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SOME PROBLEMS AND PERSPECTIVES OF ENDOGENOUS DEVELOPMENT IN HUNGARIAN AGRICULTURE[1]

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Abstract:
The authors summarize recent history of Hugarian agriculture as an ongoing negation of endogenous development potential. External models were imposed. The paper stresses some of the now emerging perspectives.

Keywords:
HUNGARY, RURAL AREAS, RURAL DEVELOPMENT, AGRICULTURAL STRUCTURE, AGRICULTURAL DEVELOPMENT, DEVELOPMENT AID, LARGE FARMS, SMALL FARMS.

A short historical retrospect

In order to understand better the present situation we must take a brief look back into Hungary's past. A really organic, harmonised and system-like development of the different regions in Hungary was realised only in the few centuries before the Turkish wars. After the lost battle at Mohacs in 1526, almost 200 years of continuous war destroyed the structures developed earlier and left the present area of Hungary a depopulated empty country of vast wetlands, swamps and poor deforested grasslands. The people who survived the wars were pushed back in development almost to the most primitive forms of nomadic animal keeping, fishing and hunting practices.

During the 18th century new settlers moved in from neighbouring areas and came also from many countries of Europe, mostly from Germany and the present areas of the Netherlands and Belgium. In this way the historical kingdom of Hungary became a colourful, diversified multi-ethnic state and a new phase of development was started. In this respect the different cultural traditions and agricultural practices became integrated with the local ecological conditions of the different regions.

The development of towns, roads of later the railroad systems made for good interrelations among the regions. In this way the historical Hungary within the natural

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borders of the Carpathians and the Alps formed a natural ecological entity and drew close to a successful realisation of the kind of development that is termed endogenous, both as a whole and in her many different and well-distinguished regions.

This process of development was broken after the First World War. New borders were drawn without any respect to the previous development of regions, the ethnic situation or ecological conditions. Roads, railways and river flows were cut by the new borders, organic regions were divided, and most of the towns along the borders lost their links with their supporting hinterlands. The destructive aftermath of these arrangements came only recently to the surface when the oppressive lid of Soviet supervision was removed from this mid-European region. Historically it would seem that a real opportunity for endogenous regional development in Hungary and the neighbouring countries will be possible only by making state borders `ethereal', a mere fiction.
Even though it might still be a long time before people around this part of Europe are able to overcome these nationality problems, researchers should look to the future and think in terms of "real regions" without state borders.

One might suggest that western researchers expand the scope of their European development plans towards the East, even though such expansion of a united Europe is not an imminent reality.
Following this short historical retrospect, we will now discuss the major problems of transition, and the possibilities and need for new structure and technologies in relation to the concept of endogenous agricultural development. Our discussion is based on the authors' previous works on different questions of transition. These works are given in the list of references without particular indication in the text.

Developments after the second world war

After the Second World War one of the first political actions taken by the provisional government was the introduction of land reform. Before 1945 there was a very distorted property structure in Hungary. Data characterising this situation are shown in Table 1.

Table 1. Property structure in Hungary before and after land reform in 1945

Before land reform (1935)			
Size of Property (ha)	Landowners Number %		Share of total area %
< 2.8	770 370	63.2	10.2
< 5.8	974,675	80.0	19.3
> 115	12,054	0.99	48.3
> 115059	36	-	10.8

Total number of land owners: 1.219 715
Average size of properties: 7.6 ha

After land reform (1947)

Total number of land owners: 1.651 315
Average size of properties: 5.6 ha
Number of properties distributed: 75 000 ha
Total area distributed: 3.2 million ha
Number of properties under 3 ha: 991 803

About 1 percent of the owners had almost 60 percent of the total agricultural land. In some regions there were hundreds of thousands of rural people without any property. The unemployment rate was extremely high and people lived in deep poverty.
Industrial activities were at a very low level and their distribution over the country was uneven. In large regions agriculture was the only economic activity, but the existing "semifeudal" structures, the shortage of capital and poor marketing possibilities prevented any development. The unbalanced distribution of land, labour, capital and markets among regions also prevented the efficient utilisation of specific potentials of resources existing in different regions.

