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Borders and Identity

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As a direct result of political, economic and social transformation experienced in Central and Eastern Europe in the early 1990s, over the past decade and a half the phenomenon of international migration – which in the decades of the dictatorial state regimes was either strictly regulated or banned – has once again become commonplace. After the political system change, the opening of Hungary's borders completely transformed the processes of migration. From being a source country for migration Hungary has become partially a transit country and to a certain extent a host country too, mainly for the ethnic Hungarians from the neighbouring countries. In line with this process another situation has been developed: an increasing number of people settling and living in Hungary consider that their national identity is not tied, or not only tied to a Hungarian identity. Non-Hungarian, or not exclusively Hungarian-identity individuals settling in Hungary are not only increasing the thirteen officially acknowledged minority communities numerically, but they also display far greater minority solidarity than their fellow minorities who have been long established in the country. The vast majority maintain their minority tongue as their native language, unlike the minorities born and brought up in Hungary who, on the whole, only describe themselves as belonging to a particular minority on a subjective basis (nationality or cultural ties). The former groups bring with them cultural and behavioural models which may even differentiate them from their fellow minorities. Based on the results of the 2001 Census, our case study aims to analyse the characteristics of those minority people who were born abroad.

KEYWORDS:
Minority.
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As a direct result of political, economic and social transformation experienced in the countries of Central and Eastern Europe in the early 1990s, over the past decade and a half several phenomena have once again become commonplace, which were either strictly regulated or banned altogether in the decades of the totalitarian state regimes. Migration is such a phenomenon. The communist regimes, in a bid to monitor every area of life (including national consciousness and social mobilization) and to guarantee the impermeability of borders to all, tightly controlled movement, restricted international migration and politicised patterns of behaviour linked to foreigners. The borders within Central and Eastern Europe became the primary means of limiting regional movement, of shutting the door on the free entry and exit of people.

Up until 1990, Hungarian society only glimpsed the phenomenon of international migration through reports of those (for example illegal migrants) who had quit the country without official authorization. The state's refusal to countenance (and its ideological approach to) migration restricted its acceptance as a natural concomitant of social, economic and political transformation (*Tóth–Turai* [2004]).[1]

During these decades, as so often in history, the partitioning and restrictive function of borders was defended not only in regional, geographical terms but also culturally and intellectually. Once again the principle of "quius regio, eius religio" was asserted, that is to say, the state exercising authority over a specific geographical area, endeavoured to impose its exclusive legitimacy in the political and economic sphere and also spiritually.

After the change of the political system, the opening of Hungary's borders transformed completely the processes of migration. From being a source country for migration, Hungary has become, in part, a transit country and to a certain extent a receiver country too. At the same time, although a considerable proportion of settlers in Hungary are ethnic Hungarians from beyond the border, they are by no means the only ones seeking a new life in Hungary. This makes an examination of the regional aspect of the "border concept" and national identity highly topical.

Citizenship is an expressly legal category: it regulates the legal relationship between the individual and the given state, that is, it brings the individual into the circle of those who – through birth or later manifestation of their own will – fall directly

[1] TÓTH, P. P. – TURAI, T. [2004]: A magyar lakosság külföldiekhez való viszonyáról szóló szakirodalom összefoglalása. (Summary of Literature on the Relation of the Hungarian Population to Foreigners.) In: *Tóth, P. P.* (ed.): *Külföldiekkel vagy idegenekkel*. A KSH Népességtudományi Kutatóintézetének Kutatási jelentései 76. (*With Foreigners or Strangers*. Research Reports No. 76. of the HCSO Demographic Research Institute.) Budapest.

under the state's legal authority. Persons holding citizenship bear certain responsibilities towards the state, and, at the same time are entitled to its protection.

However, ever fewer individuals are subject to the sole legal jurisdiction of a single state, while every state finds it has legal relationships with an increasing number of people holding different citizenships. If an individual travels to a country of which he/she is not a citizen, his/her responsibilities towards his/her "own" country remain, while, however, he/she is bound by numerous provisions of the country of residence, even when he/she does not hold citizenship of that country. Thus, citizenship is not the only form of legal relationship between the state and the individual, and at the same time, the individual may be a citizen of more than one state. Even so, it is imperative to examine the question of national-ethnic identity differentiated from that of the system of citizenship. Here we do not mean independent of the system of citizenship, but naturally we are not talking of a causal relationship either. Every national culture can be viewed as the unique grouping of historically-shaped identity patterns in which elements and models of "high culture" and everyday, traditional culture are apparent at one and the same time. In this respect too, modern societies are pluralistic, in that they offer the individual several different (albeit equally valid and legitimate) patterns for the manifestation of identity.[2]

One of the fundamental conditions for the preservation of any community is a sense of solidarity. If an individual joins a community, then this only has any sense if the individual participates in creating the community's values, contributes to its advancement and, on this basis, earns the natural right to share in the created values and to enjoy the cooperation of the community (thereby providing the individual with an element of security). Furthermore, in the name of social solidarity, it is only natural for the majority nationality of a given state to lend its backing to the minorities in preserving their spiritual and cultural values and in their efforts to advance.

Any intelligently managed state will conduct a thorough investigation to discover those areas in which it has a legal right to intervene in the private life of its citizens. It is not wise for the state to attempt to exploit national-ethnic characteristics for the homogenisation of its subjects, interpreting these characteristics as declarations of loyalty.

Mobility is a precondition of dynamic development, bringing in turn multiculturalism and diversity. It is thus necessary to establish specific systems of institutions to regulate the internal relations of both the state and the national-ethnic collectivity, and it is primarily the state's duty to ensure that these institutional systems are able to operate smoothly together.

An increasing number of people living in Hungary consider that their national identity is not tied, or not exclusively tied to a Hungarian identity. Non-Hungarian,

[2] PATAKI, F. [2001]: *Élettörténet és identitás*. (*Life History and Identity*.) Osiris Kiadó. Budapest.

or not exclusively Hungarian-identity individuals settling in Hungary are not only increasing minority communities in Hungary numerically, but they also display far greater minority solidarity than their fellow minorities who have been long established in Hungary. The vast majority maintain their minority tongue as their native language, unlike the minorities born and brought up in Hungary who, on the whole, only describe themselves as belonging to a particular minority on a subjective basis (nationality or cultural ties). The former groups bring with them cultural and behavioural models which may even differentiate them from their fellow minority nationalities established in Hungary.

This situation developed in just a single decade after the change of the political system; in other words, measured in historical terms within a remarkably short period. Due to the impermeability of the borders, the restrictive migratory policy imposed throughout the bloc, as well as the smothering of the nationality question in earlier years, statistically speaking Hungary had a negligible number of non-Hungarian citizens living within its borders, while the number of those settling in Hungary was similarly insignificant. At the time of the 1960 Population Census, the number of individuals with non-Hungarian citizenship was so small that census publications did not present data related to citizenship, and the following three censuses did not even include questions on this subject. However, the 2001 Population Census indicated that at the time there were more than 110 000 people living in Hungary who, as concerns their citizenship, did not consider themselves affiliated to Hungary or exclusively to Hungary. The census also recorded 35 000 individuals belonging to national and ethnic minorities living in Hungary who were not born in Hungary.

So where is this change leading Hungary? Is the rapid growth of migration good or useful for the country? At the same time, what changes have to be made to meet the challenges?

1. Population census methodology

The population census conducted in Hungary in 2001 represents a highly valuable source of information for an investigation into the character of national identity.[3] We coupled the long list of objective characteristics concerned with the living conditions of those questioned to the subjective and non-obligatory responses to questions on

[3] The source of data used in our analysis concerning the 2001 Census, unless otherwise specified, is the electronic database of the Hungarian Central Statistical Office. For the sources of the previous censuses see *KSH* [2003]: *2001. évi népszámlálás. 6. Területi adatok.* (*2001 Population Census. Regional Data. No. 6.*) Budapest. CD Annex.

national and ethnic affiliation in this "public opinion survey" conducted on sample of unprecedented proportions (10 million individuals, the entire population of Hungary).

In earlier population censuses the response to national affiliation was on an either-or basis: one could give only a single response to each question. In the framework of the state political instrumentalization of the concept of nation this, as it happens, was most expedient. The insistence on belonging to the nation state as a gesture of patriotism tended rather to complicate than to ease the formation of social-political behaviour recognizing the multicultural national and ethnic identity.

The revised methodology employed in the 2001 Census opened the door to an exploration of all dimensions of national and ethnic identity.

In addition to the two usual questions (nationality and native language) directly related to national and ethnic identity, further two questions – inquiring about cultural affiliation and the language spoken with family and friends – were built into the questionnaire in order to refine the approach. The picture was enhanced by questions on command of languages and (to differing degrees depending on nationality) religious denomination.

What's more, three responses could be given to each of the questions on national identity. Thus, in theory, it was possible for someone to record affiliation to a possible twelve nationality-linguistic communities.

It is important to note that there was no obligation to reply to the four questions mentioned formerly and the question on religious affiliation, while the reply for the question of language skills was obligatory. (See Table 1.)

In the end, there were 18 potential response combinations for the nature of the given national attachment (leaving implicitly out the 00 and 05 combinations), and 208 combinations for any two given affiliations, right up to several thousand potential variations for various minority affiliations.

In fact, the results revealed the realistic boundaries: national identity is a multilayered, fluid category but despite the wealth of its elements, it can basically be clearly delineated up until the point that it is not confused with state political means – and here we are talking about genocide, resettlement, restrictions on use of language and those procedures which are not malicious (and frequently not even conscious) deriving from a monolingual state administrative procedure.

Of the 10 198 315 individuals registered in the census 9 627 778 gave a valid response to the question on national affiliation while the total number of replies was 9 746 186. Every hundredth person making an answer gave a multiple response, a significant majority of which referred to the Hungarian affiliation of national minorities. Of those who gave more than one answer to the question on national affiliation, a total of 463 did not include Hungarian in their responses (441 gave two responses, 22 three responses).

Table 1

The potential response combinations

Code	Nationality	Cultural affiliation	Native language	Language spoken in family	Spoken language	Description
00	–	–	–	–	–	No affiliation
01	X	–	–	–	–	Only nationality
02	–	X	–	–	–	Only cultural affiliation
03	–	–	X	–	–	Only native language
04	–	–	–	X	–	Only language spoken in family
05	–	–	–	–	X	Only spoken language
06	X	X	–	–	–	Nationality and cultural affiliation
07	X	–	X	–	–	Nationality and native language
08	X	–	–	X	–	Nationality and language spoken in family
09	X	–	–	–	X	Nationality and spoken language
10	X	–	X	X	–	Nationality, native language and language spoken in family
11	X	X	X	–	–	Nationality, cultural affiliation and native language
12	X	X	–	X	–	Nationality, cultural affiliation and language spoken in family
13	X	X	–	–	X	Nationality, cultural affiliation and spoken language
14	X	X	X	X	–	Nationality, cultural affiliation, native language and language spoken in family
15	–	X	X	–	–	Cultural affiliation and native language
16	–	X	–	X	–	Cultural affiliation and language spoken in family
17	–	X	–	–	X	Cultural affiliation and spoken language
18	–	X	X	X	–	Cultural affiliation, native language and language spoken in family
19	–	–	X	X	–	Native language and language spoken in family

So in practice multiple affiliation is dual, one element of which is Hungarian. The 95 individuals describing Serbian and Croatian dual national affiliation are rare exceptions, interpretable for historical reasons. The proportions were similar in the three other questions. At the same time, by its very nature, when we speak about dual identity we are not being particularly precise: a person has one identity which is varied, complex and sustained from as yet not fully defined sources.

In the 2001 Population Census around 442 000 respondents declared an affiliation to one of the 13 minorities specified in the Act LXXVII of 1993 on the Rights of National and Ethnic Minorities (Minorities Act) in at least one of the four questions regarding identity. Around a half of those declaring a minority affiliation were Roma, one quarter German, and the remaining quarter one of the other 11 specified minorities.

Some of these individuals with minority affiliation are exclusively Hungarian citizens, others do not have Hungarian citizenship, but quite a considerable number hold dual citizenship. One common characteristic is that they have an established abode in Hungary.

Our examination focused on people coming to Hungary from abroad with the intention of establishing themselves here but who at the same time considered it important to indicate their minority affiliation in the census. We compared their characteristics with, on the one hand, national data and, on the other hand, the averages of the total number of the given minority.

2. Individuals with minority affiliation born abroad

Hungary's population has been in continual decline since the early 1980s. Earlier censuses (with the exception of the 1949 Census) showed continuous growth in the population, although the rate of growth began to taper off in the 1970s. The country registered its peak population in 1981.

There are two reasons for the fact that Hungary's population has fallen by more than 500 000 since 1980. One is the (negative) level of natural reproduction. While the number of live births in Hungary between 1980 and 2001 was around 2.5 million, the number of deaths was more than 3 million. The annual average number of births between 1990 and 1992 was 125 000 and between 1993 and 1995 115 000, yet this figure did not even reach 100 000 in the second half of the decade. Due to the low level of reproduction and high mortality rate, Hungary now ranks among the countries with the least favourable demographic outlooks in Europe.

The other factor is the migration difference. Between 1980 and 1989 around 200 000 more individuals left the country than were registered as settling here. After the change of the political system, this proportion swung the other way: nearly 200 000 more people arrived in Hungary than left to start a new life abroad. If over the past decade the migration differential had continued the trend established between 1980 and 1989, today the population of the country would not be half a million fewer but close on a million fewer than in 1980. 18 percent of the positive migration balance of nearly 200 000 is made up of the 35 104 individuals with minority affiliation not born in Hungary.

The proportion of this group within the individual minority communities living in Hungary is extremely variable. In this respect Ruthenians born abroad are already in a majority: of the over 2 000 Ruthenians registered in the census 55 percent were not born within the borders of Hungary. Furthermore, the relevant proportion of Ukrainians and Romanians is just a fraction under 50 percent, while the 932 Roma registered in the census as being of foreign birth represent less than half of one percent of those declaring Roma affiliation.

Fewer than 10 percent of Slovaks, Slovenes and Croatians were born outside Hungary, and the proportion is similar for Germans (although we need to be cautious about the latter). It is true that the 9 756 Germans born abroad represent just 8.11 percent of the German minority living in Hungary, but in proportional terms they constitute more than one quarter of all persons with minority affiliation born in a foreign country, and in straight numerical terms there are 2 500 more Germans born abroad than the next most populous group, Romanians. (See Table 2.)

Table 2

The number and proportion of minority persons born abroad, 2001

Minority	Total	Minority person born abroad	Proportion of minority persons born abroad to the total number of the minority	Proportion of certain minority persons born abroad to the total number of minority persons born abroad
			Percent	
Bulgarian	2 316	977	42.18	2.78
Roma	205 720	932	0.45	2.65
Greek	6 619	1 290	19.49	3.67
Croatian	25 730	2 050	7.97	5.84
Polish	5 144	2 162	42.03	6.16
German	120 344	9 756	8.11	27.79
Armenian	1 165	366	31.42	1.04
Romanian	14 781	7 286	49.29	20.76
Ruthenian	2 079	1 142	54.93	3.25
Serbian	7 350	2 808	38.20	8.00
Slovak	39 266	2 360	6.01	6.72
Slovene	4 832	307	6.35	0.87
Ukrainian	7 393	3 668	49.61	10.45
Total	*442 739*	*35 104*	7.93	*100.00*

Individuals declaring German (9 756 persons: 28 percent) and Romanian (7 286 persons: 21 percent) affiliation represent more than 48 percent of the national-ethnic groups and born abroad.

Individuals born outside Hungary originate from a total of 99 countries. More than 100 persons of foreign birth with minority affiliation arrived from 16 countries, respectively. They represent 97 percent of those born abroad. Most came from Romania (9 675) followed by those born in Germany (5 520). (See Table 3.)

