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STRUCTURAL CHARACTERISTICS OF AGRICULTURE AND FOOD INDUSTRY IN HUNGARY (1990-2004)

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The global annual output of agriculture increases by 2 per cent, which is more or less in line with the increase of the population. In the regions outside Europe the rate of increase is even higher. In the nineties the level of production in the European countries reduced by 1-3 per cent in average. At the end of the 20th century the slightly increasing amount of agricultural products was produced in the European industrial countries on a continuously reducing area of the arable land, by using less labour, and by intensive use of materials and equipment.

In the past 15 years the performance of Hungarian agriculture fell behind the European average to a significant degree; in the first half of the nineties and in year 2000 the reduction in comparison with the base period was as high as or even exceeded 30 per cent. This dramatic recession is explained by the lack of management confidence and know-how and undercapitalization of the new farms emerging in the process of privatization following the change of political system. Significant increase took place in 2004 alone owing to the record production of cereals, still the production volume was a mere 84 per cent of the one in 1990.

The volume of agricultural production (per cent)
1990-2004

(1990 =100)

Year	***World***	***Europe***	***Hungary***
1990	100,0	100,0	100,0
1991	101,2	99,9	93,8
1992	103,5	97,8	75,0
1993	104,1	96,0	67,7
1994	107,1	93,7	69,8
1995	109,3	94,4	71,6
1996	113,7	98,0	76,1
1997	116,5	98,3	73,6
1998	118,2	98,5	74,1
1999	121,2	99,8	74,4
2000	122,9	99,1	69,6
2001	..	..	80,6
2002	..	..	77,3
2003	..	..	73,8
2004	..	..	84,1

1. The key characteristics of Hungarian agriculture

Approximately two thirds of the territory of Hungary is suitable for agricultural cultivation; the 0,6 hectare agricultural area per capita is nearly the double of the average in the European Union. Despite the competitive edge provided to Hungarian agriculture by favourable ecology only the agricultural policy implemented in the seventies of the last century offered support to agriculture contributing to a considerable increase in yields. Then a brief period of stagnation and decline followed in Hungarian agriculture.

The expansion of agricultural production practically stopped at the end of the eighties, followed by a dramatic recession in the 1990s. The recession was less pronounced (10-30 per cent) in the case of crop products than in animal husbandry, which shrunk to the two thirds or even less of the level achieved in year 1990. Both the area and yield of the key crops decreased; the livestock of nearly all species significantly reduced, with the pig stock, playing otherwise the leading role, suffering the most upsetting loss.

Volume index of gross agricultural production
1990-2004

(1990=100)

Year	Crop production and horticultural products	Livestock and animal products	Total
1990	100,0	100,0	100,0
1991	102,5	84,4	93,8
1992	76,1	73,8	75,0
1993	69,1	66,1	67,7
1994	75,9	63,3	69,8
1995	77,3	65,5	71,6
1996	84,9,	66,6	76,1
1997	84,0	62,6	73,6
1998	80,9	66,5	74,1
1999	82,8	65,4	74,4
2000	70,9	67,9	69,6
2001	93,7	66,9	80,6
2002	86,6	66,3	77,3
2003	89,0	58,3	73,8
2004	113,5	57,2	84,1

Regarding the structure of production it can be asserted that, simultaneously with the Member States of the European Union, cereals dominate crop production. In Hungary, however, more than 60 per cent of the area of arable land is under cereals compared to less than 50 per cent of the EU-15 average.

The weight of fruit production is less; orchards and vineyards constitute one per cent of the total area of arable land each; the transformation of the nineties brought reduction of area and yield both.

As far as the production grapes and wine is concerned, the crisis of the beginning of the 1990s has deepened. The conditions for the production and marketing of quality wines are still to be created. The recent success of family vineyards established in the 1990s provides the only reason for optimism.

Following stagnation the production of vegetables began to slowly increase in the second half of the 1990s. The main problem is the prevailing traditional method of production of the fragmented vegetable farms.

The key trouble in animal husbandry is the uninterrupted decrease of the livestock continuing even in 2004, which hit hardest the stock of pigs and cattle.

In the past fifteen years the per capita consumption hardly followed the production trends. Meat consumption decreased only temporarily, but the consumption of milk and dairy products, flour and rice products receded permanently. The increase of vegetable consumption with a slight increase in the consumption of fruits is deemed favourable from the point of view of health.