After the land reform peasants did their best to accelerate development. Even if land properties were still small, a promising development was launched in the countryside.
But, before the process had time to blossom, the Communist Party took over political power and so-called "scientific socialist centralised planning" was introduced. Industrialisation, mostly the development of heavy industries was given top priority. Heavy taxes were imposed on peasants and they had to sell their products to state organisations at very low prices. This compulsory delivery of products coupled with compulsory production quotas distributed among regions and individual producers without respect for ecological conditions or available resources, stopped any further development and disrupted the internal regional patterns of production and the traditional relations among regions. Hundreds of thousands left the countryside and moved into the towns.

In summary this kind of "planned development" is a typical example of how exogenous and forced intervention can lead to a very distorted structure. This in turn resulted in the present hopeless economic crisis. No other sector of the Hungarian economy suffered so many changes in development concepts as did agriculture.

Table 2. gives a short overview of the development process of Hungarian agriculture since 1945.

Table 2. Phases of development in Hungarian agriculture since 1945

Before 1945:	Distorted property structures, low-level production, high-level unemployment, "semi-feudal" structure
1945:	Land reform: Distribution of large estates, 431,600 new land owners, decreased average size of properties (5.6 ha).
1945-1948:	Quick recovery from war losses, development of family farms

1949-1953:	Collectivisation by administrative, economic and physical force, exodus of rural population, 1,049,000 ha land left by owners
1953-1954:	Imre Nagy introduced reforms (1000 co-operatives were dissolved)
1955-1956:	New campaign of forced collectivisation
1956 October:	Revolution; forcing measures were removed, great part of co-operatives dissolved, compulsory delivery of products stopped
1957-1958:	Peaceful development of family farms
end of 1958:	HSWP Central Committee decision for full collectivisation
1959-1961:	Carrying through complete collectivisation; 4 572 co-operative farms organised with 1000 ha average size holding 67 percent of arable land; increasing investments in agriculture; a new wave of exodus of rural population; depopulation of some villages and regions; overcrowded towns; unbalanced regional development
1962-1967:	Stabilisation of co-operatives; 48,000 new tractors, 6000 new harvest machines imported; centralisation process is stepped up
1967:	Introduction of "compulsory expropriation of lands of co-operative members; formation of "common co-operative landownership"
1968:	General economic reform; more freedom for co-operatives; differentiation started.
1969-1972:	Forced centralisation campaign; drastic decrease of co-operative number, rapid growth in size of organisations.
1973-1983:	Capital accumulation in good co-operatives; diversification of production structure into processing, industrial and marketing activities; growth and expansion through integrating small-scale producers; the "golden age" of Hungarian agriculture.
1983-1985:	Hungarian agriculture on top of development, first signs of crisis.
1985-1989:	Increasing disturbances, export problems, decreasing profit position; organisational disturbances; trials to improve internal organisational structures.
1989-1990:	Collapse of Soviet and East German market, change of political system; crisis situation fully developed.
1991-1992:	Political debate about the future of agriculture; unstable situation; new laws affecting co-operatives and land ownership.

It would take too long to analyze all the effects of this kind of exogenous and aggressive intervention into regional development. Plans were worked out for a more balanced development but they have never been realised because of the counter interests of some powerful social groups. Other plans and measures were completely mistaken even if they were referred to "scientific". For example in regional development plans villages were classified into groups such as "central places to be developed", "places to be kept but not to be developed" and "places with no future". In villages classified in the last group, shops and schools closed down and they were given no support. The main criterion for such "optimal regional plans" was to minimise the costs of public services spent on each person.

In this way a lot of villages became depopulated, or at least the young left them, creating a deteriorating structure in the countryside with only the old people left behind.

State subsidies for less favoured regions were given by subsidising agricultural products. This resulted in production patterns which did not fit the specific ecological conditions of regions.