Table 3

The minority persons born abroad by the country of origin, 2001

Country	Minority													
	Bulgarian	Roma	Greek	Croatian	Polish	German	Armenian	Romanian	Ruthenian	Serbian	Slovak	Slovene	Ukrainian	*Total*
Romania	11	552	62	54	22	1 274	109	7 134	69	51	214	31	92	*9 675*
Germany	3	25	13	24	33	5 342	6	6	8	18	16	12	14	*5 520*
Federal Republic of Yugoslavia	10	105	18	894	9	780	2	21	20	2 492	57	37	21	*4 466*
Ukraine	7	48	13	11	41	130	10	33	412	9	93	8	3 131	*3 946*
Slovakia	6	103	19	21	20	417	4	18	19	5	1 801	60	35	*2 528*
Poland	4	3	8	7	1 973	83	1	2		2	9	12	6	*2 110*
Croatia	2	10	2	847	3	164		2	2	122	8	10	3	*1 175*
Greece	4	3	985	2	1	6	4	1		5	1	2		*1 014*
Russia	8	6	10	4	23	76	31	17	517	7	11	11	276	*997*
Bulgaria	897	3	9	3	1	13	2	1	3	3	3	1	2	*941*
Austria		8	5	37	3	838	1	9		12	3	4	6	*926*
Switzerland	1					222		1		1				*225*
Czech Republic	1	8	4	1	5	68	2	1	3	2	100	8	4	*207*
Bosnia Herzegovina		2	1	104		13				46	2	3		*171*
Armenia						1	141	2	1				1	*146*
Slovenia	1	3		9	1	12			1	8	2	89		*126*
US		9	7	13	2	34	3	4	1	5	7	7	4	*96*
Cyprus			86				1							*87*
France		4	2	1	3	38		1	1		12	1	1	*64*
Kazakhstan			2		1	2	1		28			1	22	*57*
Belorussia	1				3	5	1		23	1			8	*42*
Turkey	9	1	7			12	7	1			1		1	*39*
Great Britain		6			2	20	1	1		1	5	1	1	*38*
Italy	2	2	3	4		18	1		1		2	1		*34*
Netherland		3		3		25								*31*
Belgium		2		1	1	19							3	*26*
Moldova							1	14	3				8	*26*
Sweden		5		1		11				2	1			*20*
Georgia			1				7		6				5	*19*
Australia		6				9	1							*16*
Canada		3	3	1		7		1				1		*16*
Macedonia	1		4	1		2		1		6			1	*16*
Uzbekistan			1			1			5	2			7	*16*
Albania	2		9			1				2				*14*
Syria					1	4	4	1			1		2	*13*
Azerbaijan							9		2		1			*12*
Egypt			3		1	5		2					1	*12*
Denmark					2	7					2			*11*
India				3		6		1					1	*11*
Kirgizstan						2			8				1	*11*
Israel			2		2		3	1		1		1		*10*
Other 58 countries	7	12	11	4	9	89	13	10	9	5	8	6	11	*194*
Total	*977*	*932*	*1 290*	*2 050*	*2 162*	*9 756*	*366*	*7 286*	*1 142*	*2 808*	*2 360*	*307*	*3 668*	*35 104*

Close on three-quarters of individuals declaring a minority affiliation and born abroad arrived from countries in which the language of their nationality is in official use, and where the entire spiritual and cultural system of institutions was at their disposal in their own tongue. 98 percent of persons with Romanian affiliation, born abroad came from Romania, 91 and 92 percent of Bulgarians and Poles came from Bulgaria and Poland, respectively. 89 percent of Serbs and 85 percent of Ukrainians came from Federal Republic of Yugoslavia and the Ukraine, in the order given. However, just 29 percent of Slovenes born abroad actually left Slovenia to start a new life in Hungary.

Nearly two-thirds of individuals with German affiliation, born abroad were born in Germany, Austria or Switzerland. In their case, two other countries also had a significant proportion: Romania (1 274) and Yugoslavia (780). (See Table 3.)

The 2001 Population Census shows that over 2 000 persons with minority affiliation born abroad came to Hungary from Romania, Germany, the Federal Republic of Yugoslavia, the Ukraine, Slovakia and Poland, respectively. We shall now examine these characteristics in more detail.

27 percent of persons with minority affiliation born abroad (9 675) came from Romania. The census indicates that nearly three-quarters describe themselves as having Romanian affiliation, and 13 percent German affiliation. The 552 individuals with Roma affiliation born in Romania represent 60 percent of Roma who live in Hungary but were born abroad.

Among those with minority affiliation, born in Germany are just a few who – in the population census – did not declare German affiliation. The 5 520 individuals born in Germany constitute 15.72 percent of minorities born abroad. Among them 5 342 (97%) declared German affiliation in all the census questions. These individuals represent 4.44 percent of the German minority living in Hungary.

2.1. Gender segmentation

At no time in the past century has there been such an imbalance in the proportion of men and women in Hungary as was revealed in the 2001 Census. For every 100 men there were more than 110 women.

At the turn of the 19th and 20th centuries, the ratio of men to women was roughly in balance. From then on the proportion of women in the population has gradually climbed. In the 1949 Population Census taken after the Second World War this ratio stood at 100:108 (naturally as a consequence of the fighting). The imbalance gradually smoothed out in the 1960s and 1970s before deteriorating once again from the 1980s.

The greater ratio of women to men in the population is fundamentally related to an increase in life expectancy: the average for women in Hungary has risen to a greater extent than that of men.

Looking at individuals with minority affiliation, born abroad, it is evident that this disproportion is even greater: of the 35 000 individuals polled 20 000 were women, that is to say, to every 100 men there were 133 women. At the same time there were significant differences within the minorities themselves. While the proportion of women in the Ruthenian and Polish minorities is well over double that of men, among the Serbian community there are not even 80 women to every 100 men. In the latter case, it is clear that the war has played a part in this development since many men left Serbia in order to avoid military service. However, men are also in the majority among Armenians, Croatians, Greeks and Bulgarians born abroad, and the proportion among Romanians is more favourable than the national average too. (See Table 4.)

Table 4

The minority persons born abroad by gender, 2001

Minority	Man	Woman	*Total*	Number of women to 100 men
Bulgarian	491	486	*977*	98.98
Roma	430	502	*932*	116.74
Greek	651	639	*1 290*	98.16
Croatian	1 039	1 011	*2 050*	97.31
Polish	662	1 500	*2 162*	226.59
German	4 056	5 700	*9 756*	140.53
Armenian	189	177	*366*	93.65
Romanian	3 554	3 732	*7 286*	105.01
Ruthenian	339	803	*1 142*	236.87
Serbian	1 562	1 246	*2 808*	79.77
Slovak	778	1 582	*2 360*	203.34
Slovene	117	190	*307*	162.39
Ukrainian	1 217	2 451	*3 668*	201.40
Total	*15 085*	*20 019*	*35 104*	132.71

2.2. Age structure

Over the past century, the average age of the population in Hungary has increased by 12 years. In 1900 the average age was not quite 27 years, and the 2001 Census indicated it had increased to over 39. The average lifespan of both women and men has risen, although the rate of increase is somewhat faster for women. In 1870 men en-

joyed longer lifespan, by the turn of the century there was a balance between men and women, and today women live on average four years longer than men.

This positive trend is, however, offset by the population's unfavourable age composition: due to a continual decline in the number of births, every age group under 39 years shows a continuing downward tendency.

The age composition of Hungary's minorities is even worse than the national average. The proportion of children among every minority group (with the exception of Roma) is lower than that of the total population: barely half the national average.

At the same time the proportion of the elderly among the largest minorities – again excluding the Roma – is higher. One-fifth of the population of Hungary is aged 60 or over, while more than one-third of the Slovak minority falls into this category.

It is apparent that age compositions are more favourable among those minorities with higher proportions of individuals born outside the country. This is natural because generally speaking only the most physically active individuals of working age are prepared to take on the challenges that come with a move to a new country and a new life. The age composition of groups by citizenship status of the census population living in Hungary shows it very clearly.

As already mentioned, more than 110 000 individuals whose citizenship is not Hungarian, or not solely Hungarian, have an established abode in Hungary.

Among individuals with Hungarian and another citizenship (persons with dual or multiple citizenship), there are considerably more children and somewhat fewer elderly than the national average. In the group of individuals with foreign citizenship, the proportion of children is fewer than and that of the elderly is just half the national average. In their instance the percentage of those aged between 15–39 years, that is the most productive age group, exceeds 55 percent.

So, the age composition of immigrants tends to rejuvenate the average age of the total population of Hungary, although this does not solely concern individuals with minority affiliation. Their characteristics are better than the averages of certain minorities living in Hungary, but minority averages are considerably worse than the average Hungarian value.

On the one hand, looking at the average for all individuals with minority affiliation born abroad, the proportion of children is only one-third of the very poor national average. On the other hand, the proportion of the elderly is one percent higher than the national average. The real bonus can be seen in the relatively high proportion of young adults, over 50 percent in the case of Romanians, Serbians and Ukrainians. Furthermore, it is apparent that the proportion of the 15–59-year-olds, that is, individuals of working age, is only considerably lower than the national average among the Greeks, and 18–21 percent higher among Romanians, Poles and Ukrainians. (See Table 5.)

Table 5

The number of minority persons born abroad by age group, 2001

Minority	Age group (years)				*Total*
	0–14	15–39	40–59	60–X	
Bulgarian	31	270	366	310	*977*
Roma	117	454	237	124	*932*
Greek	24	345	272	649	*1 290*
Croatian	131	781	548	590	*2 050*
Polish	60	599	1 214	289	*2 162*
German	609	2 808	3 578	2 761	*9 756*
Armenian	31	147	100	88	*366*
Romanian	364	4 380	1 764	778	*7 286*
Ruthenian	58	448	386	250	*1 142*
Serbian	211	1 466	677	454	*2 808*
Slovak	72	801	762	725	*2 360*
Slovene	9	106	85	107	*307*
Ukrainian	223	1 862	1 125	458	*3 668*
Total	*1 940*	*14 467*	*11 114*	*7 583*	*35 104*

If we compare the age compositions of individuals declaring minority affiliation born abroad with the proportion of all minorities, then we can state that the age characteristics of the minorities are most likely to be improved by immigrant minorities in that they represent a higher proportion of individuals of working age. (See Table 6.)

Table 6

The proportion of the age groups of all minority persons and minority persons born abroad, 2001
(percent)

Denomination		Age group (years)				
		0–14	15–39	40–59	60–X	15–59
Averages	National	16.62	35.05	27.92	20.41	62.97
	Minority total	20.70	36.86	25.42	17.02	62.28
	Born abroad	5.53	41.21	31.66	21.60	72.87
Bulgarian	Born abroad	3.17	27.64	37.46	31.73	65.10
	Total	9.33	34.07	34.93	21.68	69.00
Roma	Born abroad	12.55	48.71	25.43	13.30	74.14
	Total	34.52	43.43	17.35	4.70	60.78

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Continuation.

Denomination		Age group (years)				
		0–14	15–39	40–59	60–X	15–59
Greek	Born abroad	1.86	26.74	21.09	50.31	47.83
	Total	7.55	46.03	30.02	16.39	76.05
Croatian	Born abroad	6.39	38.10	26.73	28.78	64.83
	Total	9.16	29.18	33.30	28.36	62.48
Polish	Born abroad	2.78	27.71	56.15	13.37	83.86
	Total	9.49	32.81	43.45	14.25	76.26
German	Born abroad	6.24	28.78	36.67	28.30	65.46
	Total	8.54	29.95	32.85	28.66	62.80
Armenian	Born abroad	8.47	40.16	27.32	24.04	67.49
	Total	8.33	39.06	32.70	19.91	71.76
Romanian	Born abroad	5.00	60.12	24.21	10.68	84.33
	Total	8.03	43.54	27.85	20.57	71.40
Ruthenian	Born abroad	5.08	39.23	33.80	21.89	73.03
	Total	8.32	37.71	34.44	19.53	72.15
Serbian	Born abroad	7.51	52.21	24.11	16.17	76.32
	Total	8.65	39.86	29.37	22.11	69.24
Slovak	Born abroad	3.05	33.94	32.29	30.72	66.23
	Total	9.13	24.49	31.68	34.70	56.17
Slovene	Born abroad	2.93	34.53	27.69	34.85	62.21
	Total	8.07	28.48	34.11	29.35	62.58
Ukrainian	Born abroad	6.08	50.76	30.67	12.49	81.43
	Total	10.13	42.80	30.70	16.37	73.50

2.3. Fertility

Fertility is constantly declining in Hungary. In 1970 there were 178 live births to every 100 women aged 15 or over, while this figure was only 153 in the 2001 Census. Since 1970 the number and proportion of women aged 15 or over bearing four or more children have been in continual decline, and the proportion of those bearing two children is ever greater.

Women with minority affiliation aged 15 or over have on average 1.93 live births, considerably above the average for the entire country (1.53). However, the fertility of the majority of minority communities is lower than the national average. Women with Roma affiliation (constituting around a half of all minorities in Hungary) are an exception: 262 live births to every 100 Roma women aged 15 or over; moreover,

only in their case does this proportion exceed the level necessary to guarantee the simple reproduction of the population of Hungary. Fertility indicators for the Slovaks, Slovenes and Croatians are also above the national average. There are 187 live births to every 100 Slovene women aged 15 or over, 170 to every 100 Slovak women and 163 for Croatian women.

The ratio of Slovene women bearing three children (15.28) as well as four or more children (9.43) far exceeds the national average. In the case of Slovaks, a fertility indicator higher than the national average is largely due to the higher ratio of women bearing three children (13.21). Croatian fertility indicators show slight above-average ratios for women bearing two (40.73) and three children (11.78).

The fertility of women with minority affiliation born abroad – as opposed to the average of all women with minority affiliation – lags behind that of the national average. The primary explanation for this is the extremely low proportion of immigrants with Roma affiliation: in the 2001 Population Census, of those born abroad a total of 932 individuals declared Roma affiliation (see Table 5), and among them the number of women aged 15 or over was 443. At the time the census was held nearly a quarter of these women were childless.

However, the fertility of women with Roma affiliation who had given birth was significantly above the national average even for those women born abroad (see Table 7), although it should be noted that it was somewhat lower than the fertility rate for Roma women born in Hungary.

Table 7

The number of live births to hundred minority women and to hundred minority women born abroad and aged 15 and over, 2001

Minority	Number of live births to 100 women	Number of live births to 100 minority women born abroad	Difference
Bulgarian	131.34	139.66	8.31
Roma	262.39	230.47	–31.92
Greek	107.79	148.89	41.10
Croatian	163.79	149.89	–13.89
Polish	137.28	158.25	20.97
German	149.85	155.95	6.10
Armenian	125.81	137.20	11.38
Romanian	151.56	127.45	–24.12
Ruthenian	151.37	146.04	–5.32
Serbian	124.98	114.52	–10.45
Slovak	170.55	161.71	–8.83
Slovene	187.89	148.65	–39.24
Ukrainian	135.52	126.77	–8.75

To sum up, Greek and Polish female immigrants increase their respective minority fertility rates to the greatest extent, but Armenian, Bulgarian and German women also positively influence fertility amongst their respective minority communities. At the same time, the fertility of other minorities – Ruthenians, Romanians, Serbians, Armenians and Ukrainians – with a high proportion of individuals born abroad, and the age composition of which lowers the average age of the minority, is, as we have seen, not only below the national average but in fact below the fertility indicator for the given minority itself.

2.4. Marital status

Over virtually the entire century there has been a continual increase in the proportion of widows and divorcées among women aged 15 or over living in Hungary. From the 1980s the number of unmarried women has also grown year on year, and the rate of decline in the proportion of marriages has gradually increased.

This adverse trend is even more conspicuous among men: nearly a third of men aged 15 or over is single, and the proportion of marriages has been plummeting ever since the 1980s.

The proportion of married women in most minority communities is – by given age group – greater than that of the average of the entire population. The instances where it is lower are among the Armenian, Bulgarian, Greek, Roma, Serb and Slovak minorities where the differences are offset by the higher-than-average proportion of unmarried women and divorcées.

This trend is all the more conspicuous among individuals born abroad. Taken against a national average of 49.38 percent, almost 70 percent of women with Polish affiliation born abroad and aged 15 or over are married, and the figure is over 60 percent for Ruthenian women. (See Table 8.)

Thus, it is possible to conclude that a far greater proportion of women aged 15 or over born abroad are married than is found in both the population as a whole and the totality of individuals with minority affiliation living in Hungary. Their proportion of spinsters is 3.5 percent lower than that of the population as a whole and nearly 8 percent lower than the totality of individuals with minority affiliation.

The far higher proportion of marriages is not reflected in the fertility indicators of women born abroad, and indeed in some minority communities these indicators fall below the national average. We should not forget, however, that the vast majority of individuals with minority affiliation born abroad had only settled in Hungary in the months/years prior to the census, and as such they were still adjusting to their new life. For instance, more than 20 percent of Romanian affiliated individuals born abroad had no registered abode in Hungary one year prior to the 2001 Census Day.

Table 8

The number of minority women born abroad and aged 15 or over by marital status, 2001

Minority	Marital status				*Total*
	Spinster	Married woman	Widow	Divorcee	
Bulgarian	61	246	99	63	*469*
Roma	124	216	65	38	*443*
Greek	127	286	153	64	*630*
Croatian	192	461	244	47	*944*
Polish	147	1 013	128	185	*1 473*
German	809	3 058	977	541	*5 385*
Armenian	34	82	31	17	*164*
Romanian	828	2 044	312	361	*3 545*
Ruthenian	93	466	104	108	*771*
Serbian	366	547	145	85	*1 143*
Slovak	239	817	347	138	*1 541*
Slovene	32	92	49	12	*185*
Ukrainian	465	1 362	236	279	*2 342*
Total	*3 517*	*10 690*	*2 890*	*1 938*	*19 035*

2.5. Social and economic situation

When examining the living conditions of individuals with minority affiliation, only in the case of the Roma minority we can speak of a disadvantaged state, although here we are speaking of a multiple disadvantaged position. However, the proportion of the Roma born abroad is minimal, amounting to less than half of one percent.

