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Interests and goals in the agricultural higher education system of Hungary – a methodological approach

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Abstract

In recent decades the Hungarian intelligentsia, both political and governmental, emphasised the importance of higher education in socio-economic modernisation. At the same time, after nearly twenty years of system-transition we have to see that the ambitious goals of reforms in many cases have been turned into their opposite. This paper analyses the key actors and their strategies in the higher education system, highlighting the most important obstacles to development based on a multi-actor strategy model, based on institutional economy and principle-agent theory. The results show considerable divergence in force and interest-structure of different actors. As a consequence of relationship of forces it has been shown that, without steadfast governmental policy, long-term commitment for development and active participation of the business sector in innovation, there seems to be only a rather limited possibility for upgrading the agricultural higher education system.

Keywords

institutional economics, MACTOR, policy analysis, social bargaining, stakeholder analysis

1. Introduction

All over Europe, the higher education system is facing new challenges in an era of deep-rooted socio-economic changes, European integration and globalisation.

The concentration of material and intellectual resources seems to be a necessary precondition of modernisation. This is a rather deep-rooted problem of the Hungarian higher education system: Klebelsberg (1929, cited by Ladányi, 2000:25), at that time Minister of Education has emphasised that: “*as a consequence of developments in the past we have a lot of parallel institutes ..., there are numerous dwarf colleges. In this way we lost a lot of energy, dissipate our efforts.*” The need for better concentration of resources, quality improvement and the increasing of the role of higher education institutes in regional development have been the programme priorities of different governments but – contrary to the declared goals – the number of institutes did not diminished. For example, in 1989, there were 101 faculties in 43 institutions, in 2007 there were 41 institutions with 159 faculties (not including the religious institutes and faculties).

In an earlier paper (Hajdu, I.-né and Lakner, 2008) we offered a detailed description of the discrepancies between the declared goals and reality in higher education. The aim of this paper is to offer a more detailed analysis: identifying and evaluating the actors and their strategies shaping the current agricultural higher education system, highlighting the causes of the current – in many aspects chaotic – situation, and determining the possible ways of further work. Our analysis focuses on agricultural education, but the results can be generalised to the whole system of Hungarian higher education.

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2. Methodology

The basic paradigm of analysis were the institutional economics (Amin, 2004), as well as the principle-agent theory (Eisenhardt, 1989). According to the basic theory of the so-called “French school of strategy” the different social systems can be considered as an arena in which different groups of participants (the so-called actors) take part with the purpose of enforcement of their specific interests (Godet, 2003).

The method of systematic analysis of social bargaining can be modelled by the so-called MACTOR method, an acronym for Matrix of Alliances and Conflicts: Tactics, Objectives and Recommendations. This approach has been extensively used in different fields for analysis of actors and their goals, for example in case of historic fishing policies (Castroviejo, 1993); modelling of the Tunisian university structure (Jaziri and Cherif, 2003); urban planning (Dufrasnes et al. 2008) and furniture production sector in El Salvador (Mitma et al. 2006).

If one can relatively adequately simplify the actors and the most characteristic features of their systems of interests, then there is the possibility to analyse the chances of different actors realising their goals. The possibilities of actors influencing other actors are determined by their potential to pressure other actors directly or indirectly with the purpose of affecting their behaviour. The influence of an actor (A) on another actor (C), is the sum of the direct and indirect influences of actor A on actor C.

The quantification of mutual influences can be characterised by a rectangular matrix. Cells of matrix – by definition – reflect the intensity of influence of an actor in a row on an actor in a column (Bendahan et al., 2004). The intensity of direct influence of one actor on another was measured on a 0-4 scale, from no influence to absolute influence, determining the existence of the respective actor. The matrix of direct and indirect influences (MIDI [1]) can be quantified for each pair of actors as a sum of direct and indirect influences.

$$MIDI_{a,b} = MID_{a,b} + \sum_c (\min (MID_{a,c}, MID_{c,b})) \quad [1]$$

In this way of each and every actor can be determined the vector in influences (I_a) and dependences (D_a) by equations [2] and [3].

$$I_a = \sum_b (MIDI_{a,b}) - MIDI_{a,a} \quad [2]$$

$$D_a = \sum_b (MIDI_{b,a}) - MIDI_{a,a} \quad [3]$$

Based on these indicators a normalised value can be determined for each actor. [4].

$$r_a = \left(\frac{(I_a - MIDI_{a,a})}{\sum_a (I_a)} \right) \cdot \left(\frac{I_a}{(I_a + D_a)} \right) \quad [4]$$

Using the r_a vector one can define the matrix of influence-possibilities of each actor for different issues [5].

The importance of different goals from the point of view of each actor has been expressed by the Matrix of Actor-Object (MAO). In this matrix the importance and attitudes of different goals from the point of view of different actors were quantified on a -4...+4 scale, where the -4 denoted the high importance and total negation of the given goal and the +4 denotes the high importance and total support.

$$3MAO_{a,i} = 2MAO_{a,i} \cdot r_a \quad [5]$$

The 3MAO matrix is the basis of most of the analyses proposed by method of analysis. Indeed, a number of important values are directly drawn from the 3MAO matrix. This is the case of the mobilization coefficient [6], showing how much the different actors are involved in the situation, but also of the agreement [7] and disagreement [8] coefficients, which indicate how controversial are the different issues.

$$Mob_a = \sum_i 3MAO_{a,i} \quad [6]$$

$$Ag_i = \sum_a (3MAO_{a,i} (3MAO_{a,i} > 0)) \quad [7]$$

$$Disag_i = \sum_a (3MAO_{a,i} (3MAO_{a,i} < 0)) \quad [8]$$

Furthermore, the 3MAO matrix is used to obtain the convergence matrix (3CAA [9]) and divergence matrix (3DAA [10]). For each pair of actors, these matrixes show how much they agree (respectively disagree) on salient and controlled issues.