Main features of present agricultural structure in Hungary

At present in Hungarian agriculture large-scale farms still play a determining role. Agriculture has a more important role in the national economy than in highly developed industrialised countries (see Table 3).

Table 3. The importance of agriculture in Hungary (1990)

	Share in employment		Share in
	Number of employees	%	%
Primary production	780,000	17,3	16,8
Food processing	194,000	4,3	8,9
Forestry production	46,000	1,0	0,9
Agricultural sector in total	1,020,000	22,0	26,6

Agriculture has great production potential because of the relative abundance of cultivated land, the high ratio of arable land and the excellent soil and climatic conditions. Some figures characterising the potential of Hungarian agriculture are shown in Table 4 and Table 5.

Table 4. Distribution of land by forms of land use (1990)

Forms of use	ha	%
Arable land	4712,800	72,8
Gardens	341,200	5,3
Orchards	95,100	1,5
Vineyards	138,400	2,1
Grassland	1185,600	18,3
Total	6473,100	100,0

Table 5. Land per 1000 inhabitants in Hungary and in The Netherlands (1986)

Type of land	Area in ha per 1000 inhabitants	
	Hungary	The Netherlands
Agricultural land	614	13
Arable land and plantations	498	62
Grass land	116	76
Forest	156	20

On the basis of the simple rule "the bigger, the better", there were centralisation campaigns to increase the size of agricultural organisations. In some cases the areas

of several villages were united into one big co-operative or state farm. In this way local communities lost their organic relations with their lands and environment. The remote and alienated co-operative and state farm centres took little or no care for areas where intensive mechanised agricultural production was not economic. As some elements of market economy were introduced in Hungary, big farms became profit oriented business organisations were not interested in rural development and in the real protection of the environment. At the same time the big agricultural organisations, by monopolising property rights and the rights to use lands, kept control over large areas and excluded private persons or local communities from decision about the use of lands. The figures in Table 6. show the extreme organisational centralisation in Hungarian agriculture, while figures in Table 7. show the monopolistic position of big farms in land use.

Table 6. Number and size of agricultural organisations in Hungary (1989)

Types of organisations	Number	Average size (ha)
State forestry farms	124	16,088
State farms	130	7,608
Co-operative farms	1245	3,822
All together	1499	5,165

Table 7. Distribution of agricultural land by users (1990)

	ha	%
State farms	1026,869	15,9
Co-operatives	4,891,856	75,6
Private producers	538,782	8,3
Other users	15,561	0,2
Total	6473,068	100,0

From the early 1970s a large and flexible sector of small producers emerged with the input supply and marketing help of large farms. This integration of very large and small production was one of the most special initiatives of Hungarian agriculture and a major success. The beneficiaries of this integration, however, were the large farms. Only a few of the small producers were able to accumulate enough capital to start up in independent private business. The great contribution of many thousands of small producers to the relative success of Hungarian agriculture can be considered a kind of endogenous type of development. These people were active in finding production possibilities with little capital requirement by utilising old buildings, family labour capacities, local ecological and market conditions. They could successfully combine old production traditions with the most modern practices (see Table 8).

To day, one of the main obstacles for small producers to expand their business has been the limited access to additional land.

Table 8. Comparison of production by co-operatives and small producers (in thousand million Forints, 1990)

Product	Co-operatives	Small producers
Vegetables	3.38	24.27
Fruits	4.72	11.18
Grapes	4.58	10.56
Cereals and leguminous plants	64.44	24.00
Pig products	23.01	56.51
Poultry products	16.83	28.64
Cattles products	35.06	12.80

Changes of agricultural structure in progress

Three new laws have been passed by parliament that will have the greatest influence on the transitional process of agricultural structure. Using their short popular names these new laws are:

a) Compensation Law
b) Co-operatives Law
c) Transformation of Co-operatives Law

These three laws will completely change the structure of property rights in agriculture, but their actual effect on the current organisational structure is not at all predictable.