In this section of our analysis we also included minorities not specified in the Minorities Act, thus Chinese, Africans, Arabs, Jews and those speaking Hebrew as their native language, in order to illustrate their remarkable performance from the point of view of social-economic situation and productivity.

With regard to economic activity, the highest rates of employment were recorded among native speakers of Chinese, Arabic and Polish, while the proportion of unemployment – excluding the Roma community – was not far off the approximately four-percent national average. However, among Germans the rate of unemployment was just 1.77 percent, and a mere 8 of the 2 414 Chinese registered in the 2001 Census were jobless (0.33%).

Africans, Arabs and Hebrew-speakers had the highest proportions of groups with a tertiary education qualification, while with regard to holding a minimum secondary

school certificate, those speaking Hebrew and Polish as their native languages came out top. Among minorities with a generally older age composition, the proportion of those having completed secondary school was somewhat under the 50-percent average, but – again not taking into account the Roma minority – the lowest proportion was 41 percent (Slovenes).

Turning to work activity, the highest proportion of managers was found among those with Hebrew or an African or Arabic language as their native tongue, although the Armenians, Ruthenians, Bulgarians and Serbians were not far behind in this respect. Greeks and Poles were over-represented in other intellectual activities, while the Chinese were unrivalled in the service sector. In this respect too the proportions of the Roma are truly problematic, and the characteristics of Slovenes and Romanians also give cause for concern.

2.6. Regional distribution

Minorities settled in Hungary live in a relatively scattered pattern right across the country. Their combined total exceeds 10 percent of the total population in only one county, Baranya. At the same time, there are individuals with minority affiliation living in every county in the country, but in not one county does the distribution of the total number of minorities concentrated into one area exceed 10 percent, with the exception of the capital where they make up 12 percent of the population. However, as we shall see, this is mainly the result of those born abroad.

Turning to minorities born in Hungary, in totality their proportion only exceeds 10 percent in two counties and Budapest: 12 percent of all minorities live in Borsod-Abaúj-Zemplén County, 10 percent in Budapest, and 10 percent in Pest County.

41 percent of individuals with minority affiliation born abroad live in Central Hungary (Budapest and Pest County). The others are spread thinly across the country, barely attaining 4–6 percent in the other counties.

At the same time, there are counties in which minorities born abroad represent a significant proportion of the given minority. As we have already seen, on a national level Ruthenians born abroad represent a majority of their community, and the Romanians are not far behind this. Moreover, there are only two counties in which the number of Ruthenians born in Hungary outweighs those born abroad.

The situation is similar with the Romanians. Only in two counties on the border with Romania, Békés and Hajdú-Bihar, do the Romanians born in Hungary exceed the number of Romanians born abroad. There are other regions and counties in Hungary where the minorities born abroad form a majority among the given minority. This is the case with those with Bulgarian affiliation in Csongrád and Heves counties, and Armenians in Békés and Szabolcs-Szatmár counties. Croatians and Serbians

born abroad are also not averse to settling elsewhere in the country other than in the counties of the southern border. The relatively large number of Serbians settled in Győr-Moson-Sopron, Somogy, Hajdú-Bihar, Vas and Szabolcs-Szatmár counties were probably drawn there by the promise of new jobs, and the same is true of Croatians born abroad who form a majority within the Croatian affiliated communities in Békés and Hajdú-Bihar counties. Ukrainians born abroad are also willing to settle in counties other than in the east of the country: they form the majority in communities with Ukrainian affiliation in Budapest, Fejér, Heves and Veszprém counties. Besides Nógrád, Poles born abroad represent majorities in their communities in counties representing the two "ends" of the country, Szabolcs-Szatmár-Bereg and Vas.

2.7. Characteristics of identity

As the poet *Dezső Kosztolányi* once wrote, the secret chambers which were once to be found in medieval fortresses no longer exist, but secret places still lie buried in our souls. In fact, a significant proportion of elements related to an individual's self-identity lie hidden in these "secret chambers" of the soul. Personality development may be fundamentally shaped by a childhood memory, something one has read, or indeed by tragedy experienced within the family or in the fate of one's nation. And while national-ethnic consciousness in all its shades and variations is just one of countless personality traits which, given the appropriate social and historical environment, can be adapted more or less successfully to the other personality traits, in crisis situations this identity may actually act as a springboard for collective action.

Four hundred in-depth interviews, let alone four questions in the population census, would still not be sufficient to provide accurate orientation in the complexity that is personality. Of course, this is not the role of the census.

Data gathered by the census does not provide us with answers to what an individual is like but rather how they describe themselves, what they consider important and what they are prepared to reveal to public scrutiny about their identity. However, if we are to interpret national-ethnic affiliation as a constitutional category (and this is the only possible route towards reconciliation of national-ethnic questions) then it is essential to know an individual's standpoint and manifestation of will. No one is able, and in the final analysis no one has the right, to categorize others according to national affiliation, native language or religion.

In this respect the 2001 Population Census provides a far more detailed picture of the national-ethnic identity of the population.

Of course, such data should be interpreted bearing in mind the conditions under which they were collected: it is obvious that results will differ if the legal consequences of declaration are different.

Over and above this, one can assume that a sizeable proportion of those questioned, and in all likelihood a good number of those asking the questions, did not interpret certain categories uniformly. For instance, we cannot know precisely what any one individual understands by the term "nation", nor can we know where he/she draws the line between national belonging and cultural affiliation. We will come back to these questions later.

However, of one thing we can be certain: those who registered minority affiliation in the census make up the core group of individuals for whom national-ethnic identity is an important category, which they consider worth recording and are willing to declare.

The census questionnaire allowed 15 possible answers to the four questions on identity. Questions could be supplemented with other components such as command of languages or religion, a factor of critical importance among certain minorities. Responses to these questions provide us with a more detailed picture of the methods and levels of expression of the identity of the individual.

However, within the bounds of the four census questions related to identity we are able to differentiate the following elements of the identity of the given national-ethnic community:

1. Compactness of identity declaration – the proportion of those declaring themselves as belonging to a given minority in all questions related to national-ethnic identity varied enormously from minority to minority. These individuals represent the core of the given identity community, and around them are others who describe themselves as belonging to the given minority from selective aspects.

2. The dominant identity category – two of the four questions on identity allowed some level of objective valorisation. The language a person first learnt, namely his/her native language, is a matter of fact. It is also possible to be objective about which language is spoken in the family. The other two questions, however, demand completely subjective responses: the individual has to decide which nationality he/she "feels himself/herself" belonging to, and which nationality cultural values and traditions he/she "feels an affiliation for".

In every one of the minority groups in Hungary there were more who fell into the range of individuals with minority affiliation based on a subjective response (namely on the strength of their nationality or cultural affiliation) than those who were included in this category from an aspect classifiable as objective, such as native language or the language spoken within the family and with friends. Broadly speaking, one can interpret this situation as coming about because the minorities were subject to intense assimilation in the past decades or centuries, while a declaration of their current minority affiliation is a sign of a reawakening awareness of national-ethnic identity.

However, the dominance of individual identity categories signalling the "affiliation compass" differs according to minorities. This allows us to draw conclusions about individual minority groups and their possible future.

3. *Affiliation compass* – as already mentioned, even three responses could be given to each question concerning identity. However, the number of persons giving three responses was statistically insignificant, while among those giving two responses, the overwhelming majority gave Hungarian as one of their responses. The proportion of these individuals within the minority differed considerably depending on the minority in question.

4. *No response* – more than 628 000 refused to give a response to the census question on cultural affiliation. 541 000 did not wish to respond to the question on native language. The insecurity surrounding minority identity is evident in the proportion of those who declared certain of the minority languages as their native language and refused to answer the other three questions on identity.

Our particular interest in this study was to examine how the formerly mentioned identity characteristics of individuals with minority affiliation born in Hungary and those born abroad differ.

As has already been mentioned, using data collected during the population census, we selected the identity-related responses of those who described having affiliation to one of the specified minorities in at least one of their responses to the four identity-related questions. It should be noted, however, that this affiliation differed both in intensity and character from minority to minority.

The most characteristic indicator was the proportion of those declaring an attachment to a given minority in responses to all four identity-related questions. In completing all four questions, these individuals most deliberately declared their linkage to a given minority. Their proportion was highest amongst Ukrainians (42%), Slovenes (40%) and Croatians (over one-third).

At the other end of the scale, the proportion of Slovaks and Armenians giving this response combination did not even top 15 percent. In both cases this was due to the low ratio of those declaring the respective language as their native language. While around 25 percent of Armenians declared Armenian as their native language, about the same as those using Armenian when with family and friends, far more individuals with Slovak minority affiliation (nearly 16 percent more) said they used the Slovak language among family and friends than declared it as their native language.

The proportion of Germans giving four responses to identity-related questions was similarly low: barely more than 15 percent. Here, too, native language (28%) was to "blame" for the low proportion.

The situation of Roma is very specific also in this respect: although only 18 percent completed all four identity categories, more than 92 percent of individuals with Roma affiliation declared their Roma nationality in the census, the highest proportion of all the specified minorities.

Let us now look at the "compactness" by identity characteristics of individuals born abroad. It was immediately apparent that in the case of most specified minori-

ties, the proportion of individuals born abroad who described themselves as having affiliation to their minority in all four identity categories was far higher. The highest proportion was seen among Greeks (over 61 percent), while amongst Poles it exceeded 50 percent and for Bulgarians the figure was close on 50 percent.

Comparison of the two data shows that the difference is most conspicuous for Greeks: 39 percent. The Germans came next, with a difference of over 26 percent. These two minorities are finding that their fellows arriving from abroad to settle in Hungary represent considerable "identity reinforcement" potential. It is interesting to observe that in the case of the so-called "compact", more reclusive ethnic communities such as the Croatians and primarily Slovenes, a smaller proportion of those born abroad declared an attachment to the given minority in all categories, their native language proportion was lower, and they were primarily analysed through their use of language when with family and friends.

One can quickly establish that the proportion of response combinations was higher among those with minority affiliation born abroad who signalled one clear, unequivocal identity. For instance, the proportion declaring a native language was higher than among individuals born in Hungary (with the exception of Romanians and Slovenes). The preservation and use of the native language is one of the firmest foundations for national-ethnic identification of the individual.

For a more detailed examination of the question of multiple affiliation, we took the example of those with Romanian affiliation.

If we compare the number of response combinations regarding Romanian and Hungarian affiliation, only 26 percent of those questioned and born abroad declared Romanian affiliation in all four questions on national-ethnic identity, while 46.6 percent declared they belonged to the Hungarian people on the basis of nationality and cultural affiliation, native language and the language spoken within the family.

How can we rank these 7 286 individuals for Romanian and Hungarian affiliation according to level of affiliation given in census responses? On what basis would it be possible to determine that one is "more Romanian", the other is "more Hungarian"?

A comparison of amalgamated response combinations by identity category shows that overall the group with Romanian affiliation born abroad is more strongly affiliated to the Hungarian people than to the Romanians: just 29.15 percent of individuals with Romanian as their native language gave Hungarian as their native language too, while over a half of those describing themselves as having Romanian nationality signalled their Hungarian nationality at the same time.

Using a similar method to compare the data of Ukrainians, we see that the picture here is unambiguous: almost 90 percent gave only one native language, Ukrainian, and nearly three-quarters declared themselves to be of Ukrainian nationality only. Two-thirds of their number designated Ukrainian as the only language spoken within the family.

In contrast, not quite 10 percent of Slovaks said that they only speak Slovakian with friends and in the family; fewer than 32 percent were not prepared to state that they felt themselves to be exclusively Slovak nationality. (See Table 9.)

Table 9

The proportion of persons giving only one response to each identity category within the minority communities, 2001
(percent)

Minority	Identity category			
	Nationality	Cultural affiliation	Native language	Language spoken in family
Bulgarian	56.63	39.87	82.53	24.06
Roma	70.21	66.18	62.51	43.51
Greek	54.60	40.41	72.72	29.58
Croatian	61.85	50.82	85.65	24.54
Polish	53.71	35.65	79.69	16.85
German	52.73	42.23	73.82	14.21
Armenian	52.58	40.07	80.61	48.67
Romanian	60.09	45.97	83.11	19.98
Ruthenian	60.56	46.67	81.58	29.96
Serbian	69.10	48.59	82.08	27.83
Slovak	31.78	27.70	52.70	9.76
Slovene	57.92	53.11	84.65	41.15
Ukrainian	74.14	70.47	89.25	65.63

One of the most exciting questions concerning national-ethnic identity is the way in which (and to what level) it would be expressed if behind it there were no blatant/subtle national-state or state-national homogenisation pressure.

So when we see that a relatively high proportion of minorities living in Hungary also indicated an affiliation to the Hungarian people, inevitably we must ask ourselves to what level they would consider it important to signal their Hungarian associations if, for instance, they lived in their mother country and were asked to make a declaration about their national-ethnic affiliation there.

We have no way of even conditionally answering this question. However, we can examine what sort (and level) of minority affiliation individuals with an established abode in Hungary but originating from abroad brought with themselves.

Of the four census questions on identity, the one on national affiliation is the "most ideological". When answering this, most will have had some thoughts of pa-

triotism and loyalty in the back of the mind. By examining how individuals with minority affiliation born abroad answered the question on nationality, we see that the Poles, Greeks and Bulgarians were most inclined to answer the national affiliation question with a single response, that is, they only registered their own minority. (See Table 10.)

Table 10

The distribution of responses of minority persons born abroad to the question of nationality, 2001
(percent)

Minority	Response to the question of nationality			
	Only minority	Hungarian and minority	Only Hungarian	No response
Bulgarian	55.07	24.36	14.94	1.84
Roma	40.99	12.02	30.69	2.68
Greek	55.50	23.10	13.26	0.85
Croatian	33.67	12.52	39.33	1.66
Polish	57.83	25.02	11.52	1.52
German	41.84	16.00	30.60	3.16
Armenian	53.28	15.30	20.49	3.28
Romanian	29.67	19.01	45.96	2.32
Ruthenian	42.56	12.61	28.55	3.15
Serbian	32.00	9.11	44.39	3.49
Slovak	25.13	17.46	50.30	1.65
Slovene	24.68	11.36	32.79	2.27
Ukrainian	46.42	15.68	29.57	2.31

By contrast, over 50 percent of individuals with Slovak affiliation gave only Hungarian as their response to the question on nationality. This proportion was 44–46 percent for the Serbs and Romanians.

So who are these people? Is there any legal title under which we can call them "Hungarians living beyond the border"? Unquestionably, a considerable proportion are of Hungarian origin, have moved to Hungary and live in mixed marriages, and have been ranked in the census statistics as minority affiliated on the basis of the language spoken within the family, or have felt it necessary to signal as cultural affiliation the relationship to the majority nation of the former homeland. The lesson from this is that when moving from one country to another the individual brings his/her identity across the border too; we will only be able to get some true bearing on the intricacies of questions surrounding identity if we make it understood that this is a highly complex process.

Finally, let us mention a few words on the issue of response refusals. We have seen that 5–6 percent of the population did not give any response to questions concerning identity.

In Hungary there are 828 020 persons living in households in which at least one member has minority affiliation. Roughly speaking, around a half of these individuals are – based on census responses – "pure Hungarian", namely, they described themselves as solely Hungarian in every question related to minority affiliation. In this group the proportion of those refusing to respond in the case of all four questions was far lower than the national average. Among individuals with minority affiliation born abroad, the proportion of those refusing to respond to the question on nationality was even lower: with no minority it even reached 3.5 percent. Personal contacts and the everyday experience of living in a mixed nationality community mean that people learn how to handle questions arising from diversity of national-ethnic identity in a natural way so that they do not become taboos and that their significance is neither greater nor lesser than it is required to guarantee social harmony.

3. Conclusions

When examining migratory processes, and particularly when speaking of the migration of Hungarians living beyond the border to Hungary, the point is often raised that increasing numbers of these people are "quitting their land of birth" – thereby "threatening the viability of the remaining Hungarian communities" – because of the unfavourable living conditions they experience there. An investigation of their existential situation and living conditions undoubtedly requires a far more thorough, methodological analysis; however, this was not a focal element of our paper. We concentrated instead on the effect of migration on ethno-demographic processes, taking into consideration the evidence that Hungary will only be able to support Hungarians living beyond the border and encourage common intellectual and cultural progress if the country steps on to a path of long-term, dynamic development. From this point of view, the country itself is dependent on immigrants, whether Hungarian or non-Hungarian.

Rapid economic growth is a fundamental condition of social-economic structural transformation (and development that attends it) in the coming decades because this is the only way to broaden the room for manoeuvre essential for structural change. Some of the key resources for economic growth include "human capital", labour force and human creativity.

It is worth highlighting three factors that have a bearing on this (from the aspect of our research): population decline, disparities in regional development, and potential ethnic conflict.

The following means may be employed in order to counterbalance or minimize the long-term processes of depopulation:

1. Policies aimed at boosting the birth rate may prove an incentive to have children. This requires change in our economic, social and cultural models plus a sensitive approach at several different levels; however, there will be no spectacular results in the short-term.

2. Optimal utilization of domestic resources requires specific regional planning, competing labour and capital and greater internal mobility; support for training and retraining programmes.