$$3CAA_{a,b} = \frac{1}{2} \cdot \sum_i ((|3MAO_{a,i}| + |3MAO_{b,i}|) \cdot (3MAO_{a,i} \cdot 3MAO_{b,i} > 0)) \quad [9]$$

$$3CAA_{a,b} = \frac{1}{2} \cdot \sum_i ((|3MAO_{a,i}| + |3MAO_{b,i}|) \cdot (3MAO_{a,i} \cdot 3MAO_{b,i} < 0)) \quad [10]$$

Finally, the ambivalence coefficient [11] can be calculated for each actor, giving an indication of their expected stability in their potential alliances.

$$3EQ_i = 1 - \left[\frac{(\sum_k \|3CAA_{i,k}\| - \|3DAA_{i,k}\|)}{(\sum_k \|3CAA_{i,k}\| + \|3DAA_{i,k}\|)} \right] \quad [11]$$

The basic data for analysis have been estimated by expert interviews. In the framework of our research we have conducted a series of deep-interviews in two cycles with nineteen specialists working in full-or part-time jobs in higher education sector. Nine of them worked in Budapest and the other ten in other cities. Six respondents hold the doctor of sciences title (this is a specific title for high-level scientific activity). Their institutions embraced practically whole range of Hungarian agricultural higher education.

The determination of coefficients in the two input-matrices followed the logic of the Delphi-method. The experts estimated the coefficients in two rounds. After the first round, they have been provided with an anonymous summary of the results. Participants were encouraged to revise their earlier answers in the light of the replies of other members of the group. During this process the range of the answers decreased considerably and the group converged towards a compromise. The pre-final version was send to participants by e-mail, and the last version was accepted without further amendments.

3. Results

3.1. Key actors and their strategic goals

Governments

The overwhelming majority of higher education institutes are in state ownership. The state budget allocation is the main source of financing of education and research. That is why the state is a decisive player in education. In the opinion of the survey participants the most important goals of consecutive governments in higher education were as follows:

- Increasing the efficiency of higher education. Higher education has been seen as the main tool for modernisation and upgrading of the competitiveness of Hungarian economy, but – as we will see – the practical realisation of well-sounding political declarations have run into difficulties.
- Promotion of concentration of higher education institutes. This can be explained by two arguments. On one hand, it was hoped for a reduction of costs of education by exploiting the economics of scale effect. On the other hand, the governments tried to promote the integration of higher education institutes because this was a necessary precondition of the obtaining the long-term monetary credit for the modernisation of the higher education system. Later on, the Hungarian government did not accept this credit.
- Increasing of the practice-orientation of university research. On the one hand, this was considered for increasing of competitiveness. On the other hand, the income generated by this activity was supported to ease the burden of financing of higher education by the state budget.
- Harmonisation of structure and qualification level of young graduates with the demands of labour market. Of course, in different government programmes this was the priority, but in practice it should be taken into consideration that the horizon of governmental planning was in most cases focussing on the parliamentary cycle and the tasks, bearing their fruits over a longer period, were of lesser important in the operative activity of government.
- Decreasing of the slack of workforce on labour market. As a consequence of the decreasing level of education in professional training schools (secondary technical schools) and the relatively high share of secondary schools of general education (gymnasiums), the labour market is full of young people having no qualifications. That is why an important goal of governments is to decrease this pressure and reduce the number of unemployed. Of course, in the long term these efforts could offer additional benefits for participants in education.
- Creation and maintenance of a relatively stable political atmosphere among the co-workers of institutes. Under the conditions of lack of financial resources the most important means of this was the introduction of a centralised wage tariff system and the provision of public employee status practically for every employee of institutes, from manual workers up to professors. This system offered a modest but predictable wage with a high degree of job security. On other words, before a selection of workers of higher education, a system was introduced, par excellent contradictory to the qualify improvement efforts and differentiation on based on the scientific and/or pedagogic performance.

Regional municipal organisations

The regional-level municipalities promoted the establishment of regional colleges or universities, because this seemed for them a favourable way for increasing the importance and the prestige of the region, involving new resources, increasing the number of qualified intelligentsia in the region and decreasing the number of young, unemployed persons. The establishment of new higher education institutes in a region, or the defence of the independence of an existing college or university was an aim which was able to forge an alliance even between parties having totally different political values. The overwhelming majority of Members of Parliament elected in the region did not dare to go against the public will at local level.

The universities and colleges

Under conditions of rapid social and economic changes the majority of universities have been not able to formulate any long term strategy, because the scientific elite of these institutions has no experience in this field. At the same time there was an increasing pressure on these institutions to increase their income by any means. The most important possibility for this was the so-called per capita payment for students from the state budget. It was a natural reaction from the institutes to offer a lot of new, well – sounding new qualifications (e.g. communication, media, environmental management, marketing), often without a sound study of the labour-market demand.

Students and their families

Until the 1990s, as a consequence of the relative closeness of the higher education sector, “the diploma” had an extremely high social prestige. Universities and colleges enjoyed a high reputation among the public. After the increasing of possibilities to get a college or a university degree, the majority of parents suggested to their children to obtain a higher qualification because “this will certify that you have an above-average qualification, you were able to fulfil the requirements of a college or university, and we will see the other things later on...”. Under these conditions, to get a diploma became a new fashion among the younger generations, often without a real motivation to learn and not considering the demand from the labour market. At the same time, the problems created by the repaid expansion in the number of students are a general phenomenon all over the world and cannot be considered as a specific feature of former socialist states. This question has been extensively investigated in last the three decades in developed states, but even these states have not been able to formulate an adequate response (Scott, 1995).