a) The "Compensation Law" is to give partial compensation to citizens for their property losses caused by the previous socialist regime. This law enables original land owners to purchase back all or part of their land through the "compensation bonds" if they so wish. Land is to be sold by auction and the whole complicated process will come to an end only in the middle of 1993.
b) The new Co-operatives Law determines the basic legal framework for future co-operatives. All the existing co-operatives have to conform to the rules of the new law by the end of 1992. They have to prepare new statutes, elect new leaders and apply for incorporation at the Court of Registration. All the steps of transformation are compulsory, and failure to comply with them mean, that they are deleted from the register of firms.
c) The third important new law will regulate the transformation of co-operatives. This law prescribes a very strict time table for actions to be taken by co-operatives ((to divide lands into "land funds" for different purposes, to distribute common co-operative assets among members, etc.). After completing the process of transformation the following characteristics will appear:
   - All the land will be under private ownership.
   - Some of the lands will be parcelled out but most will be left in large blocks.
   - Co-operatives will become joint ventures of private owners without being "real co-operatives" in the classical sense.

- Some members will opt out of the co-operative and numerous small co-operatives will come into existence

Besides agricultural restructuring the structure of industrial activities is also under change. Mines as well as big metallurgical plants have been closed down causing high unemployment in regions that were privileged during the former regime. Agriculture has serious market problems. Products produced until now in less favoured regions are not needed anymore. For these reasons almost every region in Hungary is in a state of crisis. New activities, products and practices have to be found for each region. It is quite clear that in such a situation centrally planned forced intervention for regional development must not be repeated.
During the transition in Hungarian agriculture a number of difficult questions arise concerning the future development possibilities of different regions. What seems certain is that:

- Present agricultural practices should be changed towards a more naturaly friendly, humanistic and ecologically sound system, utilising a variety of local and regional resources.
- A new agricultural concept is needed where the scope of agricultural activities is broadened to include the whole complex of nature management and rural development. A quantitatively oriented way of production should be replaced by a "pluriactivity" farming concept.

Some problems of intensive large-scale production technologies, need and chances for change

During the past decades the general task of Hungarian agriculture was to increase production (e.g. yields) in order to provide food for the home market as well as for foreign markets, including the earlier Soviet Union. From the beginning of the 1970s, the so-called industrialised crop production began with a growing rate of fertiliser and pesticide use. The whole plant production technology fitted these purposes. In most cases, field size in state farms and co-operatives reached between 50-100 or even 300-500 ha. This one-sided approach to increasing the quantity of products through high inputs, machine efficiency and yield increase left out of consideration all other points of view. While yields (winter wheat, maize, sunflower, etc.) approached levels in the EC-countries, this type of production policy resulted in the following problems:

- overall technology did not fit in with local ecological and social conditions
- large fields handled as one unit prevented the consideration of soil heterogeneity within one field. This led to some kinds of misuse of soil cultivation practises and

fertilisation. Due to less homogenous plant stand the proper use of herbicides was not possible.
- because of the heterogeneous conditions within one large field the timing of field operations could never be optimal.
- creation of huge fields destroyed traditional landscape, small habitats such as forest residues, hedge rows, field margins, and natural water flows that served as habitats for plants and animals
- the above degradation contributed significantly to erosion and deflation damages
- the general problems of high environmental loading caused by intensive technologies in Hungary were similar to those experienced in other countries

The following example can well serve to illustrate the problems of large scale farming:

From a plant protection point of view, people in charge of pest management were not interested in taking risk in decisions. The lack of private interest ensured continuous pesticide cover or full insurance instead of trying to apply less pesticide in order to save money. In this way their aim was to avoid any chance of sustaining loss of potential production.
Even on farms where people took a kind of risk, large plantations with different micro climatic conditions and pest infestation disabled "local" treatment, thus a surplus of chemicals was applied in some parts of the plantation.

Parallel with political, market and technological changes a completely new orientation of agriculture is needed in Hungary.