3. The influx of external resources (encouraging both foreign investments and immigration) requires a whole series of complex social measures.

In the course of our research we only dealt with those listed factors and aspects that have demographic and primarily ethno-demographic relations.

Demographic processes have a fundamental impact on the structure of society, the system of social institutions, cultural mentality and a society's level of civilization. The interrelation has a reactive effect, but this is far slower in asserting itself and is at a much lower intensity.

Ethno-demographic processes may, at the same time, represent an additional source of conflict. It is common knowledge that the social dynamic increases when – with a rising birth rate – the proportional share of young jobseekers grows in society. However, if this "critical mass" is made up of a national-ethnic group which can be clearly differentiated from the majority, this may be the source of tension. And vice versa: ageing can at the same time represent a root cause of social inertia.

The relationship between demographic trends and economic growth, although somewhat indirect, is still apparent: population decline is just as much a restraining factor on the economy as lack of capital. In this instance, as elsewhere, ethno-demographic interrelations reveal themselves in a far more complex and subtle form: the increasing pace of growth provides greater room for manoeuvre for social and economic structural transformation and paves the way towards the levelling of social disparities. However, the individual's ability to occupy a new position in the vertical social hierarchy is in large part determined by the professional (and the corresponding regional, horizontal) mobility of the different national and ethnic groups. The source of conflict here is when an individual has to sacrifice his identity for the sake of mobility, or when group characteristics per se restrict an individual's mobility.

The goal, therefore, is the establishment of a social system of institutions and relations in which integration does not equate to assimilation. In other words, in a system in which members of different national and ethnic groups can integrate them-

selves in the processes of social and economic development, in which they can represent the resources of modernization and in the interests of which they can change jobs or move home, and yet in which they are free to express their own and unique national-ethnic identities.

A more in-depth study of the relationship between identity and migration would be useful.

As a consequence of Hungary's EU accession negotiations, the country's peripheral location has also given it a mediatory role. On the one hand Hungary will continue to be a transit stop for migrants set on reaching the more developed countries of Western Europe, and on the other hand, it will be increasingly viewed as a target country. In the meantime, we have to take into account the fact that as the country gradually develops, multilingualism and multiculturalism will become ever more apparent in society. Whereas today the country is searching for the most appropriate social-economic-legal solutions for inter-ethnic relations (bearing in mind its relatively limited number of national minorities), this can be seen as a sort of "experimental model" in preparing for future challenges. However, in the case of the Roma ethnic minority, this challenge is already upon us.

Therefore, it is important to investigate which legal and institutional solutions best meet the endeavours of the minorities for self-realization and self governance when an ever smaller proportion of their number live in traditional, "closed" settlements scattered over a wide area.

Looking at minority rights and taking basic human rights as our starting point, it is also questionable how long the distinction between "domestic" and "foreign" minorities can be sustained given the considerable levels of immigration into the country.

Finally, it is important to resolve how we can maintain a balance between rights and responsibilities in the case of (state-endorsed, constitutional) entitlements derived from declarations made by avowal (by subjective declaration).

To sum up: of individuals with minority affiliation coming to Hungary from abroad with the aim of settling permanently in the country and tying their fate to that of the nation, one might say, with heavy irony, that "we have more to gain than lose". Given the majority of them, their demographic characteristics are positive, they are economically active, they are appropriately qualified, they speak foreign languages and they can more easily adjust to the demands of modernization.

At the same time, they have stronger national-ethnic identity than individuals with minority affiliation born in Hungary, and they have every intention of preserving it. Thus, if it is agreed that one of the prerequisites of development in Hungary is immigration, the constitutional conditions have to be created permitting assertion of immigrants' national-ethnic identity and their realization has to be constantly monitored. This represents a new challenge for Hungarian society, but coming up with the right answers to challenges forms the basis of advancement at any stage in history.

As *Arnold J. Toynbee* writes in respect of the development of civilizations, a historical challenge is akin to striking sparks out of a stone. One has to judge exactly the right force to obtain the spark, but not so much that it smashes the stone.

It is to be hoped that an ever smaller fraction of Hungarian society views Hungarians coming from Transylvania, Hungarian and non-Hungarian nationalities arriving from Slovakia (now Slovak EU citizens), and indeed Germans returning to the land of their ancestors from Germany, as threats.

Foreigners in Budapest

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This theme is of interest to the public community, to the economic stakeholders, and also, beyond the strategic issues of science, in general, to the resident community. The main purpose of this article is to highlight the spatial distribution of international migration at settlement level. It draws the attention of readers to the challenges of inward migration into big cities, and also underlines the importance of establishing rules and preferences at the local level. The findings show several international regularities and the nature of their existence in a local environment. The article provides a statistics based review and forecast on the demographic characteristics of foreigners living in Budapest. Finally, it recommends how to orient international migration.

KEYWORDS:
Foreigners.
Capital.

It is a global trend that new arrivals prefer to settle down in urban areas. This article verifies these regularities with regard to Hungary and its capital. As far as population forecast is concerned, it is important to map the current tendencies and their impact on the autochthon population structure. The present paper is based on inter alia 2001 Census data and expresses the need for a local migration strategy.

1. Geographical location

Hungary, as a result of its geopolitical situation, plays an intermediary role in world-wide migration. Since it is a destination mainly for the population of the Carpathian Basin, it can be mainly characterized by short-distance international movements. Owing to the country's 2007 accession to the Schengen area (to the territory of free movement of individuals), the process of migration has a new system of conditions (*Van Geenhuizen–Ratti* [2001]). However, it would be too early to sum up the expected consequences and trends of this new state of affairs (*Gellérné Lukács* [2008]).

As it was already mentioned, the neighbouring countries account for an outstanding proportion of incoming migrants, which is associated with cross border linguistic and cultural relations. Since the regime change, cross border mobility, through its rejuvenating and other effects and by increasing human capital, has played a major role in shaping the size and composition of the population of Hungary (*Hansen* [1977]). We also experience that foreigners tend to choose to live near one another, which can be interpreted as an advantage of human resources on the one hand and as a disadvantage of spatial concentration on the other. As a result, the effects that are generated by international migration are brought to another territorial level. This more detailed process traceable with soft indicators makes it possible to reach other conclusions (*Egedy et al*. [2009]).

Incoming migrants show two regularities by what destination they choose from the global options: *1*. an enhanced interest in metropolitan spaces, *2*. settling down at the border of a neighbouring country which is their country of origin. The first reflects that the urban space provides more employment opportunities and sometimes, especially in the case of diasporas, there is a relational network created by earlier migrants (*Papademetriou* [2006], *Massey–Taylor* [2004]). It is also true for Hungary where Budapest and its agglomeration account for 60–70 percent of incoming mi-

grants and the mass location of foreign residents shifted towards the capital city (*Rédei–Kincses* [2008]). As for the second regularity, the rest of migrants (about 30–40 percent) resettled near the border area of their sending country.

It was observed in many countries that cities with a multicultural background enjoy a greater global economic and social independence. As a result of the decline of industry and its transformation into service, management and decision-making activities, mostly highly qualified people (with international experience) are needed by cities considered as strategic sites to make decisions and to operate institutes. Consequently, there is a decreasing resistance against marginal groups, and the cities, through highly qualified people, have an opportunity to make a better international image. Therefore, in order to develop a more desirable future, a key issue for them is to facilitate the successful integration of migrants, and city governments need additional funding to handle any multicultural tensions deriving from possible mismanagement. http://www.migrationinformation.org/Feature/display.cfm?ID=167

With an increase in the number of highly qualified people, new horizons open up as a result of their relational capital. Nowadays, most cities of the world are dealing with international migration as a most accessible "outsourcing", in a way of neither offensive nor restrictive, but rather keen to create a *hosting social and economic environment*. In most cases, one can talk about not a reactive but a so-called proactive political practice with sometimes a recruiting nature. It is of no question at all, a proactive policy is better than a reactive one.

Immigrants need everything; therefore they generate an *increase in consumption,* affect the real estate market and stimulate the given neighbourhood. The streetscape, the traffic, the shops and their goods on sale are all being adjusted to the demand of the locals, and beyond a point, instead of social exclusion, homogenisation occurs. It may be connected to *cultural economic recovery*, which is a new asset to enhance the attraction of urban spaces. http://www.migrationinformation.org/Feature/display.cfm?ID=57

While men are required in the so-called 3D (dirty, demanding and dangerous) jobs, in cities there is always a greater need for female labour force (for nurses, babysitters, household helps, etc.) to be employed in family natured jobs (demanding less language competence from foreign women). Activities like the mentioned ones are mainly connected to the shadow economy, and it is even more characteristic in the case of foreigners. The members of this group usually less consciously choose a new place to live, often migration networks (former migrants) help them to find the ways to settle down. All this represents not only a single effect of feminization, but also an indirect influence on the increase of fertility. However, among the foreigners in Budapest, we still recorded a male surplus; though it seems that this could reverse within a short time.

International migrants decide on their own, based on the relevant pull and push factors, where to settle down as a resident (*Rédei* [2005]). In this way, they play an active

role in changing the demographic and economic structure of the given geographical space. Migration is a visible form of several socioeconomic fields. That is to say, in many cases, it may be connected to the potential differences existing in the spatial structure. It is a paradox situation that *cities with their aging population are the strategic poles of the economic space*; thus, they increasingly need foreigners as an external resource. As presumed, migrants are motivated to settle down in cities, where there is a more free and favourable environment and more opportunities to find work, to start a business, or to establish relations with earlier migrants. According to surveys on the hundred largest cities of the US, the number of international migrants increased by 54.8 percent in the last decade. Out of this, suburban areas accounted for 63.7, city centres for 21.7 percent and city peripheries for the rest. In the one third of the analysed hundred cities, inner areas showed no population growth as a result of migration. (http://www.migrationinformation.org/Feature/display.cfm?ID=567)

Table 1

Foreign citizens staying in Hungary, 1995–2009

Year (1 January)	Hungary	Budapest	Share of the capital (percent)
1995	138 101	46 712	33.8
1996	139 954	48 719	34.8
1997	142 506	55 422	38.9
1998	148 263	60 432	40.8
1999	150 245	62 362	41.5
2000	153 125	64 865	42.4
2001*	110 028	39 200	35.6
2002	116 429	43 857	37.7
2003	115 888	43 216	37.3
2004	130 109	48 682	37.4
2005	142 153	54 251	38.2
2006	154 430	66 025	42.8
2007	166 030	69 918	42.1
2008	174 697	74 344	42.6
2009	184 358	79 994	43.4

* Methodology has changed.
Source: HCSO database.

In Europe, the proportion of foreign-born people is over 25 percent in the population of four cities (London, Amsterdam, Brussels and Frankfurt). Here, migrants

usually settle down in the central areas, except for those cases, where a ruling family or international organizations preserved the historical milieu and no slumming occurred, and thus, real estate prices in city centres remained high. In the 1980s, it became typical that migrants took the place of residents who had moved to suburban areas. Foreigners moved to the outskirts only if the deteriorating housing conditions provided a place for them to live there.

Foreign nationals show an interest to live also in Hungary, especially in Budapest. The capital attracts nearly half of the foreigners. (See Table 1.)

In sum, studying international experience, we can come to the conclusion that international migration may generate benefits especially in the case of purposeful and proactive local management aligned with geographical space based assets. National regulation aims at the reinforcement of controlling principles and the settlement is that place where migrants live and the former efforts are realized successfully/not successfully. For this reason, it is essential for a hosting city/region to support or hinder migration through its regional objectives. Developments launched and taxes paid by foreigners are of importance to the locals. For example in Hungary, the majority of foreign direct investment is made in Budapest and its surroundings (*Fazekas* [2005]). At county level, Budapest accounts for the highest share of taxes paid by foreigners. From all (750 thousand) tax-payers 32 thousand are foreigners (4.5 percent) (*Rédei–Kincses* [2008], *Kincses* [2008]).

2. Subsidiarity of migration

In the practice of strategy, it is expedient to make decisions on migration issues where they take effects, implementing a kind of subsidiarity in this way. Most of the major host countries orient the spatial choice of migration by establishing an interactive relationship with the potential migrants and by disseminating information to them on the goals set out by the regional development plans. In this way, they are able *to break down*, through regional preferences and resources, *centrally supported integration and skills by the need of certain places and families*. Realizing this fact, the host countries are trying to manage the process of migration to gain benefits and to enrich the economy with new intellectual and biological resources (*Rédei* [2005]).

National laws regulate the integration of migrants. Yet, the success of migration only partly derives from the act of crossing the border. Entering into a country is only an opportunity to achieve desires to be pursued by this movement. The real integration process takes place in a given geographical place, where the migrant's skills and adaptation capability are tested and he/she starts to discover the local op-

portunities. At the levels of regions and urban settlements, receptiveness is of crucial importance in whether the migration will result in a surplus or a loss. It may have such aspects that call forth a successful position for both the migrant and the given region. Instead of the earlier zero-amount migration, a shift is being observed in the field of immigration into the direction of a so-called win-win situation. http://www.imiscoe.org/research/clusters/c9.html

What does it all mean? This orientation is forcing the hosting area, for example a city, to map up the demands in an ongoing and characteristic way and to disseminate the relevant information to migrants, as well as to contribute, through consultation, to the identification of interests of both parties and to the reduction of tensions.

By migration not only the migrants' capabilities, skills, but also their culture and values are being transmitted. From this point of view, it is noticeable how countries of origin distribute migrants. For example in Budapest, the proportion of those who arrived from the Asian, African and the American continents grew, which affirms the increasing share of distant cultures.

It is important to select migrants by age not only for demographic reasons, but because migrants in younger age

– are characterized by rapid innovative adaptability;
– pay taxes and contributions in the destination country and thus, generate revenues for the given country;
– especially the highly qualified ones mean human capital imports;
– increase not only the number of population but also that of other events (marriages, births, etc.).

Nevertheless, those migrants who are in a less favourable situation than the inhabitants of the given country may account for a significant social burden and may disturb the locals and in this way may have a damaging effect on the "climate" of integration.

Besides migration of the youth, the increase of elderly migration is also experienced owing to which the services provided – as new aspects for the real estate market – in the given area play a major role during the process of selection (*Illés* [2006], *Illés–Kincses* [2008]).

All this implies the fact that a one-sided approach to migration does not facilitate but actually hinders the success of the process.

The challenges of a multi-cultural society can be felt especially in a big city. Partly the neighbourhoods, partly the changes, like the appearance of Chinese, Arabic, Latin, Turkish or Jewish quarters in the cityscape shape its daily life and activity. As we see in the world, the metropolises were the first and steadiest proponents to establish a local regulation. But what do they regulate? How many people should be let in as a proportion of the local population? What kind of professions is supposed

to be hosted? What measures should be introduced to facilitate settling down and integration? What is the local population's attitude towards foreigners and vica versa? How do they accept each other?

Of course, there are not only positive but also negative examples in history, when ethnical colourfulness triggered conflicts and crisis. It is a fact that multiculturalism became an essential urban asset, and for the municipal government one of the challenges is to determine how to integrate newcomers and enhance development. Most of the countries are being dependent on foreigners and use them as an external resource. In certain cases this led to new urban, regional "rules" in street and neighbourhood life, in shopping malls or even in football pitches that are different from the national regulations.

A new trend is the increase in moving to study. Since the majority of foreign students prefer to live in an urban environment, the process of "*studentification*" is became an essential force in shaping the urban structure and milieu as well as in creating relational capital. University campuses play a major role in the process of strategic development. All of these have impact on the local economy, the real estate market and on the expansion of services and workplaces. In Budapest two typical trends can be observed: *1*. university facilities become new centres in the outskirts; or *2*. they do not constitute integrated parts of the surrounding urban area. Students' customs and lifestyle differ from those of the locals, which could be a constructive process but could also result in ghettoization. In many cases former military facilities were transformed in line with their new functions to meet the demands of mass education. These complexes were built in the urban outskirts, but as a result of the ongoing urban expansion, nowadays they frequently hamper the organic development (*Rédei* [2009]).

3. National overview

In Hungary, the number of the resident population has been decreasing since the 1970s. Therefore, only international migration may mitigate the population loss in the foreseeable future (*Hablicsek* [2003]). International migration has a direct impact on the size of the population as a whole and an indirect effect on the number of the youth.

Since the regime change, the country has had a surplus in international migration, that is, more foreigners arrive in Hungary than those who leave it. There is a positive migration balance of 10–20 thousand people annually, along with a natural loss of 30–40 thousand persons. On 1 January 2009, 184 358 foreign citizens were on an extended stay in the country, accounting for 1.84 percent of the resident population.

(See Table 2.) That is to say, out of one hundred people who live in Hungary today, nearly two are foreigners. Compared with other countries, this is a low value, but it is a "novel" process for the Hungarians. In the eight-year period after the turn of the millennium, the proportion of foreigners increased by 70 percent nationally.