A considerable number of students try to get a relatively general qualification. This means that there is an increasing popularity of degrees in communication, economics and liberal arts. The popularity of agricultural faculties has been decreased considerably by other factors, too. The most important of these are as follows: (1) rather unfavourable image of agriculture (e.g. crises in different sectors, shrinking production); (2) hardship of the agricultural producers’ life (e.g. lack of free time in animal husbandry, high risk of production, e.g. financial, criminal, market, natural, threats); (3) decreasing interest in natural sciences in secondary education.

A much thinner layer of university students (following mainly the value-patterns of their families) tried to maximise his/her knowledge during the years in higher education. It is worth highlighting that in the opinion of every participant of our interviews the number of these students has drastically decreased during the last two decades. It is extremely important that in the opinion of participants of interviews there is a value-crisis in Hungary. The “traditional” values of the society (hard work, priority of family life) are losing their effect; the socialist era could not establish a long-lasting value system and the first two decades of “capitalism” have proved for the masses of society that the most important keys of success are the moral inhibitions. (Róna-Tass, 2002).

These days it is impossible to speak about “the students” in general. With considerable simplification it seems to be useful to divide the students into two groups: the so-called ambitious ones, who really want to achieve a sound and marketable knowledge and another group who would like to spend their time (and the money of their parents) as students in colleges or universities, waiting for some good possibility to get a job, temporary employment, and hoping to have a higher social status by having a BSc or MSc degree. A considerable part of them have part-time jobs demanding a relatively low qualification but offering the possibility of income generation. This income-generating activity-step by step gets an increasing importance in their value-system and time-allocation, and the college/university education holds only secondary importance in their mind.

The elite of the Hungarian science and education

The organisational structure of Hungarian science and higher education mirrors a rather hierarchical scheme (e.g. there are eight categories of teachers in higher education institutes, from college teaching assistant to university professor). The structure of Hungarian science, offering numerous monopolistic positions of elite, is a highly debated issue.

Some critics of this system, inherited mostly from the socialist-years, have achieved international publicity and attention (Schiermeier, 2006). During the troubled years of transition the elite of Hungarian science (professors, scientists having the Doctor of Sciences title (their number is approximately 2600, average age: 66 years; members of Hungarian Academy of Sciences, approximately 370 members, average age: 71 years) tried to form a circumstance where they could profit from their above-average social capital and scientific background. This was promoted by the fact that the establishment of new faculties were linked to the presence of professors. This offered a favourable possibility for this elite to get 2-4 (in some cases even more) positions at different universities and colleges in last decade. Of course, this elite tried to create for itself a quasi-monopolistic position, minimising the possibilities of competition. To achieve this, the keeping up of the above-mentioned soviet-type two-tier system of scientific qualification was an excellent tool.

At the same time one should note that among the younger generations of Hungarian scientists there has not been enough ambition to achieve higher scientific degrees and worldwide recognised results in research, because other activities (e.g. part-time entrepreneurial activity) offer much more obvious short-term advances than the scientific career.

The “average teachers”

This term embraces an extremely heterogeneous group of college and university teachers. With some simplification, they are the teachers who cannot be considered as the elite of scientific life, from PhD students to the elder associate professors. In most cases the most important aim of these people is to get a “rather quiet” academic status (As some respondents formulated: the majority of ambitious, dynamic, younger Hungarian scientists are soon in the business sphere or at foreign universities. It should be noted, that during the last twenty years the Hungarian agricultural faculties have not been able to attract the best students from secondary schools.). According to current Hungarian regulations the dismissal of an associate professor is an extremely difficult process. For more ambitious teachers the most important way to achieve success in academic life is the production of high quality scientific papers. In the evaluation of teacher’s activity the efficiency of pedagogical work, teaching quality or practice-related activity have a rather low (if any) importance.

Actors of the labour market

With some simplification, the actors of labour market can be divided into two groups: the state- or municipally owned (“public institutions” in the broadest sense of the word) socio-economic institutions, and the competitive sector. In years of socialism, the role of the state embraced every part of the socio-economic life. Privatisation and the decreasing of the economic role of the state, re-structuring of the public sector (e.g. reform of public education, health-care system and armed forces) caused a considerable decrease in labour-demand in the public sector. Of course, under conditions of rapid, often contradictory changes, these institutions had neither energy nor ambitions for long-term human resource planning, and articulation of their demands for higher education sphere.

The business sector comprises a wide range of economic entities. The most important actors of the Hungarian economy are the filials of the multinational firms, giving approximately 39% of the GDP, and 87% of export value (HCSO, 2007). The most important parts are the multinational enterprises. The majority of these firms have their own training systems, which is why they do not want to participate in a pro-active way in the modernisation of higher education. In most cases, these realise their R+D activity in their home country, but there are 38 multinational firms which have research and development laboratories in Hungary. The R+D activity of the firms is below the international average even in innovation-intensive branches. For example the share of R+D costs in revenue in average in the European pharmaceutical industry is 14,2%, in Hungary it is 9.1 % (Vas, 2007).

Innovation in small and medium sized enterprises in most cases only a secondary importance. In the opinion of respondents, they are reluctant to deal with and invest in research-intensive activities, when the return of investments is much higher in other spheres of the economy e.g. in the service sector, trade, entertainment, and in general in searching for the loopholes in regulations. A good example of this statement is the food industry: the share of illegal food production and trade (without any tax payment) is in meat, poultry and wine industry about 30%, according to the official estimates. There seems to be no innovative product which is competitive with the short-term profitability of these activities, which is why their interest in considerable upgrading of higher education is rather low. The relatively low involvement of the business sector in higher education and research is highlighted by the fact that, although the per-capita R+D expenses are well below the EU average, the business sector finances only 38% of these expenses. The corresponding indicator for the EU-27 is 54% (Eurostat, 2001).