If endogenous regional development is the aim, then a broad environmental management definition of agriculture has to be introduced, with an integrated adaptive crop production concept with the following characteristics:

- establishing and maintaining the natural biotope network (green surfaces, open fields, protected areas) that will have the subsequent basic functions:
  - living area function
  - water protecting function
  - air filter function
  - farming function
  - landscape-aesthetic function
- maintaining the soil-plant-man-soil cycle
- rehabilitating the landscape as a natural, economic and social unit
- land conserving biologically placid soil cultivation with soil performance management
- real integrated plant protection

- farm and field size must be reviewed and changed
- transforming "farmers" to masters of the land and village

Summary

From a policy point of view the Hungarian economy still needs the incomes from agricultural production. The climatic conditions of Hungary greatly favour seed, vegetable and fruit production. Thus regional development will at first include the production of plants and plant varieties that suit the local climate, soil, and other conditions and that are valuable even on EC-markets. This kind of production should be conducted, however, in the manner mentioned above. A locally fitted type of production on smaller fields has the chance to produce valuable products, to use fewer inputs by better timing of any pesticide application, and to use natural regulating mechanisms (predators, parasites).

- The situation in Hungarian agriculture is not favourable to endogenous development.
- In the present transitional period an almost completely new system has to be worked out. First of all a clear government policy is needed to define the expected role of agriculture in the whole economy and in the future of rural regions.
- A system of new legal and organisational institutions has to be built up in which agricultural, nature protection and social problems of regional development can be managed in a more integrated way.
- To realise all these tasks there is a great need for research, planning and economic support from the European Community.

References

ÁNGYÁN, J., Z. MENYHÉRT, T. SZALAY, L. PODMANICZKY (1992), Environmental facts and alternative growth strategies for Hungarian agriculture. Proceedings of the International Conference on "Agriculture and Environment in Eastern Europe and the Netherlands", Wageningen Agricultural University, 31-38p.

ÁNGYÁN, J., G. ÓNODI, L. PODMANICZKY (1992), Alternetive strategische Möglichkeiten in der Entwicklung der ungarischen Landbewirtschaftung. (in: F. Kuhlmann, Cs. Székely (1992), Ergebnisse der zehnjahrigen wissenschaftlichen Partnerschaft, Gödöllõ, 346p.), 30-40p.

ÁNGYÁN, J., J. KISS, T. SZALAY, Z. MENYHÉRT, L. PODMANICZKY, (1992), Alternative agricultural strategies and their feasibility to the Hungarian conditions. Pre-proceedings of the workshop on "Sustainable Land Use Planning", Wageningen, 1992. 91-95p.

T. KIRAL, F. SZAKÁL AND A. ERKUS (1992), Agricultural structure and transition in Hungary. Cooperation in Turkiye, No. 16, 1992. Apr.

KISS, J. (1989), Comparison of directional light-trap catches in maize. Bulletin of the University of Agricultural Sciences Gödöllõ, No. 1. 73-80p.

KISS, J., Z. MÉSZÁROS (1989), Characteristics of the Macrolepidopteran assemblage of a maize stand in Hungary. Acta Phyt. et Ent. Hung. 24. (1-2). 135-139p.

KISS, J., Z. MÉSZÁROS (1991), Species restoration in agricultural territories: an approch with Macrolepidoptera. In: Majid, H. (Editor): *Encyclopaedia of India, Vol. III. Sustainable Development.* Rima Publishing House, New Delhi, (in press)

SZAKÁL, F. (1991), Problems and transition in Hungarian agriculture (Paper presented at the seminar "Agricultura y commercio en los paises del Este Europeo", Valencia, Spain, 1991.

SZAKÁL, F. (1992), Basic problems of land use planning in relation to economic growth. Pre-proceedings of the workshop on "Sustainable Land Use Planning", Wageningen, 1992. 87-91p.

SZAKÁL, F., CS. SZÉKELY (1992), Specific problems of the transformation of collective farms into viable market oriented units in Hungary. Reports of a joint ECE/FAO Workshop, Gödöllõ, Hungary, Bonn 1992