Table 2

Foreign citizens in Hungary, 2001–2009

Year (1 January)	Resident population	Foreign citizens staying in Budapest	
	person		as a percentage of total population
2001	10 200 298	110 028	1.08
2002	10 174 853	116 429	1.14
2003	10 142 362	115 888	1.14
2004	10 116 742	130 109	1.29
2005	10 097 549	142 153	1.41
2006	10 076 581	154 430	1.53
2007	10 066 158	166 030	1.65
2008	10 045 401	174 697	1.74
2009	10 030 975	184 358	1.84

Source: HCSO database.

As we see, *foreigners replace an increasing proportion of the domestic population,* and they tend to cluster around certain areas where they create distinctive spaces reflecting their customs and demography. At present, this process has relation to the increase in the number of foreign citizens, but the decreasing trend in the number of resident population calls forth an accelerated change of their proportion. This also results in a strengthening of the socioeconomic and demographic impacts of migration. In Hungary, stronger influence may be forecasted since migrants from distant countries are expected.

As it was mentioned previously, the countries of the Carpathian Basin (Austria, Slovakia, the Ukraine, Romania, Serbia-Montenegro, Croatia and Slovenia) play a determining role in the ongoing growth of the population. However, *the number of those arriving from other countries is also increasing rapidly*. Most of the people come from Romania, the Ukraine and from Serbia-Montenegro. In addition to these groups, a significant number of EU15 citizens (mainly Austrians and Germans) live in Hungary. (See Table 3.) However, the national impacts are significantly surpassed by the regional ones, especially in the case of micro-regions and settlements.

Table 3

Foreign citizens staying in Hungary by citizenship (1 January)

Country	2001	2002	2003	2004	2005	2006	2007	2008
Austria	694	785	750	780	544	1 494	2 225	2 571
France	511	601	711	765	330	1 316	1 506	1 481
Netherlands	324	346	373	415	236	666	1 096	1 201
United Kingdom	624	700	872	963	440	1 451	1 911	2 107
Germany	7 493	7 676	7 100	7 393	6 908	10 504	15 037	14 436
Italy	542	563	545	551	404	777	1 020	1 207
EU15	11 723	12 181	11 629	12 143	9 714	18 357	25 394	25 490
Croatia	917	931	800	902	837	778	813	852
Romania	41 561	44 977	47 281	55 676	67 529	66 183	66 951	65 836
Serbia	12 664	11 975	11 693	12 367	13 643	12 111	12 638	17 186
Slovakia	1 576	2 213	1 536	2 472	1 225	3 597	4 276	4 944
Slovenia	82	88	65	81	34	79	115	133
Ukraine	8 947	9 835	9 853	13 096	13 933	15 337	15 866	17 289
*Neighbouring countries**	*66 441*	*70 804*	*71 978*	*85 374*	*97 745*	*99 579*	*102 884*	*108 811*
Russia	1 893	2 048	1 794	2 244	2 642	2 759	2 760	2 787
Poland	2 279	2 227	1 945	2 196	2 178	2 364	2 681	2 645
Turkey	455	544	469	557	615	756	886	1 120
Other European countries	11 100	10 621	11 165	9 181	9 911	8 214	8 447	7 863
Europe	93 197	97 640	98 230	110 915	122 261	130 535	140 827	146 145
Asia	12 603	14 401	13 480	14 715	15 121	18 543	19 733	22 356
America	2 488	2 557	2 434	2 535	2 667	2 989	3 075	3 557
Africa	1 233	1 318	1 281	1 455	1 556	1 800	1 783	1 913
Other and unknown	507	513	463	489	548	563	612	726
Total	*110 028*	*116 429*	*115 888*	*130 109*	*142 153*	*154 430*	*166 030*	*174 697*

* Including Austria.
Source: HCSO database.

4. Regional overview

In 2001, Budapest accounted for 17 percent of the resident population, cities with county authority for 20, other towns for 27 percent and villages for 36 percent. By

2008, the proportion of those living in towns increased to 31 percent, while that of village population decreased to 32 percent. The first two categories showed no significant changes. It is an interesting question whether the foreigners follow this pattern in their distribution or not. (See Tables 4 and 5.)

Table 4

Foreign citizens staying in Hungary by territorial distribution, 1 January 2001
(percent)

Country	Budapest	City with county authority	Other town	Village	*Total*
Austria	31.56	17.87	18.30	32.28	*100.0*
EU15	36.07	19.37	19.96	24.60	*100.0*
Romania	30.91	18.02	21.86	29.21	*100.0*
Serbia	16.54	45.34	18.53	19.59	*100.0*
Croatia	16.58	21.81	38.71	22.90	*100.0*
Slovenia	34.15	31.71	17.07	17.07	*100.0*
Slovakia	28.93	35.41	22.34	13.32	*100.0*
Ukraine	19.06	22.89	29.29	28.76	*100.0*
Europe	29.71	22.91	22.05	25.32	*100.0*
Asia	73.96	15.12	6.69	4.23	*100.0*
America	52.33	25.48	11.33	10.85	*100.0*
Africa	51.99	27.90	11.44	8.68	*100.0*
Total	35.63	22.12	19.89	22.36	*100.0*

Source: HCSO database.

In the case of foreigners, Budapest was strongly overrepresented in line with international trends, that is, capital cities are primary target areas for migration. It is especially true for those arriving from outside the European Continent (77 percent of Asians live in the capital city and a further 13 percent of them in cities with county authority). When all towns are taken into account, the proportion of working-age people is even larger while in villages the share of pensioners is significant.

In the past seven years, as a result of the fact that Hungary became a member of the Schengen area, Budapest attracted more and more foreigners, while their proportion decreased in cities with county authority and in villages. *In the case of smaller towns only the percentages by citizenship have changed*. The number of persons from the EU15 and from non-European countries increased.

Table 5

Foreign citizens staying in Hungary by territorial distribution, 1 January 2008
(percent)

Country	Budapest	City with county authority	Other town	Village	*Total*
Austria	17.19	14.62	21.00	47.18	*100.0*
EU15	31.35	14.15	20.48	34.01	*100.0*
Romania	40.61	12.04	22.95	24.40	*100.0*
Serbia	22.67	38.29	21.49	17.55	*100.0*
Croatia	19.95	19.60	41.90	18.54	*100.0*
Slovakia	34.95	19.36	23.93	21.76	*100.0*
Ukraine	36.11	17.80	22.30	23.79	*100.0*
Europe	36.71	16.92	22.21	24.15	*100.0*
Asia	77.43	13.41	6.45	2.71	*100.0*
America	55.74	17.91	11.05	15.30	*100.0*
Africa	57.90	24.58	11.40	6.12	*100.0*
Total	42.56	16.54	19.82	21.09	*100.0*

Source: HCSO database.

According to the territorial analysis, *six areas show above-average values*: *the surroundings of Lake Balaton, Budapest, Pest County and the micro-regions along the Ukrainian, Romanian and Serbian-Montenegrin borders* (*Kincses* [2009]). If the spatial distribution of foreigners is analyzed at the level of micro-regions, concentration can be observed. As it was mentioned, *Budapest and, to a growing extent, the surrounding micro-regions are the main central areas for the foreign population*. In 2001, these areas accounted for 52 percent of foreigners against 62 percent in 2008. (See Figure 1.)

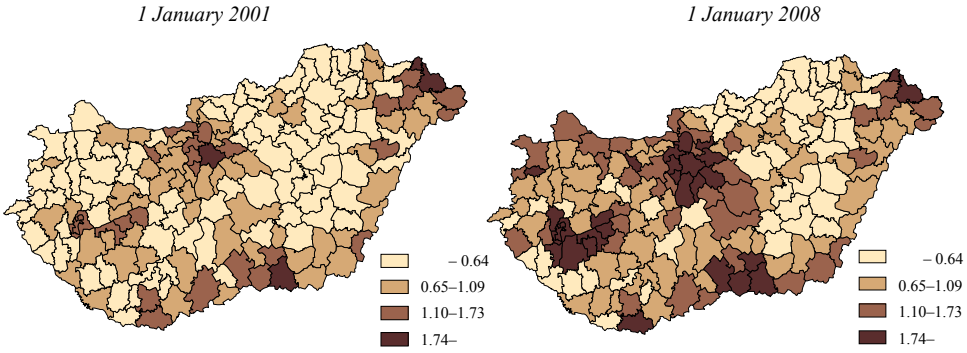
Those arriving from the EU15 prefer the western part of the country, mainly Győr-Moson-Sopron and Somogy counties in addition to Budapest and its agglomeration. Romanian citizens mainly choose three areas where they live in significant numbers, namely the area along the Romanian border, the capital and Western Hungary. Serbians and Montenegrins live in a wedge-like cluster area stretching from Budapest to the common border. Slovaks are concentrated in the region of Northern Hungary and around Budapest, while Ukrainians prefer, besides the capital, the micro-regions near their country of origin.

In sum, the place of settlement of EU15 citizens is determined by the reason of their arrival. Urban areas are mostly popular with working-age foreigners, while eld-

erly migrants (coming for example from Germany) usually choose places near thermal baths or at Lake Balaton. The Dutch prefer rural locations, African and Asian people urban areas and the Irish normally reside in the capital.

Figure 1. The proportion of foreigners per hundred residents

(percent)



For those who arrived from a neighbouring country, Budapest and Pest County are the most attractive destinations in addition to those micro-regions, which are located near their country of origin. Micro-regions along the Romanian, Ukrainian and the Serbian borders play an outstanding role in this respect.

Here should be mentioned the foreign nationals born in Hungary. On a yearly basis, around 2 000 non-Hungarian children are born in the country according to HCSO statistics.

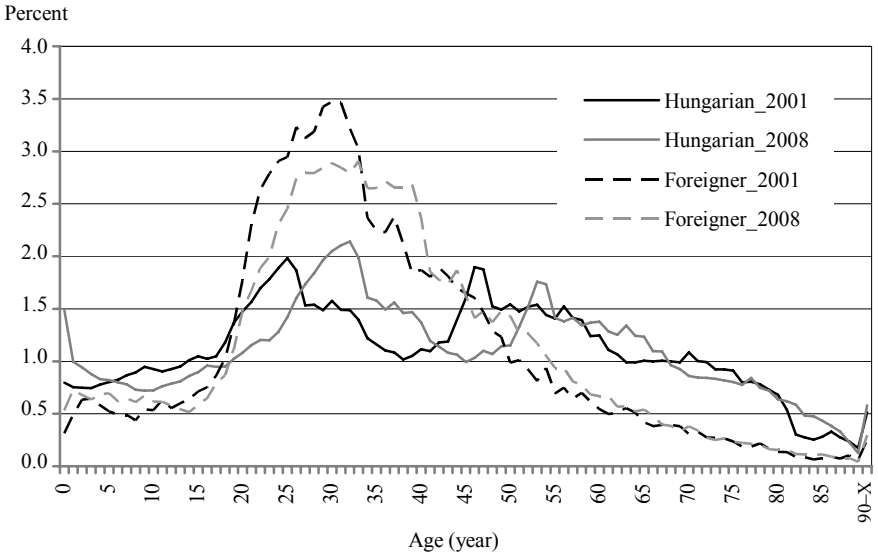
5. The analysis of foreigners by age

In terms of age, foreigners who live in Hungary significantly differ from the Hungarian citizens, which results in a considerable increase in the ratio of younger age groups as well as an easier adaptation. The major part of foreigners is in the age group of 15–64 years. (See Figure 2.) In 2008, the *average age of non-citizens*, in spite of their rapid aging, *was 6.2 years less than that of the resident population*. However, foreign and "non-foreign" people show different ageing rates.

In Budapest, the average age of the resident population increased from 41.9 to 42.6 years between 1 January 2001 and 1 January 2008, while the foreigners showed a sharper change (from 35.2 to 36.4 years) over this period. This fact may relate to increasing elderly migration (*Illés* [2002]). However, the faster rise in the average

age of the migrant population exerts much smaller influence on Budapest where younger, working-age people continue to arrive.

Figure 2. The distribution of Hungarian and foreign citizens living in Budapest by age, 1 January 2001–2008



In Hungary, a decrease in fertility and an increase in life expectancy account for a decline in expenses of child rearing and for growth in that of the care of elderly people. In the case of the resident population, the dependency ratio of children decreased from 0.24 of 1 January 2001 to 0.22 of 1 January 2008, while that of old people increased from 0.22 to 0.23. (This also shows the aging of the domestic population.) The total dependency ratio lessened from 0.46 to 0.45: one hundred people aged 15–64 years supported 22 children aged 0–14 years and 23 old people aged 65–X years in 2008.

In the case of foreigners, the national and micro-regional data significantly differ from those of the resident population. For them, the national dependency ratio of children decreased from 0.11 to 0.10 over the analyzed seven years, while that of old people increased from 0.08 to 0.11. Thus, hundred active foreigners supported ten children aged 0–14 years and eleven elderly people aged 65 or older, which are, in an economic sense, much better data than those of the domestic population. Out of the foreigners, Austrians account for the highest dependency ratio (0.38) as a result of a large proportion of elderly people in this group. The percentage of people from the EU15 is similar (0.32), and that of the dwellers arrived from the American continent is 0.25 owing also to the high share of the older generation. Slovaks (0.08), Slovenes (0.11), Romanians (0.18) and Ukrainians (0.19) had the lowest dependency rates. It is important to note that very good ratios are shown also by Africans (0.11) and

Asians (0.20). In all micro-regions, the foreigners account for a lower child dependency ratio than that of the total population. The foreigners exert the strongest negative influence on the former ratio in the wedge-shaped area situated from Budapest to the Serbian border and in the surroundings of Lake Balaton, which depends, on the one hand, on age distribution and, on the other hand, on volume effects.

In terms of the total dependency ratio, the area that stretches from Budapest to the Serbian border and the territory along the eastern border (just those regions where most migrants live) show a significant improvement due to foreign migrants, while aliens made it worse in the area of Lake Balaton (in consequence of the high proportion of the elderly).

In sum, the following statements can be made:

Owing partly to the population loss of Hungary and partly to the increase in the number of migrants, foreigners and within this, foreign nationals from the neighbouring countries have an ever-increasing influence. So, over seven years (2001–2008), the proportion of non-Hungarian nationals increased from 1.08 to 1.74 percent, showing a 60 percent growth.

In terms of territorial distribution, Budapest and its agglomeration account for a major part of foreigners, while the micro-regions along the borders and the surroundings of Lake Balaton for a smaller proportion. Budapest, where the majority of non-European citizens live, plays a central role and is able to recruit highly qualified workforce from greater distances. The vicinity of Lake Balaton is a destination more characteristic for the citizens of the EU15 countries; while the micro-regions along the borders are only local destinations.

Against many other so-called large host countries (for example the US, the United Kingdom, Italy, Spain, Australia, etc.), those foreign citizens choose to live in Hungary, whose education level is similar to or better than the average level of the Hungarian population (human capital accrual) and who belong mainly to the Hungarian minority, so their integration is easier. The proportion of active-age people and taxpayers is also higher among foreign citizens.

Foreigners, as a result of their increasing number and demographic characteristics differing from those of the resident population, generate not only human but also economic added value and have a significantly positive influence on the regional socioeconomic processes in the areas preferred by them.

6. Budapest at district level

On 1 January 2009, 79 994 foreigners lived in Budapest. In another approach, the role that the capital plays as a migration destination is underlined by the fact that in

the beginning of 2009, 4.67 foreigners lived per hundred inhabitants there (the same indicator was 1.84 at national level). Naturally, this ratio is not evenly distributed in the city as shown by Figures 3 and 4. The 2nd, 12th, 5th, 6th, 7th, 8th, 10th 13th, 14th and the 11th districts are the most preferred ones. Naturally, the foreign nationals, according to their nationality, show different patterns in where they live.