In summary, it can be stated that the possibilities of “demand-side” regulation of the higher education sector seems to be rather difficult because the level of interest in upgrading of this sector from the end-user side is weak.

3.2. Analysis of strategies by MACTOR method

Based on the considerations above, the set of key, relevant actors (Table 1), and the most important strategic goals of one or more of actors were determined (Table 2).

To concentrate the energy of participants on the key issues, only the most important problems have been taken into consideration in preparation of Tables 1 and 2. Even in this case it is obvious the relatively high number of actors and their strategic goals. This fact highlights the complexity of the problem.

Table 1

The relevant actors in Hungarian higher education system

Actor	Abbreviation
Government	GOV
Regional self –government (County-level)	REGIO
Scientific elite	PROFS
Higher education teaching staff	TEACHERS
Higher educational institutions (Universities and/or colleges)	INSTITUTES
Socio-economic entities of market of services of higher education	MARKET
Students with high level of professional aspiration	AMBSTUD
Students with low level of professional aspiration	LOWAMBST

Table 2

The relevant actors and key strategic goals in Hungarian higher education system

Strategic goal	Abbreviation
Keeping of the state budget allocated for higher education financing	BUDGET
Increasing of practice-oriented research and teaching activity of higher education institutes	PRACTICE
Introduction of measures aiming at incentives and forces for more efficient research and teaching	INCENT
Achieving a higher education qualification without considerable effort	EASIDIP
Decreasing the number of youth unemployment by increasing the number of higher education students	UNEMP
Stabilisation of workplaces in higher education	STATUSQ
Integration of entities, decreasing the number of higher education institutes	INTEGR
Establishment of regional higher education institutes	REGIONAL
Increasing of income of university budget	INCOME
Increasing the quality of teaching and research activity e.g. by increasing of demands for diplomas	HIGHQ

After these preliminary remarks the interpretation of the matrix of direct influences (Table 3) is straightforward.

Table 3

The matrix of direct influences of actors, measured on a 0-4 scale

	GOV	REGIO	PROFS	TEACHERS	HIGHEDU	MARKET	AMBSTUD	LOWAMBST
GOV	0	3	1	1	3	2	1	1
REGIO	2	0	1	1	1	1	0	0
PROFS	1	1	0	2	4	0	1	1
TEACHERS	1	0	1	0	2	0	1	1
HIGHEDU	1	1	2	4	0	0	1	1
MARKET	1	0	0	0	1	0	1	1
AMBSTUD	1	0	0	1	1	0	0	1
LOWAMBST	1	0	0	1	1	0	1	0

Some remarks:

- Formally, the Hungarian government respects the autonomy of higher education institutes, but by allocation of resources is able to influence considerably the position of institutes. This is an especially important factor, because the incomes of institutes in most cases are not sufficient for upgrading the infrastructure, which is why the government-level decisions are crucial.
- As a consequence of the election system, the regional interests can be rather efficiency articulated and carried out, often against the will of central political power. In socialist times, the geographical distribution of higher educational, research and development capacity was distributed in Hungary in a rather uneven way: the overwhelming majority of these capacities were in Budapest and some larger cities. It is an important question whether the distortions of this institutional system could be counter-balanced by scattering of resources of development for higher education. This question should and can be answered only by in-depth effect-studies, but until now such types of analysis were not conducted.
- The government and regions can influence the motivation and behaviour of students (e.g. by scholarships, but the efficiency of these systems are hard to estimate and goes beyond the scope of the current study); in practice, this type of influence is rather weak. The system of scholarships is a relatively weak incentive for better performance. The business sector is often reluctant to offer scholarships because in the opinion of managers there is a huge supply of young specialists and they have a favourable position to choose the most suitable students for their purposes. The larger, multinational firms often apply specific teaching programmes for young specialists. They often consider this as a more efficient way of human resource management than the support of higher education universities.
- The actors in the market have theoretically a considerable possibility to influence the higher education policy, but their participation in this process is rather formal. The SMEs have only rather limited resources to influence the activity of higher education institutes, their professional organisations are focussing on current economic problems. The professional organisations (e.g. Hungarian Society for Agronomic Sciences) are rather weak, and in some cases (e.g. Hungarian Scientific Society of Food Industry) are formal. The multinational enterprises focus on their own education system.
- The students' organisations are rather weak and inefficient. Theoretically, these organisations have a relatively wide scope of influence but in practice they utilise only very small parts of their competences.
- Members of teaching staff have different organisations and representation possibilities, but they do not focus on strategic questions, rather on day-to-day social problems of teachers. In the case of students' and teachers' organisations the diversity of interests of their members (e.g. ambitious and lesser ambitions students) can be considered as an important hindrance to consensus.

The interests-system of different actors are summarised in Table 4.

Table 4

The actors-interest relations, measured on a -4...+4 scale

	BUDGET	PRACTICE	INCENT	EASIDIP	UNEMP	STATUSQ	INTEGR	REGIONAL	INCOMEMAX	HIGHQ
GOV	4	4	3	-3	4	3	4	-2	4	2
REGIO	-2	1	0	-1	4	1	-4	4	0	1
PROFS	-2	1	-1	1	1	2	-4	4	3	-1
TEACHERS	-2	3	-2	1	1	4	-4	4	3	-1
HIGHEDU	-4	4	3	3	4	3	-3	4	4	2
MARKET	0	1	1	-1	-1	-1	0	0	0	1
AMBSTUD	0	1	1	-3	-1	-2	0	0	0	4
LOWAMBST	0	0	0	4	1	1	0	0	0	-2

Analysing the graph of influence and dependence of different actors (Figure 1), based on equation [1], it is clear that there are considerable differences in the possibility of bargaining power and ability to enforce interests between actors. The direct influence of market forces and students is extremely low. The scientific elite have a relatively favourable position: high influence, paired with relatively low dependence.

