have some economic consequences for the business life: degradation of biodiversity, decrease in agricultural and rural areas have huge effect on the individual enterprises, on production structure, technology, direction of innovation, etc. To be successful participant of the

business life they need to give appropriate answers, trying to reach their optimal behavior. On the other hand, the increase in consumption (the over-consumption itself) can be a leading force of the economic development, but the question is: why to increase the use of limited resources for, what is the limit of the nowadays usage? The limitation will increase the production cost, so lots of enterprises will get of the market if they will not meet the acceptance of the consumers. To be accepted, to keep them, trust is also an important factor. Business must change some moral attitudes (like being altruist, paying more attention on environment and social responsibility, etc.) All the thoughts, questions are beyond themselves and in strong connection with innovation, with the capability to be renewed.

The main conclusions of the First International Conference on Economic Degrowth for Ecological Sustainability and Social Equity of Paris in 2008 and the so called, Barcelona Conference from 2010 must be added to the question of “degrowth”. At first it was discussed the financial, social, cultural, demographic, environmental crisis caused by the deficiencies of capitalism, and the main principles of the “degrowth”, at the second the main focus was how to implement the „degrowth” theory into the society, into the daily life. Some practical solutions are the followings (not listed all): promotion of local currencies, reforms of interest; transition to non-profit and small scale companies; increase of local commons and support of participative approaches in decision-making; reusing empty housing and co-housing; elimination of mega infrastructures, transition from a car-based system to a more local, biking, walking-based one. Some suggestions came into practice, like the solutions of sharing economy (Uber, Airbnb, etc.), local currencies (like Soproni Kékfrankos, Balatoni Korona in Hungary) or the increase of local communities, but the conclusion of the conference after 6 years is that the society has not have big influence on the responsible economists, politicians.

Other authors highlight the importance of learning the new principles of economic cooperation. (Fukuyama, 2007; Sedlacek, 2012) The base of cooperation is moral economy instead of benefit economy. (Georgescu-Roegen, 1972, Daly 1991; Tóth, 2014) Transition from the economy of even more to the economy of enough is utmost necessary. The role of cooperation, to share of resources, strengthen the market position with concentrated products is important element of the nowadays agriculture, farming. In those countries, where it is characteristic the fragmented farm structure (not only the concept of local production – local consumption) should be implemented, but needed is the cooperation. The need of cooperation, need of trust among the business participants sector-neutral, but has important role in agribusiness. (Wilson, 2000; Andersson et al., 2005; Szabó, 2010; Takács, 2012; Baranyai et al., 2014)

### ***Solutions for SMEs - potential strategies: Innovation vs. Imitation***

Here only one direction of the future’s development of SMEs is discussed, from a business point of view the progress can be accomplished basically four strategies:

- innovation (product development) find out new things, with different content compared to the existing products, services;
- imitation, accomplish good solutions, meanwhile further developing, additional value add (not simply the act of copying someone or something (something, that is made or produced as a copy of the final function, but the way is individual);
- open innovation (mass innovation), for stakeholders (actors) the integration of internal and external knowledge is important; knowledge sharing; (innovating with partners by sharing risk and sharing reward);
- integration (synthesis), the ideas are integrated in the existed system, combined with the existing ones and making it appear with the new features in the market. (Table 1.)

Table 1. Innovating strategies: advantages and disadvantages

FEATURES	INNOVATION	IMITATION	OPEN INNOVATION	INTEGRATION
Time to market	Unpredictable as any innovative work.	Slow, but predictable, if not many hidden pitfalls or adaptation problems are encountered.	Quick (considering the whole innovation life cycle)	Fast, if effort to integrate with other system components is low.
Cost	Unpredictable.	More expensive and depends on complexity and adaptation effort.	Sharable and can be reduced	Low, if components are reasonably priced and not much integration work needed.
System integrity (with system architecture and environment)	Solution is built to match core architecture and customer needs.	Good, if developers adapt ideas to existing architecture.	Business processes, structures and systems integration: special, but requires synchronization between the partners	Acceptable if new components do not screw and over-complicate core architecture.
Expertise Required	High level expertise, creativity and specialized knowledge are required for good innovative solution.	Good developers can effectively adopt good ideas that are explained well.	Expertise, knowledge sharing	Not much specialized expertise is required, usually external support is available for integration.
Control over code and future development	Full control.	Good control if ideas are applied well and not over-engineered.	Shared and give opportunity to ramification	Little control and you are on mercy of external developers.
Competitive advantage and uniqueness	Innovation is an excellent opportunity to gain advantage.	Depends on quality and creativity in adaptation	Greater bargaining power due to the combined market entry, larger risk owing to the lack of trust	Not much for the standard solution that many can use.
Maintenance, support and improving capabilities	Completely your own effort.	Your effort is supported in original source of ideas if you are lucky.	Multi-player, teamwork required	Work is outsourced to dedicated external developers who fix, support and improve the product.
Learning curve, tacit knowledge, help	Should be covered by you to enable effective support and future development by existing and new developers.	Partially supported by original source, however can drift far as the result of internal implementation.	Highest outcome, synergy	Usually supported by help, tutorials, training and community involvement.