Figure 3. The number of foreigners in Budapest by district, 1 January 2008

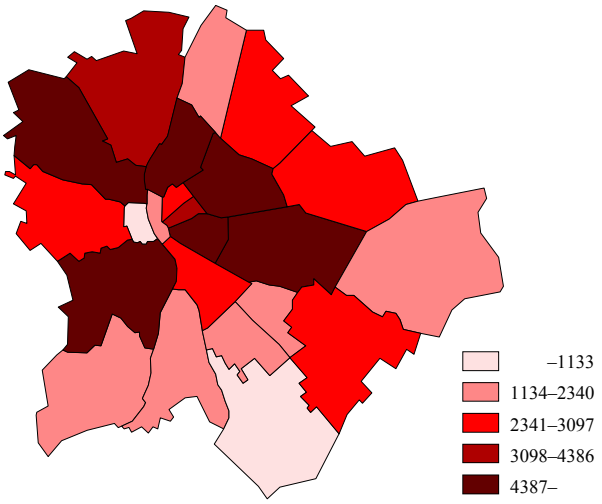
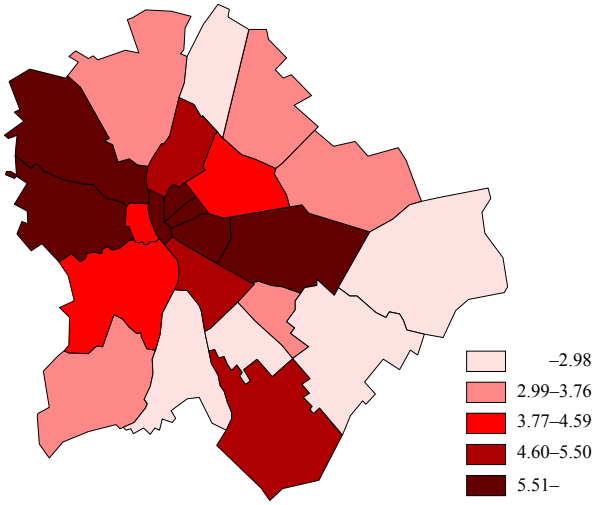


Figure 4. The proportion of foreigners per hundred residents in Budapest by district, 1 January 2008
(percent)



In 2008, in the 2nd district, EU15 citizens (32 percent of foreigners living in this part of the capital) and Asians (23%) predominated, and many Americans lived there too (6%). Romanians accounted for only 16 percent, which was less than half of their Budapest-wide average of 41 percent. The 12th and 5th districts showed similar ratios, in the former district the proportion of people from the EU15 was 34, from Asia 14, from America 9, from Romania 18 and from the Ukraine 5 percent, in the latter district the respective figures were 28, 18, 5, 16 and 12 percent. In the 6th district, the share of foreigners from the EU15 (19%) and from the American continent (4%) was still relatively high, but Asians (21%), Romanians (25%), Serbians and Montenegrins, as well as Ukrainians (7 and 7 percent) accounted for a larger proportion. There was an even greater shift in the 7th district (10 percent for EU15 citizens, 19 percent for Asians, 35 percent for Romanians and 8 percent for Serbian-Montenegrins or Ukrainians). In the 8th district, the Asians gave 36, the Romanians 38, the Ukrainians 7 percent, while the respective figures of the 10th district was 53 percent (!) for Asians, 27 percent for Romanians and 7 percent for Ukrainians. The latter was the only district in the capital where Asians accounted for a majority of foreigners due to the market operating there, which influenced them in choosing a place to live.

The ratios of 2001 were highly similar to the distribution of 2008. It is noticeable that the proportion of Asians in the 8th district decreased from 43 to 36 percent during the examined period but there were, besides, no significant changes in the citizenship structure of the districts. It is especially interesting because a rehabilitation programme was carried out in the slum area of the 8th district, which may be associated with the experienced change.

On the whole, foreigners living in Budapest show a varied picture by citizenship, much different than in other parts of the country. Citizens of 158 countries live there. This city accounts for 58 percent of Africans, 77 percent of Asians, 56 percent of Americans residing in Hungary. The more distant the country of origin is, the more probable that the capital will be the primary destination. 36 percent of those arriving from the neighbouring countries (41 percent of the incoming Romanians, 36 percent of the Ukrainians, 23 percent of the Serbian-Montenegrins, 35 percent of Slovaks, 47 percent of Slovenes, 20 percent of Croats and 17 percent of Austrians) live in Budapest. The capital has a remarkable number of dwellers originating from the EU15, Slovakia, Turkey, China, Vietnam, Serbia and Montenegro, the Ukraine, Italy and Syria. However, nominally, Romania has the highest proportion (with 37 thousand people). In terms of the intra-Budapest international migration balance, foreigners show a volume increase in all districts as shown by Table 6.

This analysis confirms that those districts have the highest rates of increase where there were many foreigners in the previous period. It justifies the network characteristics of migration: foreigners move to that place where they have better options to be

integrated and the home prices are lower. Several research projects on migration came to the conclusion that the migrational relationships are determining and the established migration patterns have overriding importance.

Table 6

The growth rate of the number of foreign residents in Budapest by district
(previous year=100 percent)

District	2002	2003	2004	2005	2006	2007	2008	2002–2008
I.	110.94	103.95	96.93	109.34	138.29	106.37	106.09	190.74
II.	110.78	106.21	105.47	92.99	145.78	112.73	108.35	205.46
III.	108.84	95.91	143.63	87.16	107.05	104.21	100.76	146.89
IV.	121.46	97.27	117.65	115.76	101.08	107.55	100.73	176.20
V.	109.92	93.69	90.36	127.85	153.60	104.59	108.47	207.32
VI.	107.99	98.20	94.56	120.24	139.08	109.99	106.78	196.94
VII.	115.19	94.49	87.97	135.10	127.72	110.28	108.11	196.98
VIII.	119.47	93.59	102.66	125.80	128.29	105.61	105.75	206.88
IX.	103.50	98.62	99.81	128.07	126.04	106.43	107.78	188.65
X.	121.59	99.07	105.21	130.76	120.55	103.75	108.87	225.66
XI.	102.31	97.71	172.00	67.44	126.85	106.90	104.75	164.73
XII.	106.37	98.98	93.03	108.43	140.14	111.40	106.32	176.27
XIII.	114.93	100.75	93.12	141.43	122.63	96.76	109.39	197.93
XIV.	110.33	96.10	144.33	87.03	115.51	107.05	110.00	181.15
XV.	114.87	97.89	97.43	139.62	109.99	105.44	105.01	186.27
XVI.	117.16	100.92	101.36	136.38	110.22	103.79	105.16	196.63
XVII.	111.10	99.30	106.91	137.73	112.60	101.79	102.07	190.06
XVIII.	103.03	99.47	99.19	138.02	110.74	103.90	103.45	166.99
XIX.	118.05	99.63	100.45	130.42	112.12	103.75	103.03	184.66
XX.	105.52	101.31	118.34	121.81	105.18	107.36	106.91	186.01
XXI.	114.29	100.63	99.82	137.33	109.72	109.28	106.30	200.93
XXII.	108.61	102.21	100.81	127.28	115.81	104.00	105.08	180.28
XXIII.	206.20	102.26	149.63	122.36	160.44	110.14	115.68	789.15

Source: HCSO database.

In Hungary, the significant domestic migration deficit decreased continuously, most dynamically in the last 4–5 years with the consequence that in 2007, Budapest, as a whole, showed a surplus! However, domestic migration towards the capital does not increase considerably. It confirms the significant role of international migration

in substituting domestic migration, which is also underpinned by the results of population forecasts required to formulate development plans.

The open and crossable borders enhance international migration. The population forecast that was prepared at the end of the last year – as part of the Budapest transport plan, breaking down data by the territorial units of the master plan – indicates the likelihood of a smaller increase in the number of immigrants until 2036 as a probable scenario, within which Budapest will have a 70 percent share. As a result, in the next 30 years, 240 thousand foreign nationals are needed to *offset the natural loss resulting from the aging of the population of Budapest and from suburbanization*. The envisaged size of the population is 1.7 million heads for 2036 including a foreign population accounting for 17 percent. Major factors in the change of the number of foreign nationals are that who will try to get citizenship and what the legal frameworks of implementing this endeavour will be like.

There is no decrease in international migration and in its diversity, which makes it necessary for the city management to perform strategic functions in the formerly mentioned areas with the purpose of generating added value in the capital city.

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Major Stakeholders in the Transformation of the Hungarian Enterprise Sector between 1987 and 2007*

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The authors have been researching the enterprise sector in Hungary for more than two decades. In 2009, a new analysis was launched with a long-term approach to study this field based on a special statistical database of ECOSTAT. This database contains data on all enterprises that filed a corporate tax return with the Tax and Financial Control Administration. The present article features the following three aspects of the multiple processes taken place in Hungary in the last two decades: the way that led from the centralized system to the "country of micro enterprises"; the characteristic differences of enterprises by domestic or foreign owners; and the degree of export concentration.

KEYWORDS:
Enterprise.
Investment.
Exports.

* The present paper is based on the study currently being prepared within the framework of "The evolution and changes of Hungarian enterprises between 1992 and 2008 – in particular the situation and future of small- and medium-sized enterprises with respect to their competitiveness, by management data of enterprises" research project being carried out at the Budapest College of Management between 2009 and 2010, to which ECOSTAT provided research database.

Since the end of the 1980s, Hungary has experienced a growth in the number of enterprises, unprecedented in its history. However, the impetus of the rapid increase broke in the middle of the 1990s as a consequence of, inter alia, foreseeable saturation, and then self-correction as well as market-based selection of enterprises started. In other words, a clarification process began as a result of which only active enterprises having stabile market position "stay alive". The rapid changes were followed by slower transformation processes, in which – instead of volume increase – replacement of enterprises, structural changes and shifting of positions can be witnessed. These processes are also underpinned by the improved total effectiveness of enterprises.

1. The way that led from the centralized system to the "country of micro enterprises"

Of the Eastern European countries, Hungary was all but unique in that the mixed economy's political conditions had been established by the end of 1987, under which the self-dependent state corporate-cooperative sphere, the "socialist sector" could be organically complemented with the private sector. This concept was also embodied in legislation: in the course of 1988–1989, a new tax system was introduced; essential laws were made on liquidation, commercial enterprises, the transformation of enterprises, corporations and cooperatives, as well as on foreign investments. As a combined effect of the established legislative framework, the political changes and the unfolding economic processes, a rapid transformation started in the organizational structure of the economy following 1990–91. The Law of Business Associations, which entered into force on 1 January 1989, became a platform to processes proved to be irreversible in the composition of economic stakeholders. The fact that the economic regime change preceded the political regime change by two years, retrospectively, is of inestimable importance to the future.

In 1989–90, a number of laws/regulations were elaborated in business legislation, which opened up a road towards a multi-sector economy as well as were suitable, ahead of the political changes or in line with them, to ensure a return for the Hungarian economy to the Western European capitalist way. At the end of 1989 and at the beginning of 1990, overall deregulation was implemented in the legal system: the administrative barriers to the market economy were removed and economic legisla-

tion provided a new foundation for the Hungarian economy. The establishment of the complete economic legal system was of longer duration than the first election term (Antall–Boross Government (1990–1994)) and it ended in 1995–1996. The adoption of the essential laws of the Hungarian market economy was an advantage for the country in the course of EU accession and legal harmonization.

The right to privatise was in the centre of the economic regime change: the country turned from a structure based on the absolute superiority of socialist state property to a system resting on the dominance of private property. Hungary as the earliest of the former socialist countries started the privatization process in 1989. The Law of Business Associations served as its legislative basis. The first stage of privatisation ("spontaneous privatisation") roughly lasted for a three-quarter year period and it affected a maximum of two percent of the state sector.

Later, spontaneous privatisation was replaced by state-managed compulsory privatisation. Ordered by the acts of 1992, 99 percent of the state-owned companies were compulsorily transformed into joint-stock companies (90%) or limited liability companies. The legal form of state-owned companies ceased to exist; its place was taken over by the trading company form of state companies. Mass privatisation, the market-based sale of state property was implemented in 1995–97 under the Privatisation Law.

The national wealth, which had been nearly completely nationalized after 1945, became privately owned over a decade and half, that is, historically during a very short period. Privatisation played a determining role in the establishment and revivification of the market economy: while the proportion of state property exceeded 85 percent at the beginning of the process, nearly four-fifths of the Hungarian economy was in private hands in the middle of the first decade of the 21st century.

The pillars of the economic organizational structure of the one-party system, the state-owned companies and the cooperatives were transformed, privatised, dissolved, or they ceased to exist. Between 1989 and 1994, the number of state-owned companies decreased to one-fifth–one-fourth, their total turnover of HUF 3 117 billion, at current prices, lessened to HUF 230 billion. Meanwhile, the number of limited liability companies increased 175-fold, their total turnover 45-fold, the number of joint-stock companies 11-fold, their total turnover twenty-fold, and the number of other enterprises 62-fold and their total turnover seventy-fold. The number of cooperatives grew by 80 percent, but their total turnover, at current prices, decreased by a third.

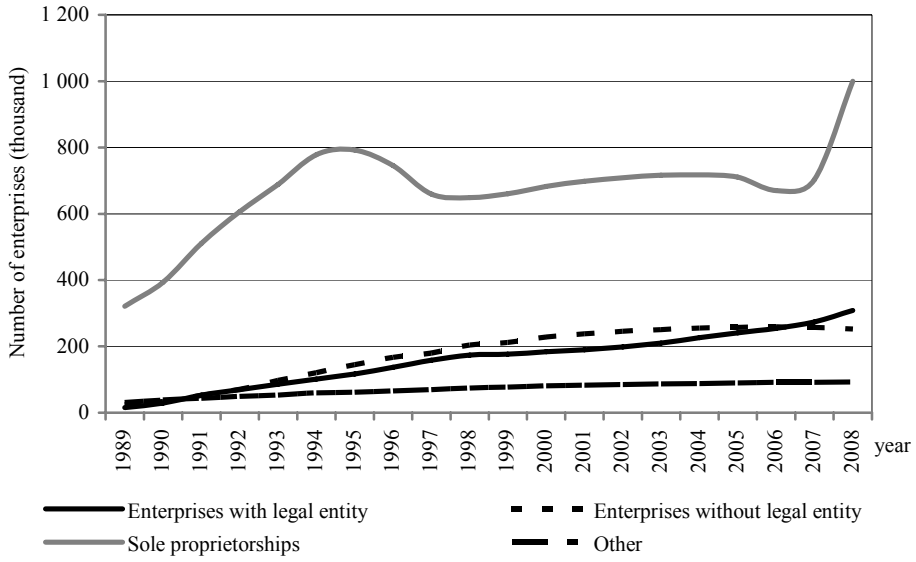
At the end of these processes (by 1995), a new property, economic organizational structure came into existence, which showed smaller changes in its internal proportions until 2000 and no significant changes later. Thus, in its main lines, this structure meant the new Hungarian economy.

Between 1985 and 1991, with respect to their number, medium-sized enterprises with a statistical staff of 50–1 000 formed the largest volume. They were followed by

large enterprises; the micro and small enterprises constituted only a tiny proportion. The actual structural change took place between 1992 and 1994: the number of enterprises with 1–9 employees increased eighty-fold, that of enterprises with "0" person forty-fold, with 10–19 employees fourteen-fold, while the number of enterprises with 50–299 persons grew only 1.7-fold from 1991 to 1994. The number of enterprises employing 300–1 000 persons decreased by nearly forty percent and that of even larger ones by forty-five percent. By the middle of the decade, the centralized structure of large companies completely disintegrated, and, as for the number of enterprises, Hungary became the country of micro and small enterprises.

However, in general, not an increase at different rates but as a whole, an ongoing decrease was the common feature of the structural changes observed in different dimensions, which aggravated the necessary transformation. Around at the end of the mid-third of the 1990s, the outcome of stronger recession and slower development reached that threshold, where the result of the structural transformation became positive. In any case, it seems quite certain that the great structural changes, with regard to property relations, economic branches, legal forms, the emergence of new enterprises and the legal, regulatory background (except for the areas of the state budget and welfare), have got near to a dynamic resting point: no transformation similar to the scale of the past half decade should be anticipated, ceteris paribus.

Figure 1. Expansion of the enterprise sector



Source: HCSO database.

1.1. The role of working capital in the transformation

Foreign direct investments (FDIs) played an outstanding role in the transformation of the property and enterprise structure of Hungary.

Concerning foreign capital investments, the Hungarian economy was in a more favourable position than its counterparts in the 1980s. This is partly rooted in subjective, partly in objective reasons. Of the subjective factors, the traditional historical relations, the relative openness and small size of the country, as well as its better-than-average reputation resulting from its reform efforts may be mentioned. Of the objective elements, its regional location and the level of its economic, legal and financial infrastructure shall be referred to. In a combined way, these aspects became stronger at the end of the 1980s as a result of the successful international role of the country. Therefore, in the first half of the 1990s, Hungary attracted nearly a third – 31.4 percent – of all foreign direct investments of the Central and East European region.

Table 1

The inflows of foreign direct investments into the successor states of the former socialist bloc
(USD million)

Country	Year		
	1994	1995	1990–95
Hungary	1 146	4 400	11 200
Poland	1 875	2 500	7 148
Czech Republic	878	2 500	5 666
Slovakia	187	200	775
Slovenia	87	150	501
Albania	53	75	205
Bulgaria	105	150	412
Romania	340	400	933
Other Balkan countries	120	100	300
Former socialist countries without the successor states of the Soviet Union	*4 791*	*10 475*	*27 140*
Baltic states	430	400	1 280
Russia	1 000	2 000	4 400
Ukraine	91	113	574
Other countries of the Commonwealth of Independent States	640	800	2 300
Total	*6 952*	*13 788*	*35 694*

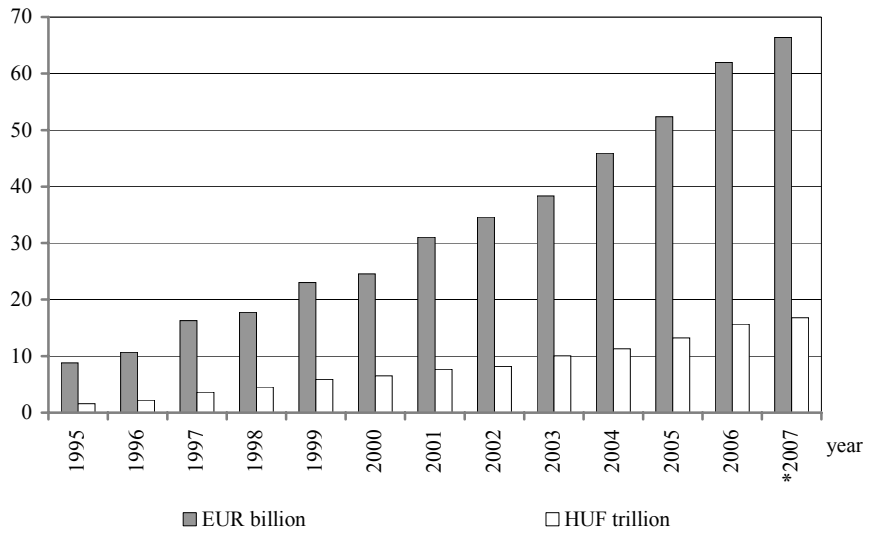
Source: *Magyar Hírlap* [1996]: Növekvő külföldi tőkebefektetés Kelet-Európában, Magyarország az élen. (Increasing Foreign Direct Investment in Central Europe, Hungary at the Head of It.) 26 March. p. 11.