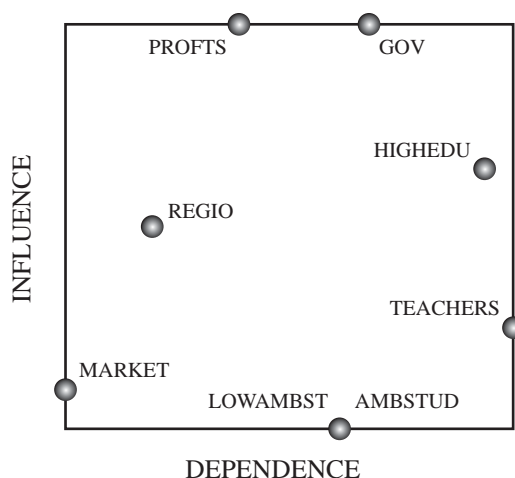


Figure 1: The influence-dependence relations of actors

Source: own calculation, base on Table 1

The government and the scientific elite have the highest level of influence (Figure 1). In the case of this elite the level of dependence is slightly lower than the government. This highlights the importance and the responsibility of this social group for higher education. At the same time, this fact highlights the importance of the Hungarian Academy of Sciences too.

The freedom of activity of higher education institutes is relatively low compared to the government. This is a consequence of balance of power, mainly in the case of distribution of resources. The heterogeneous group of higher education teachers is in a relatively dependent position. It can be considered as an important contradiction that the two, theoretically, key actors of the education process, the students and the market, have only rather limited possibilities of influence. This can be explained by the factors outlined above. Theoretically, the market-players could influence the activity of higher educational institutes in a more intense way but, as we see, they are engaged with running their daily business. The higher number of low-ambition students can counterbalance the (rather sporadic) efforts of ambitions ones.

The normalised value of influences (r_i), calculated on the basis of equation [4] highlights even more the rather contradictory situation (Figure 2).

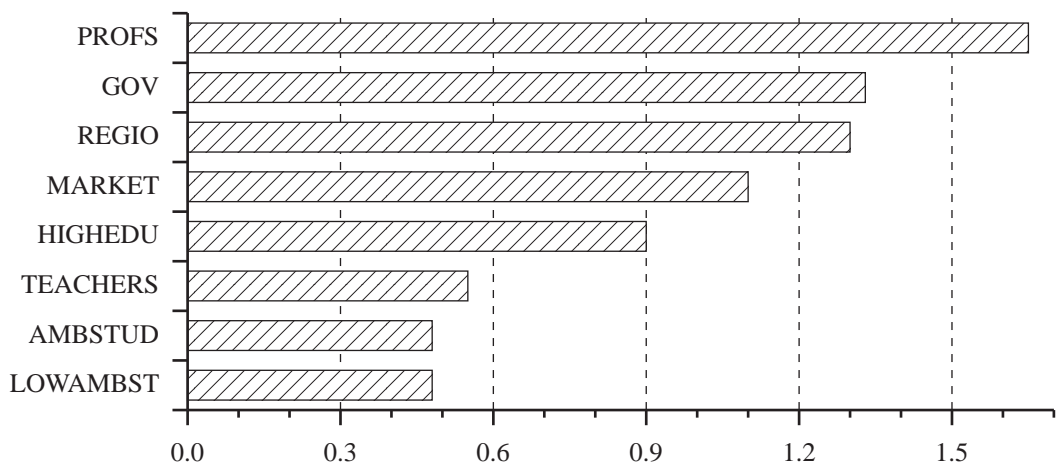


Figure 2: The normalised values of influence

Source: own calculations, based on Table 1

The problems of imbalance of power are obvious on this graph. That is why the forging of an alliance between the forces interested in changing of situation is a crucial question. In this process the cooperation between forces who are really interested in development is a crucial question. The relatively low level of influence of ambitions students is an especially important problem. There is an increasing need for specific programmes aiming to offer better possibilities for talented students. This issue has gained in importance after the EU accession, because there is a real danger that the best students will be “lured” out of Hungary by high-quality and reputable Western-European universities. This tendency can be seen in the fact that in 2002 twenty research intensive European Universities founded the League of European Research Universities (LERU, www.leru.org). It is highly informative that there is no Central-or Eastern European Universities amongst these institutions. If the current processes continue, we have to forecast a division of labour between the “western” and “eastern” universities; the former will offer the education of the elite and the latter the input for secondary or tertiary cycles of higher education.

Analysing the relation of different actors to goals, weighted by the level of their influence offers a favourable possibility to see the most important focal points of discussion as well as the level of support of these efforts (Figure 3).