Per capita consumption of consumables
(1990, 1994, 1998, 2002, 2003)

Denomination	Per capita consumption of consumables, kg/ capita				
	1990	1994	1998	2002	2003
Meat, meat products and fish	73,1	69,0	63,7	75,4	72,0
Milk	169,7	140,0	149,6	143,1	138,3
Fat	38,6	38,1	36,2	39,0	39,1
Eggs	21,6	18,8	14,7	16,7	16,5
Flour and rice	110,3	91,3	84,1	87,8	88,1
Potatoes	61,0	58,2	67,4	65,3	64,5
Sugar and honey	38,6	36,2	42,1	32,9	33,2
Vegetables and greens	83,3	85,8	94,3	111,7	113,7
Fruits	72,3	69,6	67,5	91,6	86,4

2. Key characteristics of Hungarian agricultural farms

By the results of the farm structure survey of year 2003 there were 7800 agricultural enterprises and 766 thousand private farms at the time of the survey. Since the time of the agricultural census of year 2000 the number of agricultural enterprises and private farms decreased by 7 and 20 per cent, respectively. In comparison with the 1991 figure the reduction in the number of private farms exceeded 30 per cent.

89 per cent of the agricultural enterprises and 75 per cent of the private farms used productive land of farm size, with the average area of productive land being 503 hectare in the first case and a mere 3 hectare in the latter case. These figures are quite indicative of the significant differences in the holding structure of the two legal forms.

In contrast to the 63 percent of farm size private farms a mere 28 per cent of farm size agricultural enterprises were involved in animal husbandry in 2003. Contrary to pig breeding

in the private farms cattle breeding was predominant in the case of agricultural enterprises: 90 per cent of the total livestock was constituted of 2 species (cattle and pigs) in the latter case, and 4 species (pigs, cattle , sheep , horses) in the former one.

The characteristics of farms by type of farming also differ. In 2003 72 per cent of the agricultural enterprises were involved exclusively in crop production. A shift towards specialization is indicated by the trend whereby in 3 years time the number of agricultural enterprises involved in crop production increased by 30 per cent contrary to the decrease to the same extent of the number of mixed farms involved both in crop production and animal husbandry. One should, however, consider the significant impact of the reducing importance of animal husbandry. The number of agricultural enterprises involved exclusively in animal husbandry has hardly changed in three years.

No change in the structure of activities of the private farms comparable to that of the agricultural enterprises has taken place. Similar to the year 2000 figures 40 per cent of the private farms were involved exclusively in crop production; one fourth of those – in animal husbandry only, and 38 per cent were mixed farms.

In 2003 the characteristics of farms were surveyed for the purpose of production, too. No crucial changes compared to the year 2000 figures were revealed; 59 per cent of the private farms produced exclusively for own consumption, 12 per cent – for profit; 29 per cent of the private farms sold the surplus remaining after own consumption. Production for own consumption was mainly typical for animal breeding private farms whereas its occurrence was the lowest in the case of mixed private farms. Production for profit was the highest (20 per cent) in the case of crop producer private farms and the lowest (2 per cent) in the case of animal breeding private farms.

The share of farms involved in the processing of agricultural products was just a few per cent for both legal forms. Following the turn of the millennium processing activities of agricultural enterprises typically decreased; only dairy processing remained at the same level, and a slight increase of wine bottling took place. In the period observed the activities a slight increase of the processing of dairy and horticultural products was typical for the private farms.

The share of farms involved in processing activities, by group of legal forms (2000, 2003)

Denomination	Share of			
	agricultural enterprises		private farms	
	involved in processing activities, per cent			
	2000	2003	2000	2003
Meat processing	1,15	0,76	0,41	0,40
Dairy processing	0,39	0,38	0,13	0,62
Processing of fruits and vegetables	1,32	0,78	0,21	0,50
Wine bottling	1,01	1,27	0,04	0,03

3. Key characteristics of the Hungarian food industry

Food industry, the processing of consumables is among the oldest branches of Hungarian industry. The first Hungarian food processing factories, particularly slaughterhouses and flour mills, evolved in the second half of the 19th century. Bakeries, flour mills and breweries employing a small staff operated in Hungary even earlier.