Until 2001, Hungary, as for both privatisation and green field investments, was a prime target area in the region for western investors. Foreign direct investments amounted to USD 56.9 billion up to the end of March 2006.[1]

According to an UNCTAD report[2], in terms of FDI stock, Hungary became the third with a total of USD 97 billion behind Poland (USD 142 billion) and the Czech Republic (USD 101 billion) in the Central and South-East European region in 2000. The combined share of these countries was 72 percent in 2000 and 57 percent in 2007. In the period of 2000–2007, on average, the stock of foreign direct investments flowing into this region increased five-and-a-half-fold, while that of the three countries 4.3-fold. This outlined tendency is likely to continue, especially Romania, Croatia and Bulgaria may be the preferred target areas in the near future.

In Hungary, FDI amounted to a total of nearly EUR 62 billion in 2006 and to an estimated total of EUR 66 billion in 2007.[3]

Figure 2. The stock of foreign direct investments in Hungary



* Data of 2007 is estimated.

Source: Database of the National Bank of Hungary.

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In the first half of the 1990s, privatisation investments played a significant role in the first wave of foreign direct investments. Between 1991 and 1997, EUR 4.6 billion was invested in the context of privatisation (half of that in 1995). Of these, the privatisation of MATÁV, the gas suppliers and the power stations accounted for the highest revenues. Significant privatisation events of the 2000s were the privatisation of the Postabank in 2003 and that of the Budapest Airport and Antenna Hungária in 2005.

Out of sales items, the volume of stocks and other shares were of outstanding importance in 1995 and 2005: it was a two-year period of major privatisation revenues. 2003 was the only year when, though both capital investments and withdrawals reached outstanding values, on the whole, capital withdrawal took place. (Note that there was a strong speculative attack against the Hungarian forint in that year.) Currently, reinvested incomes account for a considerable amount, but their share – similarly to other items – is rather fluctuating concerning foreign direct investments.

In the post-1998 period[4], the main investor countries had/has a steady share, the amount of capital invested by single main partners increased in a quite similar geographical structure.

Traditionally, Hungary has strong economic relations with Germany. German firms have investments in most sections of the economy. The share and dynamics of their investments are the highest among foreign investors, their stock has more than doubled since 1998 and approximated EUR 13 billion in 2005. Foreign direct investments from the Netherlands have showed the highest increase in share and growth rate. Austrian companies, as a result of vicinity and historical traditions, are also important economic partners of the Hungarian enterprises. FDIs from Austria amounted to a total of EUR 5.2 billion in 2005. FDI stock from France (EUR 2.1 billion) and Luxemburg (EUR 1.6 billion) is also of significant value.

Manufacturing accounted for 40 percent of foreign direct investments. Within that, the capital investment stock of the vehicle manufacturing sector continued to grow most dynamically: it increased nearly six-fold between 1998 and 2005, reaching the value of EUR 4.9 billion. This was followed by the manufacture of electrical equipment and instruments and appliances for measuring, testing and navigation, where the stock of investments raised more than three-fold and exceeded EUR 4.1 billion in the observed period. The manufacture of chemicals and chemical products showed a similar outstanding growth (in total four-fold increase in capital investment during the formerly mentioned seven years).

The volume of investments in service activities, both in 2004 and 2005, were in excess of manufacturing investments. There was a rise in the dynamics of single sector branches, especially in business support service activities and in the areas of trade and telecommunications.

[4] Data of branches and countries are available from 1998.

When analyzing capital flows in a national and sector breakdown, larger-scale changes can be observed over the years: individual transactions may completely alter what proportion a country or a branch has. Accordingly, different countries and sectors may have dominance in certain years. In 2005, for example, the EUR 2.8 billion share of the United Kingdom and the majority of the share of "Activities of holding companies" (EUR 2.1 billion) within "Real estate and business activities" derived from the privatisation of the Budapest Airport, and in the fields of transport, storage and telecommunications, a part of investments linked to the privatisation of Antenna Hungária.

1.2. The transformation of the enterprise sphere: growth and structural change

Regarding the number of enterprises (both sole proprietorships and partnerships), the post-1989 economic transition ended in 1995–1997. In these years, the rate of the previous structural change – that could be mainly characterized by the number and composition of economic stakeholders – slowed down considerably and the "revolutionary" changes ended. A new order came into existence for enterprises and legal forms, and this new economic structure continued to develop in a stage of the internal evolution of newly emerging and, as a result of market competition, disappearing enterprises.

The dynamics of the changes of the 1990s are well shown by the fact that there was a nearly three-fold increase in the number of enterprises in six years (between 1989/90 and 1995/96), and with the replacement of the centralized organizational structure, Hungary became the country of small enterprises by the turn of the millennium, regarding international data, we may say to an excessive degree.

At the end of 1989, 360 thousand enterprises and 31 thousand other (non-profit) organizations operated in Hungary. Although sole proprietorships (320 thousand) accounted for the majority of enterprises, the number of enterprises without legal entity (mainly economic associations) was also significant (24 thousand). Cooperatives (7 500) and limited liability companies (4 500) formed the majority of some 15 thousand enterprises with legal entity. However, the rate of centralization is shown by the fact that the number of state companies that accounted for the major share of output and operated the largest part of fixed assets was only 2 400.

The number of registered enterprises reached a high of 1 053 thousand in 1995; in conjunction with them, altogether 1 115 thousand economic organizations were registered in Hungary. Later, the number of sole proprietorships decreased as a result of which, at the end of 1997, the number of registered enterprises were under 1 million (998 thousand) and that of registered economic organizations decreased to 1 067

thousand. Of enterprises, sole proprietorships decreased from 791 to 660 thousand, while limited partnerships increased from 107 to 140 thousand. After 1997, the number of sole proprietorships grew slightly and it settled around the level of 20 000 from 2000 onwards. Since 2001, the dynamic rise in the quantity of joint enterprises has come to an end and was tending to stabilise around the level of three hundred thousand. Despite the significant total decrease – which could be interpreted as a kind of self-correction or clarification – and taking into account that the number of families in Hungary is nearly 3 million, it can be stated that, on the average, every third family took part in some kind of individual enterprises. Although it is true that a part of these enterprises was only virtual with respect to market presence: only 70 percent of the registered sole proprietorships (only 62 percent of them in 1996) and 85 percent of the limited partnerships were actually active at the end of 1997. Nevertheless, one may say that in a historical context with singular rapidity, the significant part of the Hungarian society became entrepreneurs by the second part of the decade whether out of compulsion or based on real economic assets offered by the market, or founded on loopholes of market regulations.

At the beginning of the transition, from 1992/1993 to 1997, the headcount of large enterprises decreased by more than ten percent (nearly three hundred thousand people) owing to the privatisation as well as to the liquidation and division of a part of large enterprises. Then it increased along with the number of enterprises and by 2006 approximated the value of 1992.

At the end of 1997, enterprises with legal entity, whose structure was also characterized by a large-scale transformation, gave the majority of output against a numerical preponderance of sole proprietorships and limited partnerships. The number of partnerships increased around eight-fold between 1989 and 1997. Within this, the number of cooperatives hardly changed (7 546 cooperatives were registered in 1989 and 8 330 in 1997), but the number of limited liability companies increased 23-fold and that of joint-stock companies more than ten-fold (from 307 to 3 929). Limited liability companies accounted for 90 percent of partnerships in 1997. 85–90 percent of the registered limited liability companies and joint-stock companies were active; but it was the case for only slightly more than half of the cooperatives.

In the middle of the 1990s, the several-year-long processes changed significantly, which was expressed by the increasing trend of the number of enterprises and by the changed proportion of active registered enterprises. This latter factually meant that self-clarification started in the middle of the decade after the pace of the initial enterprise boom ran down: the permanently non-active enterprises continued to phase out from the marketplace, so the real market stakeholders accounted for an ever increasing proportion.

The explosive growth in the number of enterprises that was a characteristic of the beginning of the 1990s came to an end around 1994–95. As its first sign, there was

no growth practically in the number of registered sole proprietorships in 1995, then, in 1996 their figure decreased by 45 thousand and in 1997 by a further 86 thousand. At the same time, the rate of increase in the number of partnerships also declined considerably and it was supplemented with an organizational change by which the number of enterprises with legal entity (mainly limited liability companies) became close to that of enterprises without legal entity (essentially limited partnerships).

The increase in the ratio of active to registered enterprises was another well-perceivable change of the middle of the 1990s, mainly among enterprises without legal entity. It could be considered completely normal that at the beginning of the decade, in connection with the economy-wide transformation, a number of enterprises were established under constraint or to exploit legal rules without real economic base, which – as a result of the changes in rules – became not viable to operate and even their formal operation generated an ongoing loss. In this sense, one can identify it as self-correction of an uncontrolled, run-away process, as a kind of self-clarification. The ongoing slight improvement came to an end around 2002–2003, the trend turned into a decreasing direction and there was an increase in the ratio of non-active to registered enterprises.

While the overall slow increase in the active/registered ratio could be regarded positive, its rates and absolute values are not so. In total, enterprises accounted for an average active/registered ratio value of 59 percent in 2006, that is, more than two-fifths of enterprises had neither employee, nor revenue. 72 percent of the registered enterprises with legal entity and 63 percent of the registered enterprises without legal entity were active. At the same time, nearly half (47%) of the sole proprietorships, which accounted for the largest proportion, did not operate. Of enterprises with legal entity, around eighty percent of the joint-stock companies were active; but the relevant value of limited liability companies was similar to that of limited partnerships, which have no legal entity (73 and 71 percent, respectively). According to a HCSO report, enterprises with "0" person had the lowest proportion of active enterprises (only 17 600 in 2006).

1.3. The transformation of legal forms

The centralized economic structure – which had operated as a system specific element during the previous period – loosened in the 1980s, then, at last, it was disintegrated and permanently transformed between 1989 and 1995. The transformation of companies was mainly about the division and disintegration of joint-stock companies and the establishment of limited liability companies. Between 1995 and 2000, the companies, in terms of their headcount, net revenues, etc. became statistically unidentifiable.

In the period of the transition, new enterprises with legal entity were mainly established as limited liability companies, while nearly all enterprises without legal

entity as limited partnerships. Joint-stock companies (that replaced state companies) demonstrate the characteristics of large enterprises in terms of their operation and management, but limited liability companies show a varied picture: on the one hand they are similar to large enterprises; on the other hand the features of small- and medium-sized enterprises may be identified in them. Micro and small enterprises, which are mainly family enterprises, account for a part of the limited liability companies and for nearly the total of the other legal forms (overwhelmingly limited partnerships). Though, as a result of their small size, the proportion of other enterprises in sales, assets and tax revenues is only some percent, their role is highly significant in employment: a slowly increasing part of the total average statistical headcount reported by the enterprises of the database was employed by them (14 percent (altogether 296 thousand persons) in 2007). Likewise, 43 thousand enterprises with "0" person (self employed persons) operated in Hungary, together with which the number of employees could be significantly above 350 thousand.

The structural change of limited liability companies – namely a shift from smaller enterprises to larger ones, which was showed by an increase in the performance of exports – is reflected by the changes in both total and export turnover. This sector accounted for 56 percent of export sales in 1995 and for nearly three-fourths of them in 2000. As its reverse side, joint-stock companies, cooperatives and other legal forms (limited partnerships) fell back in production of sales revenue.

Among forms of management, which also reflect partly the size of enterprises, there is a characteristic difference between fixed and current assets: joint-stock companies comprising rather larger companies have significantly larger share of fixed assets than that of current assets. However, limited liability companies, limited partnerships and cooperatives account for a larger share of current assets.

Similarly to assets, there are also typical dissimilarities among different legal forms concerning liabilities: the involvement of external resources features limited liability companies and limited partnerships, while own resources are of primary importance at joint-stock companies and cooperatives.

1.4. The size of enterprises, the degree of organizational decentralization

A natural corollary to the hierarchical economic organization is the concentration of assets, labour, inputs and outputs, whose "carriers" were formerly the state companies. In 1989, this legal form had more than four-fifths of fixed assets and more than two-thirds of employees. In the subsequent two years, a significant part of these companies was transformed into joint-stock companies and a smaller part of them into limited liability companies. At that time, the other ideological pillar of the pre-

vious system, the cooperatives showed only a smaller decrease, primarily in the number of employees.

The significant fall in the asset concentration of enterprises is indicated by the stock of fixed assets per enterprise as well as by the number of employed persons per enterprise. The change was extremely rapid: the average asset value and headcount was HUF 206 million and 222 persons in 1989 against the respective values of HUF 76 million and 60 persons of 1991 owing to the growth in the number of enterprises without legal entity. Nevertheless, the average asset values of corporations and limited liability companies remained nearly unchanged, while those of joint-stock companies significantly increased. The radical decrease in the number of employees took place primarily at corporations, secondarily at cooperatives.

Between 1992 and 2007, the number of partnerships increased three-fold, their GDP output at current prices grew ten-fold, but the number of persons employed by them slightly decreased. Consequently, concerning employee numbers, the size of an average enterprise lessened from 21 persons to its third.

As for partnerships, the average balance sheet total per enterprise at current prices increased 6.3-fold, while the number of enterprises following the "foundation boom" increased by only seventy percent, which resulted in a 3.7-fold growth in the asset value per enterprise. Of assets, the value of current assets per enterprise indicated the most rapid increase.

Of fixed assets per partnership, "Plant and Machinery" rose most quickly (2.6-fold), but there was no considerable difference among single types: average "Tangible assets" per enterprise increased 2.56-fold, "Land and buildings" 2.45-fold.

The reduction in the average enterprise size experienced in the first half of the 1990s continued at a lower rate. It is apparent in the changes of the average wealth/reserves on the resources side: between 1995 and 2007 the called up share capital per enterprise grew by only 27 percent, which is a significant decrease in real terms. Lagging behind the 3.7-fold increase of assets, the rise of average capital and reserves per enterprise was three-fold. These two show a growth of the average indebtedness of enterprises and that of the average size of their short- and long-term liabilities.

2. The characteristic differences of enterprises by domestic and foreign owners

Between 1995 and 2007, the number of those enterprises, which were included in the database and filed a corporate tax return, grew by 70 percent. While the proportion of wholly domestic-owned enterprises increased by six percentage points during

this period, there was no change in that of the wholly foreign-owned ones. Thus, the numerical proportion of enterprises with mixed ownership significantly decreased, and "other associated enterprises" (0–25 percent foreign share in the founders' assets) essentially disappeared.[5] So enterprises became polarised: they are either wholly domestic- or wholly foreign-owned enterprises, the proportion of "mixed" types is negligible.

As for the average statistical staff reported by enterprises, other proportions are typical compared with the previous ones: the wholly domestic-owned enterprises accounted for around three-fourths of the total number of employees in the observed twelve years. The number of employees of other associated enterprises and partnerships showed a 75 percent decrease, while the proportion of persons employed by subsidiary companies and wholly foreign-owned enterprises significantly grew, one out of every four employees – a total of 360 thousand persons – was employed by these enterprises in 2007. Thus, polarisation in employment increased too: foreign subsidiaries and wholly domestic-owned enterprises accounted for nearly the total of the headcount in 1:3 ratio.

Compared to the previous ones, the structure of capital and reserves differ in every detail: the proportion of wholly domestic-owned enterprises decreased by one-third over the observed twelve years and did not reach the half (40%) of the total capital and reserves at the end of the period. Together with the other associated enterprises, it accounted for a value of only 44 percent. The combined proportion of wholly foreign-owned enterprises as well as subsidiary companies was 54 percent of capital and reserves, thus, foreign subsidiaries representing seven percent of all enterprises had the majority of capital and reserves and together with the associated enterprises a combined total of 58 percent.