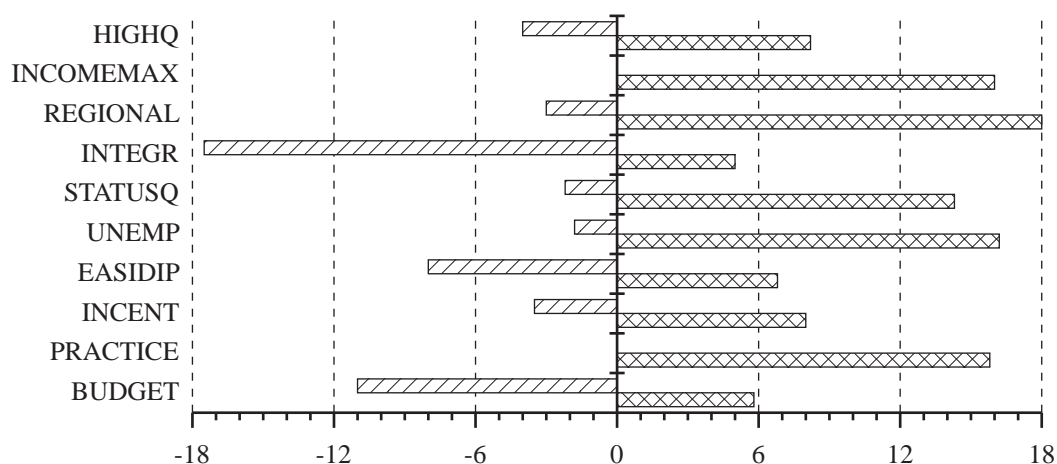


Figure 3: The acceptance and reluctance towards different goals.

Source: own calculations

Figure 3 offers at least five important lessons:

- The increasing of practice orientation of higher education is the only goal which can be considered as a generally accepted one. Acceptance of each other goal is highly controversial. At the same time, the acceptance of this strategic aim is not enough to change radically the activity of higher education institutes.
- There are considerable forces against the integration of institutes of higher education. Until the radical changes of the current relations of force there is only a limited possibility for real integration. The most probable scenario is the achievement of formal solutions, without real and efficient concentration of resources.
- The preservation of stability is a highly supported issue, being an important obstacle of any reform, aiming at increasing of efficiency of activity of institutes.
- The increasing of quality of higher education seems to be a question of secondary importance from the point of view of key policy-makers compared to another aims. At the same time, the upgrading of quality is a decisive question from the point of view of the future of Hungarian higher education (Mészáros and Szabó, 2009)
- The world-wide economic crisis will be a key factor from the point of view of the Hungarian higher education system. In the worst-case scenario, the energy of the political elite will be concentrated on crisis-management with limited attention to future consequences of short-term decisions. In the best-case scenario, the government will acknowledge the importance of the role of education in general and higher education in particular in socio-economic development, and further efforts, human and material resources will be allocated for development of agricultural higher education, because this system is a key factor of food safety and security, environmental management, rural development and (in an increasing way) of energy-security. In these turbulent and difficult times there lies a large responsibility on the shoulders of the Hungarian scientific and political elite with regard to which way of development to choose.

Analysing the ambivalence of actors, based on equation [11], it is clear that practically each important actor is rather ambivalent and it is a rather unfavourable fact that the lowest level of ambivalence can be observed in case of participants which are the most interested in preservation of current situation (Figure 4). That is why we cannot expect long-lasting stable alliances between the participants, because the level of acceptance of key goals is rather different between the different players.

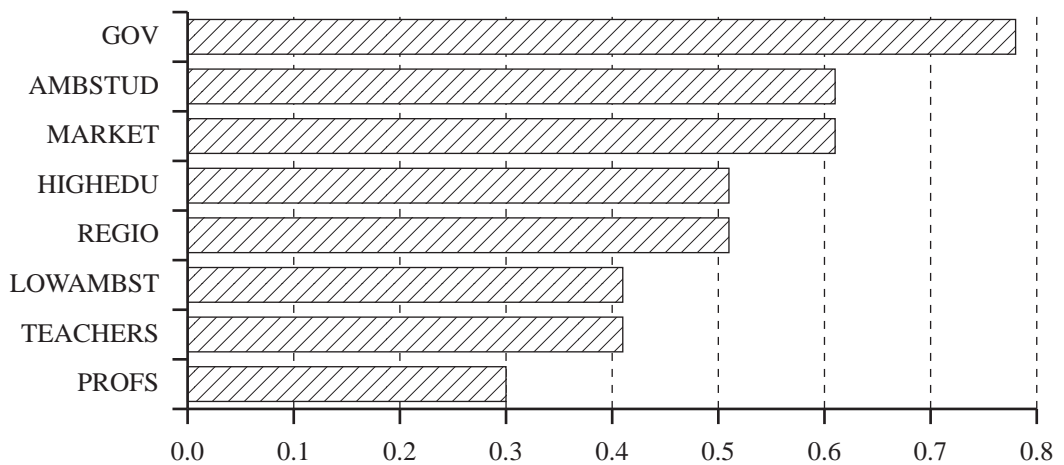


Figure 4: Level of ambivalence of actors

Source: own calculations

Summary

Based on the findings above, there is an intense temptation to develop an agenda for strategic development of Hungarian higher education system, but this goes well beyond the current article. We would like to emphasize only one thing, based on a proverb, attributed to Albert Einstein (http://en.wikiquote.org/wiki/Albert_Einstein#Einstein.27s_God_.281997.29): “We cannot solve problems by using the same kind of thinking we used when we created them“. The modernisation of the higher education system is impossible without a much more intensive European integration of this system, based on the real demands of the market.

Acknowledgement

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**Brouwer, F., van Rheenen, T., Dhillion, S. S. and Elgersma, A. M. (eds.):
Sustainable Land Management: Strategies to Cope
with the Marginalisation of Agriculture¹**

Mészáros, Sándor²

A new book on sustainable agriculture was published by the Edward Elgar Publishing Company in 2008. The content of this multi-author work is based mainly from the EU research project with the acronym EUROLAN. Most of the 13 chapters are case studies focusing on some northern, southern, eastern and western EU Member States, plus Norway, whilst the United States and Japan are each covered by a chapter.