In the nineties of the last century more than half of the food processing factories were involved in the production of bread and pasta, whilst the companies involved in the processing and preservation of meat, vegetables and fruits also played an important role. The number of food processing factories increased primarily due to the increasing number of small entities. The process of considerable centralization and concurrent concentration also began, with centralization being mainly typical for the sugar industry, and meat industry, where both trends could be observed at the same time.

The number of entities involved in the processing of consumables and beverages (1990, 1994, 1998, 2002, 2003)

Denomination	Number of entities involved in the processing of consumables and beverages				
	1990	1994	1998	2002	2003
Meat processing and preservation	87	86	132	232	249
Poultry processing	34	29	42	74	79
Processing of fruits and vegetables	..	74	102	176	180
Dairy processing	33	47	52	70	66
Production of milling products	48	..	..	111	102
Production of bread and fresh pasta	127	118	430	948	963
Production of sugar	12	11	8	5	5
Breweries	10	9	11	38	34
Production of soft drinks	24	..	31	83	96

The following trends were typical for the transformation of ownership and resource structure in the food processing branch.

- State ownership reduced to a minimum level, with the prevalence of entities of mixed ownership.

- The share of capital investment in meat- and dairy downstream processing in the total investments in the food industry decreased strikingly, bringing about the particularly unfavourable condition of these branches and significantly increasing the capital demand of subsequent restoration.

- The reduction of employment did not keep abreast with the rate of recession in production, thereby decreasing productivity. The process of replacing human labour

with pant and equipment slowed down due to the prohibitive costs; entities of mixed and foreign ownership typically strived to earn extra profit on cheaper labour.

4. The weight of agriculture and food industry in the national economy

For a rather long period of time agriculture played a far more important role in Hungary than in the European Union regarding its contribution to the GDP. In the 15 Member States of the European Union this ratio was below 2 per cent, with a rather significant spread of contribution of agriculture to GDP by the countries.

In the years between 1986 and 1989 the contribution of agriculture to the GDP in Hungary exceeded 20 per cent; this index has been steadily reducing since 1990. In addition to the decline of agricultural production the transformation process in the national economy following the change of political system also contributed to the decreasing weight of agriculture. The rapid decline of industry and services also added to the decrease of importance of agriculture. Contrary processes took place in year 2004, when the bottom line of declining industrial output, recession of services and a record production of cereals was a 33% contribution of agriculture to the increase of the GDP.

In the years between 1990 and 2004 the production of consumables and beverages was around 15 per cent of industrial output, and a slight decrease was observed only at the end of the said period. In contrast to the temporary stagnation of the weight of food industry at the beginning of the 1990s caused by the general recession of industrial production, from 1994 the dynamic growth of engineering industry combined with the lower volume of output of food industry contributed to the declining weight of this branch. The peculiar condition of and processes taking place in these two branches of the national economy explain that, by the turn of the millennium, the share of food industry settled at a level nearly equal with that of agriculture, sharply contrasting with its significantly lower weight in the GDP at the beginning of the period.

The weight of agriculture and food industry in the Hungarian national economy (1990-2003)

Year	Share of agriculture in the GDP	Share of food processing in the GDP
1990	15,3	..
1991	7,8	4,6
1992	6,5	4,2
1993	5,8	4,0
1994	6,0	3,8
1995	5,9	3,7
1996	5,8	3,5
1997	5,2	3,3
1998	4,9	3,1
1999	4,2	2,8
2000	3,7	3,0
2001	3,8	3,3
2002	3,3	3,1
2003	2,9	2,9

5. The weight of agriculture and food industry in the employment

The sample-based labour survey of the population provides data regarding the share of people employed in agriculture and food industry. Any person involved in income earning activity for at least one hour on the week of observation qualifies as employed. Though the survey provides adequate results regarding the share of people employed in food industry, the accuracy of the share of people employed in agriculture warrants reservations due to the act, that part -time agricultural activities are typical for a large number of households in Hungary. The small sample of the labour survey is not sufficiently representative for the observation of such activities, yet the same data provide comparable results for the changes in the share of people employed in the food industry and agriculture.

The share of people employed in the food industry has been steadily declining since 1994. The lower volume of output of production in the food industry and the transformation of entities adds to this picture. The pattern in employment practically follows the trend of the weight of food industry in the national economy. The same applies to the share of people employed in agriculture.