Remarks: advantageous, applying a positive, low risk favourable, relatively low cost, can be risky depends on individual and circumstances need resource surplus, more attention and risky high risk, costly, time-consuming

Source: Own construction, based on of Segestrom, 1991; Jarjabka-Lorand, 2010; Huizing, 2011, Takácsné, 2013

Innovation is expensive and risky to solve the problems, faces unique challenges, good solutions help to serve the consumers better, economically successful, reducing the costs and more reliable. It is highly risky, needs more time, result depends on the competitive participants' behaviour. Through imitation can be built/developed the solutions the business itself, needs less money, but must be differed from copying by adding some new to the „copied” solution. Open innovation is a platform of knowledge sharing, shorten the process, the diffusion of the novelty, but requires trust among the participant. Integration – based on cooperation –is the most effective way of product, technology innovation, of development a new system with lowest risk, effort and minimal future support. (Here must be mentioned innovation clusters, spin off businesses).



## CONCLUSION

Answering the question in the title: *Challenges, chances, alternatives for SMEs (and the theory of „degrowth”)* can be stated that for all participants of economy the sustainable operation means today: appropriate answers to changes, focusing on future, finding new solutions, ways to reach and keep the consumers, at viable size. That is nothing new these were expectations of the successful business in the last centuries. But what have to be changed is: turning to moral economy from profit (owners) orientation, to consciously select the business' place and role in local economy, not only in the development and innovation process.

Based on the “degrowth” theory it means: task is to find new solutions with sharing the resources and knowledge by cooperation. In agriculture site-specific plant production is a relatively new technology, but its diffusion is not so fast and wide could be due to its cost and environmental advantages. The new values (Réévaluer – reappraise) suggest the intent of preserving the nature at least in the nowadays condition. Precision agriculture is a tool in this and allows the efficient use of natural resources (Restructurer – restructuring factors of production). Each farming strategy in which the farmers' cooperation is the base of an efficient machinery use (Restructurer – restructuring of social relationships), each technology that reduces the human-health risk (Réduire – reduction) shows into the direction of degrowth.

For the SME sector's actors one of the possibilities for the future is monitoring, adopting and/or adapting (imitation) the sector's best practice. The imitation is more important in terms of the company growth than the product, service or process innovation. The copying of innovators, sharing knowledge can achieve significant results with minimizing cost and risk (technology and market). It is important to find ideas worthy of imitation, and be in time and rapidly available for production and market access.

## Acknowledgements

The research was supported by OTKA K 109026 foundation.

## BIBLIOGRAPHY

- Andersson, H. – Larsen, K. – Lagerkvist, C.J. – Andersson, C. – Blad, F. – Samuelsson, J. – Skargren, P. (2005): Farm Cooperation to Improve Sustainability. *Ambio*. 34(4/5), MAT 21 / Food 21 - A Sustainable Food Chain. pp. 383-387.
- Baranyai Zs, Szabó G G, Vásáry M. (2014): Analysis of machine use in Hungarian agriculture - Is there any future for machinery sharing arrangements? *Annals of the Polish Association of Agricultural and Agribusiness Economists* 16:(3) pp. 24-30.
- Behnassi M., Shahid S.A., D'Silva, J. (Eds.) (2011): *Sustainable Agricultural Development*. Recent Approaches in Resources Management and Environmentally-Balanced Production Enhancement. Springer. p. 278.
- Belpomme D. (2007): Avant qu'il ne soit trop tard Paris Fayard 302. o
- Caffey, R.H.; Kazmierczak, R.F.; Avault, J.W. *Incorporating Multiple Stakeholder Goals into the Development and use of Sustainable Index: Consensus Indicators of Aquaculture Sustainability*. Staff Paper, Department of AgEcon and Agribusiness of Louisiana State University: Eunice, LA, USA, 2001-8, 40 p.
- Daly, H.E. [1991]: *Steady-State Economics*. Island Press, Washington, D.C
- Chilinsky, G. – Heal, G. – Vercelli, A. (1998): *Sustainability: Dynamics and Uncertainty*. Kluwe Academic Publication. Dordrecht – Boston – London. 249 p.
- Fukuyama, F. (2007): *Bizalom - A társadalmi erények és a jólét megteremtése*. Európa Könyvkiadó. 616 p.
- Georgescu-Roegen, N. [1972]: *Energy and Economic Myth*; in: N. Georgescu-Roegen [1976]: *Energy and Economic Myths: Institutional and Analytical Economic Essays*; Pergamon Press, New York, 3-36. o.
- Huizing, E.K.R.E. (2011): Open innovation: State of the art and future perspectives. *Technovation*. 31. 2-9 pp.
- Jarjabka Á. - Lóránd B. (2010): *Az innováció alapjai és megjelenési területei*. Pécs. 129 p.
- Latouche, S. (2011): A nemnövekedés diszkrét bája. Szombathely. Savaria University Press 138. p [Latouche, S. (2007): *Petit traité de la décroissance sereine*. Fayard]
- Lorenz K. (2001): A civilizált emberiség nyolc halálós bűne. IKVA Könyvkiadó. Budapest. p. 133
- Mawapanga, M.N.; Debertain, D.L. Choosing between alternative farming systems: An application of the analytic hierarchy process. *Rev. Agric. Econ.* 1996, 18, 385-401.