The subject matter of the book can be described in four **key terms**, namely: marginalisation of agriculture, sustainable land management, multifunctional agriculture, and social capital.

The term ‘marginalisation’ was first used at the end of the 1980s and, in European context, at the beginning of the 1990s. According to a definition in the book “marginalisation of land is a process of changing land management practices, driven by a combination of social, economic, political and environmental factors by which the use of land for the main land-dependent activities (agriculture, forestry, housing, tourism, local mining) ceases to be viable under an existing socio-economic structure” (p. 237). Marginalisation is therefore a socio-economic process decreasing the viability of agriculture. This process “might be invisible in many parts of Europe” (p. 6), though, at the same time, “marginalisation is an early warning for future abandonment of land” (p. 246). The book covers also to the factors of marginalisation; in some parts of Spain, for example, the population density is about 10 persons/sq.km, which is considered to be the minimum threshold for ensuring sustainability of county-level services.

A separate chapter deals with multifunctionality, and presents eight different meanings and interpretations thereof. Multifunctional agriculture is considered as a social concept that, beyond its primary function “also provides other functions such as the viability of rural areas, food security, cultural heritage and environmental benefits” (p. 2). In this respect, the most interesting thing for me – considering multifunctionality and sustainable development as separate categories – is the fact that the book links these two concepts. It is appropriate to cite one of the paragraphs of the last, recapitulatory chapter: “Multifunctionality could be a concept to understand sustainable development better. Multifunctionality strengthens our body of knowledge on sustainable development, making the linkages between the different components transparent. For example, farmers producing food and meanwhile also maintaining the landscape contribute to the economic, social and ecological dimensions of sustainable development.” Of course, multifunctionality is also connected with the marginalisation of agriculture.

No separate chapter is devoted to the theoretical issues of sustainability, but chapter 2 discusses in detail its connection with the previous two concepts (pp. 48 and 52-53). In this respect, the last two chapters summing up land management practices are also worth mentioning; one of them also illustrates by means of a flow chart the dependence of the outcome of sustainability and marginalisation on land quality and correct land management (Figure 12.1, p. 229).

¹ Edward Elgar Publishing 2008. 252 p.

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Chapter 11, discussing social capital, also provides important theoretical and conceptual contributions; and includes three case studies. Putnam linked the term ‘social capital’ to civic organisations and voluntary associations and suggested the ratio of the number of such organisations to the population as its indicator. In his opinion, social capital may really serve rural development in “well-connected” societies. “It facilitates the utilisation of local resources both in terms of natural and human resources by the creation of social networks, trust and civicness” (p. 211). In the last section of the chapter, the authors illustrate the relationship between social capital and rural development with a lively metaphor: this relationship is the same as the connection between the software package with the hardware facilities; these latter being represented here by local employment, infrastructure and services.

The case studies firstly provide an overall picture of Europe. Chapter 9 includes also a recapitulatory study on the condition of the EU-15 countries, i.e. the more developed part of the EU, with the objective of forecasting the problems which can be expected between 2010 and 2020. The extent of risk of marginalisation is described by four indicators: the percentage of regions with a population density below 50 persons/sq.km, the percentage of farmers over 55 years of age, the percentage of farmers with incomes below half of the average for the national economy, and the rate of areas exposed to erosion in excess of 2 t/ha per year. The data detailed by regions are also displayed in four maps which clearly show the hot spots of the EU-15 countries. All four indices are between 20 and 30% as an average of the EU-15 countries. It has been established that there is no risk of marginalisation on two thirds of the territory of the EU-15 countries. However, a great risk exists in 5% of the territory, especially in Portugal, but also in Greece and in Italy, though to a smaller extent. The main hazard is constituted in these Mediterranean regions by the insufficient rainfall anticipated due to climate change, but, of course, there are also other risks of a social character. Also the important connection has been emphasised that the rates of land abandonment and depopulation is dependent on policy (support).

The case studies by countries have however demonstrated that marginalisation does not concern only the Mediterranean regions. Chapter 5 includes case studies in Norway and Finland; in these North European countries, the cold climate, the low population density and the large geographical distances constitute the specific causes of marginalisation; and the same factors also prevent pluriactivity. The authors suggest two economic strategies for farmers against marginalisation: increasing the farm size and growing of more productive, special plant varieties. Beyond this, the other option concerns the change to pluriactivity. As to the state (policy), subsidy represents the only tool for counteracting marginalisation; without support, the agriculture of these two countries is not competitive with the other economic sectors.

The situation is somewhat similar in the mountain regions, presented by Chapter 7 in a case study in the Alps region in Austria. Though there are differences in the demographic trends (the population is increasing in the Western Alps, while decreasing in the Eastern Alps), the marginalisation process is proceeding, albeit slowly (the livestock levels and the intensity of agricultural production are decreasing). Here, tourism and forestry may represent the main alternatives for farmers, but the agricultural (support) policy is not sufficient for arresting the unfavourable trends, but “integration programmes combining regional, environmental, socio-cultural and economic development will also have to play a major role in combating marginalisation and land abandonment”(p. 145).