Share of food industry and agriculture in employment (1990-2004)

Year	Share of people employed in the		Annual Working Units worked in the
	Food industry	Agriculture	
1990	4,8	14,2	..
1991	5,1	11,9	..
1992	5,1	11,3	..
1993	5,2	9,1	..
1994	4,8	8,7	..
1995	4,3	8,0	784 929
1996	4,5	8,3	804 346
1997	4,4	7.9	765 778
1998	4,3	7,4	741 573
1999	4,1	7,2	711 976
2000	4,0	6,6	664 906
2001	4,1	6,3	632 531
2002	4,2	6,2	637 040
2003	3,9	5,5	572 405
2004	3,6	5,2	544 742

When presenting the use of labour in agriculture one should also consider the labour data expressed in Annual Working Units (AWU). The figures reported in AWU are built on calculations linked with the Economic Accounts for Agriculture (EAA), therefore relevant

data are only available from the mid 1990s. The steady decline in the number of farms and reduction in the agricultural labour expenditures is well represented in these data. It is rather intriguing that paid labour amounted to a mere 20 per cent of all labour expenditures in the period observed.

6. The weight of food economy in the external trade

In the first half of the 1990s the export of agricultural products amounted in average 8 per cent of the total export of the national economy. The fundamental changes took place in the last years of the nineties; the share of agricultural products export stabilized at 2,6 per cent in the years after the turn of the millennium. The reasons to be mentioned include the significant decline of the output crop production and horticulture, livestock and animal products.

At the beginning of the period the export of consumables and beverages represented a share in the export figures of the national economy exceeding that of agriculture (16 per cent) to halve by the turn of the millennium. In the years following the turn of the millennium the export of food industry products stabilized at 5 per cent, which is still the double of that of agricultural products.

Commodity structure of the external trade of food economy (1996, 2000, 2004)

Denomination	1996		2000		2004	
	import	export	import	export	import	export
	tons		1996=100,0			
Livestock	*4 094*	*67 480*	**177,1**	**132,6**	**692,5**	**74,0**
Meat, meat products	*28 083*	*288 019*	**227,1**	**101,0**	**280,8**	**90,5**
Dairy products, eggs	*47 673*	*51 503*	**63,1**	**214,9**	**106,5**	**162,0**
Fish, crab, molluscs	*11 492*	*3 783*	**127,1**	**94,0**	**148,4**	**177,1**
Cereals and cereal products	*150 451*	*693 863*	**91,4**	**286,8**	**184,2**	**364,8**
Vegetables, fruits	*245 790*	*1078960*	**161,1**	**73,6**	**200,9**	**76,3**
Sugar, sugar products, honey	*57 093*	*71 587*	**52,0**	**138,7**	**255,0**	**201,2**
Coffee, tea, cocoa, spices	*62 886*	*28 605*	**123,4**	**90,9**	**157,3**	**146,7**
Beverages	*41 738*	*404 550*	**136,2**	**47,3**	**460,6**	**34,5**

Comparable data by product groups are available in external trade from 1996 only, that is, after the implementation of the new foundations for external trade statistics: the relevant system of the European Union. This is the reason why the time series are short. The data presented record the most recent moments of a process has started nearly ten years ago.

Similar to the earlier statements, the export of livestock, meat and meat products exceeded import many times over in the middle of the 1990s. Following the turn of the millennium the export surplus remained quite substantial despite the significant build-up of cheaper import.

The amount of milk, dairy products, eggs and cereals also increased exceeding the volume of imports at all times. Despite the reduction of its share in the export structure the surplus of export of vegetables and fruits remained rather considerable.

The balance of external trade in sugar and sugar products characterized by relatively low turnover indicated a slight import surplus in year 2004.

In contrast to the earlier significant surplus in export the volume of beverages imported exceeded export at the end of the period.

7. Conclusions

At the beginning of the 1990s change-over to the market economy hit hard agriculture. Due to the unfavourable structure of the national economy and undercapitalization the output of agriculture considerably declined, and it failed to reach the level in 1990 even by 2004. Animal husbandry and the production of animal products suffered the most sensitive losses. The changes also affected food industry, precipitating radical changes in this branch, too. The contribution to the GDP of both branches steadily declined, though at varying rate. As a result of this process the contribution to the GDP of agriculture and food industry was 2,9 per cent each in year 2004. The transformation process is likely to continue, and the Hungarian food industry is yet to find its place and role in the economy of the European Union.

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