- Mensah, A.M. – Castro, L.C. (2004): Sustainable Resource Use & Sustainable Development: A Contradiction?! Working paper. (ZEF) Center for Development Research University of Bonn. 22 p. [http://www.zef.de/fileadmin/downloads/forum/docprog/Termpapers/2004\\_3b\\_Mensah\\_Castro.pdf](http://www.zef.de/fileadmin/downloads/forum/docprog/Termpapers/2004_3b_Mensah_Castro.pdf)
- Mészáros S.(2011) Gazdálkodás 3. szám: Nemnövekedés: egy új gazdasági paradigma európai fejleményei p. 259-265
- National Research Center (2010): *Toward Sustainable Agricultural Systems in the 21st Century*. by NRC. Kindle Edition. The National Academic Press. Washington. 2010. [www.nap.edu](http://www.nap.edu). pp. 598.
- Popp, J – Pető, K – Nagy J (2013): Pesticide productivity and food security. *Agronomy for Sustainable Development*. 33(1) pp 243-255
- Ryden (2008) Education for global responsibility V Sustainable Development. [http://www.bup.fi/BUPfilm/Lars\\_film\\_site/texts/sustainable\\_text.pdf](http://www.bup.fi/BUPfilm/Lars_film_site/texts/sustainable_text.pdf) Letöltés: 2011. 12. 03.
- Sedlaček, T. (2012): A jó és a rossz közgazdaságtana. A Gilgames-eposztól a Wall Streetig. HVG Kiadó. 400 p.
- Segerstrom, P. S. (1991): Innovation, imitation, and economic growth. *Journal of Political Economy*, 99(4). pp. 807-829.
- Stull, J.; Dillon, C.; Shearer, S.; Isaacs, S. Using precision agriculture technology for economically optimal strategic decisions: The case of CRP filter strip enrollment. *J. Sustainable Agric.* 2004, 24, 79-96.
- Szabó, G. G. (2010): The importance and role of trust in agricultural marketing co-operatives. MTA – AKI, Budapest: *Studies in Agricultural Economics*. 112. 5–22.
- Takács I. (2012): Games of farmers – to cooperate or not? *Annals of the Polish Association of Agricultural and Agribusiness Economists*. 14:(6) pp. 260-266.
- Takács-György, K. – Takács I. (2011): Risk Assessment and Examination of Economic Aspects of Precision Weed Management. *Sustainability*. 2011:(3) pp. 1114-1135.
- Takács-György, K. – Takács I. (2016): Some ideas about site specific crop production and theory of degrowth. *Növénytermelés*. 65:(2016. Suppl) pp. 67-70.
- Takácsné György K. (1994): A családi gazdálkodás méretére ható tényezők modellvizsgálata I.. *Gazdálkodás* XXXVIII:(4) pp. 65-69.
- Takácsné György K. (2013): Innovációs formák, elterjedésük és szerepük a mezőgazdaságban. *Kecskemét*. 1060-1064 pp.
- Tóth G. (2014): Kelet-nyugat átrendeződés? *Journal of Central European Green Innovation*. 2 (4) pp. 163-170
- Turek R. A. (2013): *Sustainable Technologies, Policies and Constraints in the Green Economy - Sustainable agriculture - between sustainable development and economic competitiveness*, IGI Global Publishing, 978-1-466-64098-6, p. 219-235
- Valkó G. – Tóth R. – Vinogradov Sz. – Fekete-Farkas M. (2013): Measurement of Sustainability of Agriculture. *VADYBA* 23:(2) pp. 141-148.
- Wilson, P.N. (2000). Social capital, trust, and the agribusiness economics. *Journal of Agricultural and Resource Economics*, 25 (1): pp. 1-13.
- World Commission on Environment and Development (WCED) (1987). *Burtland Report*. United Nations. New York.