Hungary is strongly represented in the volume in several respects. On the one hand, Alajos Fehér and Gábor Szabó are members of the team of 24 authors, the latter contributing to two chapters. On the other hand, the Czech Republic and Hungary represent in the book the ten countries which joined the EU in 2004, partly in chapter 6, discussing both countries, and partly in chapter 11,

devoted to social capital. As regards the situation in Hungary, there are of course similarities with the Czech Republic, for example the composition of land holdings by size is bipolar in both countries; however, at the same time, the proportion of mountain areas, especially that of high mountains, is greater in the Czech Republic. Though in Hungary, at present, only a few micro-regions and settlements are endangered by the risk of depopulation, the marginalisation process is nevertheless present, especially in some regions located in the north-eastern and south-western parts of the country, as illustrated by a map on p. 112. In Hungary there are several factors preventing the rationalisation of land management, some of them encumbering also the change to multifunctional agriculture. As the authors put it: “The poor development of human and social capital as well as of regional economies are crucial factors hampering agriculture from undertaking functions other than commodity production (for example environmental protection and nature conservation, tourism, landscape protection and so on)” (p. 111). Due to this reason: “The development of multifunctional agriculture in Hungary is still in its infancy” (p. 122). However, the authors make four proposals for improving the situation and suggest measures for the period between 2007 and 2013 (pp. 123 and 127 respectively).

The problem is contemplated with a different attitude in the United States of America than in the densely populated Europe. There, already three quarters of the population live in cities, occupying however barely 3% of the territory. And again, only a part of the rural population is engaged in agriculture; this is perhaps the reason why this chapter was entitled: “The clock is ticking for rural America”. That is, one sign of marginalisation is the decrease of the agricultural area. This diminution amounted to 5% on average across the entire USA between 1990 and 2004, exceeding 10% only in three areas. Land abandonment does not constitute a serious concern, either, because areas suitable for recreation purposes (hunting, tourism, cottage and summer-house construction) are in great demand, thus land prices are high. Urbanisation and size increase of the farms are considered to constitute the two main factors of marginalisation. The latter is the principal reason leading to the decrease of the population employed in agriculture. Of course, several government programmes are in place in order to protect the agricultural and natural lands; these are discussed in a separate section of chapter 4. Regarding multifunctional agriculture, the author is of the opinion that it could be helpful in developing the relationships between agricultural and non-agricultural regions.

In Japan, farms are located on just 13% of the total area and even those – from European or American eyes – can be considered as micro-farms, with an average size of 1.8 ha. As in the US, marginalisation manifests itself also here in urbanisation and – in the provinces – in the increase of the proportion of the non-agricultural population. Land abandonment concerns by today about 10% of the cultivated area. Here, multifunctional agriculture has been involved in the agricultural legislation since 1999. New management concepts have been disseminated, one of them named Nature Management Farming, which is the more common (more current) category. This movement has started from the Netherlands and Great Britain in the 1980s and 1990s and refers to multifunctional farming laying great emphasis on nature protection. “Nature management farming can be defined as land management practices that support multifunctionality of land. Farming provides food and fibre, maintains agricultural landscapes, generates employment in rural areas, supports the bio-ecological system and biodiversity, and also controls the quality of water, air and soil, and animal welfare” (pp. 187-188). The other new term is High Nature Value Farming, where farmers not only cohabit with the wild plants and animals but accept also restrictions, as is usual in Europe in nature protection areas. By way of a concrete example, the book cites a wild-goose migration site, where ploughing is restricted in winter and pesticide use in the breeding season; however the price of the rice produced in such area covers the excess costs.

IN SUMMARY: A very interesting, accurate and useful new book has been published on the topic. **One of its principal merits** consists in the thorough clarification of the topic's basic concepts (marginalisation, sustainability, multifunctionality and social capital), covering all interrelations. **Its other advantage** lies in the image of Europe, gradually evolving in the reader's mind, revealing the condition and concerns of the continent's agriculture and rural areas and also the methods and tools for their remedies. **As its third virtue** it can be emphasised that it is far from being only a theoretical work of basic research character, but it applies a highly practical approach to the relevant problems, providing several ideas, methods and tools for the agricultural and rural policy makers. In addition to the authors' work, the efforts of the four editors – F. Brouwer and T. van Rheenen of the Netherlands and S. S. Dhillion and A. M. Elgersma of Norway – also merit special recognition. As a person participating both in eastern and western European collaborative research projects, I know by experience what a difficult task they had, from standardisation of the terminology to the preparation of scientific syntheses.

Of course, also questions emerge in the reader's mind when studying the book. In me, for example, the question emerged, to what extent phenomena and issues similar to marginalisation of agriculture or development of sustainable land management may be subject to European (EU) level eco-political management, and also to what extent such management is necessarily of national competence. The book convinced me that, due to the differences in the natural conditions, the population density and the degree of social development in each country, no uniform, supranational formula can be conceived in the foreseeable future. Readers may also ask to what extent the discussion of the topic may be considered as comprehensive and whether there are some issues that are dealt with to a lesser extent. I have felt two weaknesses: the one is the situation in eastern Europe (i.e. the recently accessed EU-10 countries) that, though not entirely neglected in the book, their greater representation could have been decidedly useful for a more complete European image. My other thought is that the theoretical questions of sustainability did not perhaps received sufficient attention in the book in accordance with their actual importance, with special regard to their connections with the likely climate changes. Although the book briefly addresses climate change, for example in the closing chapter (pp. 243-244) and also in the case studies here and there, all the same, a chapter discussing systematically the topic of sustainability would have been of benefit for the work.

Apart from the above-mentioned critical remarks, I can strongly recommend the book to agricultural economists, particularly researchers, professionals and PhD students dealing with the restricted issues of marginalisation, sustainable development, multifunctional agriculture or with the problems of the disadvantaged regions. However, the volume merits wider attention, including first of all teachers interested in environmental economics or in rural development, and, on the other side, agricultural experts interested in the life and problems of rural Europe. Last but not least, I also recommend this work to the attention of agricultural policy makers and decision makers having competence in respect of the issues discussed therein; they may then act upon the lessons and proposals of the book when formulating their measures, or if they would like simply to enhance their European outlook.

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4. **Keywords.** Maximum five words expressing characteristics of problem (object), methods and results. They should be listed after the abstract.
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