In 1995 and 2000, the ownership ratios showed essentially the same values for called up share capital as for capital and reserves. However, there was a significant deviation in 2007: the share of wholly domestic-owned enterprises decreased at

[5] Distinctly from the practice of HCSO, the content of the categories used in analyzing foreign and domestic enterprises were determined according to the Act C. of 2000 on Accounting. Its Section 3; Subsection 2 sets out definitions based on the size of ownership shares, naturally irrespective of the owner's nationality. Starting from and slightly breaking down these definitions, hereinafter the following concepts are used: *1. Wholly domestic-owned enterprise*: the proportion of foreign called up share capital is zero percent. *2. Other associated enterprise*: the proportion of foreign called up share capital is higher than zero percent, but smaller than twenty percent. *3. Associated enterprise*: the proportion of foreign called up share capital is higher than or equal to twenty percent, but it is lower than or equal to fifty percent. *4. Subsidiary company*: the proportion of foreign called up share capital is higher than fifty, but lower than one hundred percent. *5. Wholly foreign-owned enterprise*: the proportion of foreign called up share capital is one hundred percent.

The referred Act does not use the first and last categories, they were created according to the previously specified aspects of this study. Our analysis shows that the separation of associated enterprises, subsidiary companies and wholly foreign-owned enterprises is of negligible importance, the economy is polarizing at the two ends named as "wholly".

half the rate as that of capital and reserves, that is, domestic owners had exactly the half of the total called up share capital, while solely foreign owners and their subsidiaries possessed 45 percent. It should be noted that associated enterprises played a much greater role in terms of capital and reserves and called up share capital than in terms of the number of enterprises or the number of employees in 1995. By the middle–end of the period, the significance of these enterprises became marginal; they became wholly foreign-owned presumably in the course of privatisation or with buyouts.

The original source of asset accumulation is the retained earnings/consolidated profit remaining after paying tax and disbursing capital income (dividends), which is indicated by an increase of other reserves in the course of years. Therefore, its growth depends on two factors: how much profit the enterprise has after taxes and how much dividend is paid and assets are accumulated.

In 1997, both majority-domestic- and majority-foreign-owned enterprises accounted for half of the retained earnings/consolidated profit shown that was modified to 40:60 by 2000 and to 43:57 by 2007. At the same time, the ratios regarding majority-foreign-owned enterprises changed significantly: the share of wholly foreign-owned enterprises was three-times higher than that of subsidiaries in 2000, but these ratios were clearly reversed by 2007.

Profit or loss is the sum of incomes minus costs, expenses, tax liabilities and dividends. Total turnover (net sales) is the aggregate of domestic and export turnover. Domestic turnover of majority-domestic-owned and majority-foreign-owned enterprises was modified from the 3:1 rate of 1995 to the 2:1 rate of 2000, that is to say, exports played a significantly larger role in changes of the revenues of enterprises. (In the following years, there was no change in the latter ratio.)

An average 40–50 percent of dividends are paid to foreign companies, 30–35 percent to domestic private entities and around 20 percent to domestic companies. The share of foreign private individuals (excluding some years when dividends were paid in an order of hundred billions) on average was very small compared with that of the others.

In 1995, there was hardly any identifiable difference between wholly domestic-owned and wholly foreign-owned companies in terms of the composition by the number of employees: respectively 91 and 89 percent operated with 0–10 persons and 99 percent of them with maximum 300 persons. The number of domestic enterprises employing over 1 000 persons was 106, while a total of a dozen such enterprises were in foreign ownership.

In 2007, there were larger and more essential differences: the wholly domestic-owned enterprises showed no change by size, but among wholly foreign-owned companies, the number of enterprises with more than fifty employees increased significantly. The number of domestic-owned enterprises with over one thousand per-

sons decreased to 63, while that of foreign-owned ones grew nearly four-fold to 47. It is clear from the foregoing that foreign-owned enterprises (that are subject to corporation tax in Hungary) have a more evenly balanced structure by enterprise size than wholly domestic-owned enterprises.

Table 2 shows the number of employees and GDP output of all enterprises and those of the foreign-owned ones (foreign-owned enterprises and subsidiaries together) by complex size categories.

Table 2

Enterprises in Hungary by enterprise size, 2006

Denomination	Number of employees	Proportion (percent)	GDP (HUF million)	Proportion (percent)
Large enterprises	814 509	34.7	6 287 809	50.6
– of this, foreign-owned	364 284	65.1	4 302 057	67.5
Medium enterprises	485 721	20.7	2 299 695	18.5
– of this, foreign-owned	117 329	21.0	1 014 366	15.9
Small enterprises	519 076	22.1	1 918 403	15.4
– of this, foreign-owned	51 502	9.2	461 162	7.2
Micro enterprises	526 886	22.5	1 926 687	15.5
– of this, foreign-owned	26 553	4.7	597 462	9.4
Total	*2 346 192*	*100.0*	*12 432 593*	*100.0*
– of this foreign-owned	*559 668*	*100.0*	*6 375 047*	*100.0*

Source: ECOSTAT database.

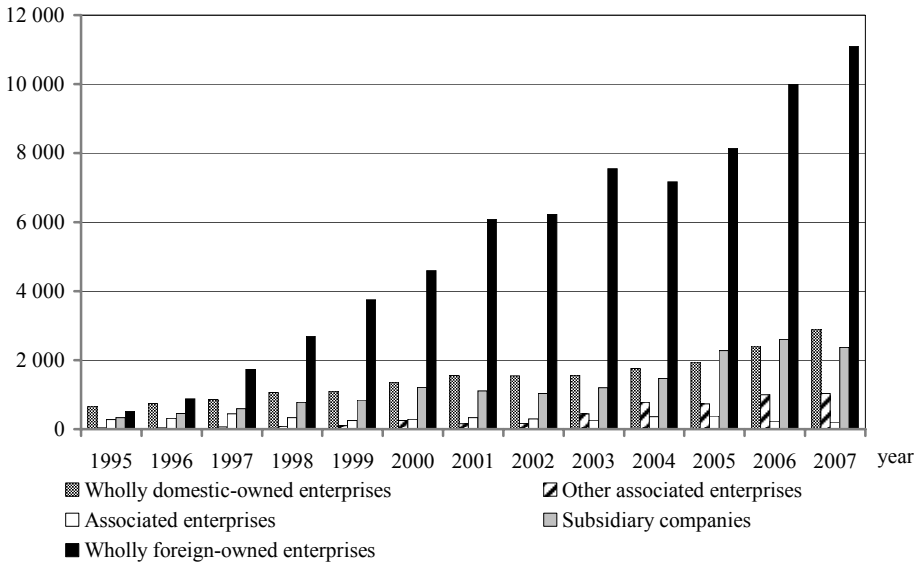
These data clearly indicates a close link between enterprise size and foreign ownership: foreign ownership is especially typical of bigger enterprises. Furthermore, in the referred year, the foreign-owned enterprises and subsidiaries accounted for a fourth of the employees of all undertakings and for half of their GDP. Thus, the GDP per employee figure of foreign-owned enterprises was two-times higher than that of all enterprises.

3. The degree of export concentration in Hungary

Between 1995 and 2007, there were significant changes in the distribution of export turnover. In the middle of the 1990s, the majority-foreign-owned enterprises

gave nearly half, the wholly foreign-owned ones 28 percent, while subsidiary companies 18 percent of it. As a result of a dynamic increase in the export turnover of majority-foreign-owned enterprises and a moderate growth in that of domestic-owned ones, wholly foreign-owned enterprises accounted for 59 percent of total sales in 2000, meanwhile subsidiary companies that showed only a slight decrease for 16 percent. In 2007 the same share of wholly foreign-owned enterprises approximated two-thirds and that of subsidiary companies exceeded one-eighths, so the majority-foreign-owned enterprises gave more than three-fourths of the total of export revenues, that is to say, seventy-five out of every one hundred forint. Figure 3 shows the changes in export revenues.

Figure 3. The export turnover of enterprises by ownership
(HUF billion)

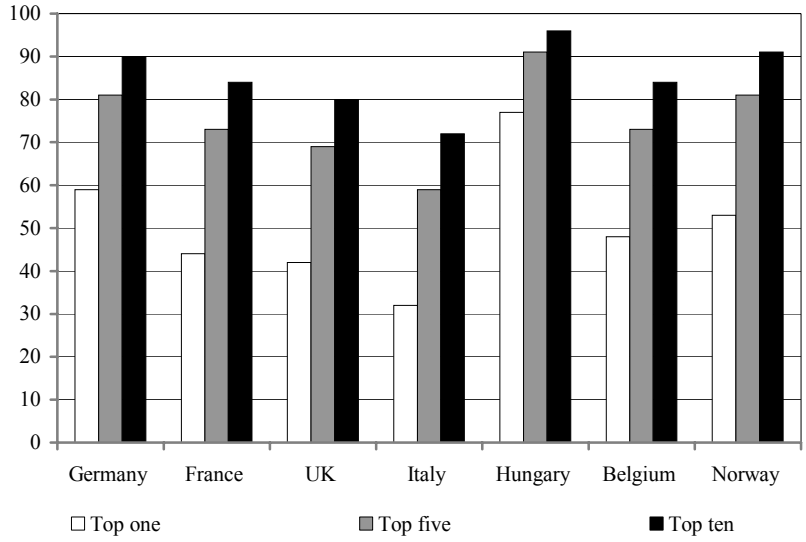


Source: ECOSTAT database.

One of the peculiarities of the Hungarian export performance is that the foreign-owned companies account for an overwhelming majority of the sales of partnerships. Another characteristic is the high level of organizational concentration. According to an EU research, in the manufacturing industry of Hungary, the top one percent of the exporting companies gives 77 percent of total export sales. The rate of concentration in Germany, which holds the second place, is less than sixty percent, while that of other observed countries is less than fifty percent. In Hungary, the top ten percent of

companies account for almost the total share (96%), the same value is below 90 percent in other countries.[6] (See Figure 4.)

Figure 4. The share of exports of top exporters, total manufacturing, 2003
(percent)



Source: MAYER, T. – OTTAVIANO, G [2007]: *The Happy Few: New Facts on the Internationalisation of European Firms*. CEPR Policy Insight No 15. Brussels.

The formerly referred analysis identified interactions between openness and export activity at the level of firms for 14 countries in the European Union. It showed that:

– the size of a country seems to be negatively related to its export participation rate (EPR). Germany, France, UK, Italy and Spain have an EPR in the range of 60–75 percent, Sweden, Denmark, Ireland, Belgium, Austria, and Slovenia in that of 70–90 percent. For the EU as a whole, the (weighted) export participation rate is 70 percent.

– for the export intensity rate the pattern is similar. The previous five large EU-countries have export intensity rates of about 30 percent. In the smaller countries an average firm of the database exports about 50 percent of its production.

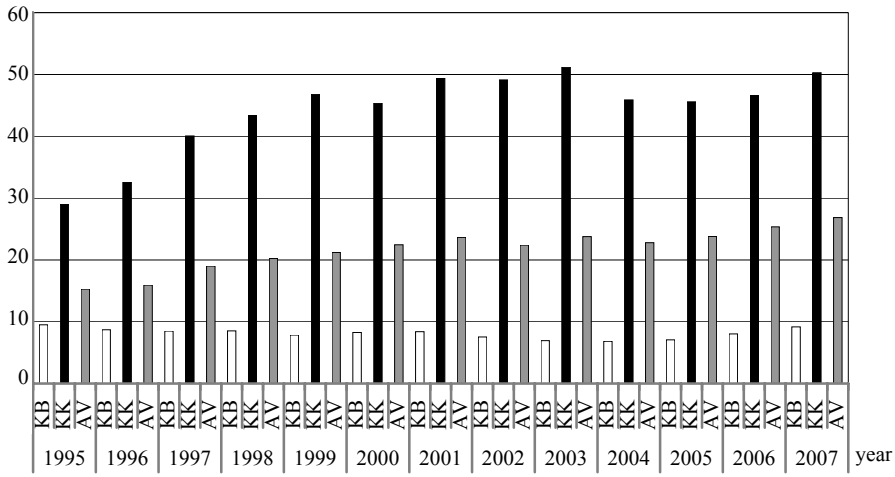
[6] COMMISSION OF THE EUROPEAN COMMUNITIES [2008]: *Commission Staff Working Document. Accompanying Document to the Communication from the Commission on the European Competitiveness Report 2008*. SEC(2008) 2853. Brussels. pp. 38–39.

These results are consistent with the fact that large economies are less open. Firms in small countries have to export or import to benefit from large markets. The outcomes seem to suggest that higher openness in small countries can be explained by more exporting firms (higher extensive margin) and by higher export intensity (intensive margin). The investigations also found evidence that the extensive margin (number of firms exporting) is more important than the intensive margin (average exports per firm). (See Footnote 6.)

Although Hungary belongs to the group of small and open EU countries, it does not correspond to the others with respect to extensive and intensive margins: among the 14 economies analyzed, Hungary had the third lowest EPR (48 percent) in 2007 after the UK and Norway, meanwhile EPR of Sweden, Slovenia and Belgium was 83, 81 and 80 percent, respectively. (See Footnote 6.)

Finally, it is necessary to highlight a very important conclusion of the referred working document on the relation between innovation efforts and export behaviour: the empirical analysis of firms shows a significant and sizeable innovation premium – exporters have five times more sales of new or improved products than non-exporters. (See Appendix.)

Figure 5. The proportion of export turnover to total turnover, 1995–2007
(percent)



Note. KB: wholly domestic-owned enterprises, KK: wholly foreign-owned enterprises, AV: average rate
Source: ECOSTAT database.

Analysing the ECOSTAT database, we are able to outline the level of concentration in Hungarian exports not only for manufacturing but for a wider sphere (for the

total sector of corporate ventures). For 2007 the database included 328 243 enterprises without those belonging to the "J" (financial) branch. The covered undertakings accounted for a total turnover of HUF 62 913 billion, from which HUF 17 609 billion derived from exports (28 percent). Export turnover per total turnover showed an increasing trend over the last fifteen years with an around two-fold increase in the average rate. The output of the wholly domestic-owned enterprises didn't change, while the production of the foreign-owned ones increased from 29 to 50 percent. (See Figure 5.)

Out of 328 243 enterprises, only 24 700 (7.5%) generated revenues from export activity. Against this low rate, they employed 953.5 thousand (44%) of a total of 2 170 thousand employees of enterprises. In 2007, exporters accounted for 41 percent of the total capital stock and for 55 percent of total owners' equity (capital stock plus retained earnings).

Table 3

The concentration of the Hungarian export activity

Denomination	Number of enterprises	Employee (thousand)	Export turnover (HUF billion)	Total turnover (HUF billion)	Stockholder's equity (HUF billion)	Owner's equity (HUF billion)
TOP 10	10	41	6 149	7 857	3 543	317
Share from exporters (percent)	0.04	4.3	34.9	18.8	23.4	8.4
TOP 25	25	70	8 351	10 649	4 673	555
Share from exporters (percent)	0.10	7.4	47.4	25.5	30.8	14.6
TOP 50	50	164	9 910	13 003	5 400	644
Share from exporters (percent)	0.20	17,2	56.3	31.2	35.6	17.0
TOP 100	100	133	11 444	15 891	6 213	923
Share from exporters (percent)	0.41	13.9	65.0	38.1	40.9	24.4
Exporters together	24 701	954	17 609	41 726	15 173	3 788
Share from all (percent)	7.5	43.9	100.0	92.1	54.8	40.6
All together	328 243	2 170	17 609	45 304	27 699	9 321

Source: ECOSTAT database.

Data of Table 4 show that the top 10–100 exporters' share from stockholder's equity is much larger than from owner's equity. The same is also true – although to a lesser extent – for all exporters, which underlines the fact that exporters have a substantially better ability to accumulate capital than non-exporters do.

*

In summary, examining enterprises subject to corporation tax by owners, the following conclusions can be drawn.

Until 2000, the changes were of great importance, the structural transformations were significant. Then the internal structure seemed "to settle down" and currently, no changes of a scale similar to that of the past period may be anticipated.

Micro and small enterprises account for an overwhelming proportion of enterprises, which is not due to organic development. Foreign-owned enterprises that are subject to corporation tax in Hungary show a more evenly balanced micro, small, medium and large enterprise structure by enterprise size than the wholly domestic-owned enterprises.

The wholly foreign-owned enterprises play a primary role especially in the larger enterprise categories (of over one thousand persons).

Domestic- and foreign-owned enterprises have become polarised: as time went by both wholly domestic-owned and wholly foreign-owned enterprises gained a greater importance, while the proportion of mixed enterprises – that had been established based on the foreign partner's (frequently a relative's) contribution in kind and the Hungarian partner's labour force at the beginning of the period (following 1989), in the era of "garage capitalism" – decreased.

Domestic- and foreign-owned enterprises show characteristic differences in their ability to accumulate capital as well as in their opportunities and endeavours. Foreign-owned companies represent much greater power in reinvesting profit after tax than the domestic-owned ones, so an ever increasing proportion of wealth accumulated in this way is concentrated in the hands of foreign owners. This process has both bright and dark sides: the foreigners' capital accumulation on the one hand increases national wealth and enhances the owners' attachment to the country; on the other hand it increases the risk since a possible withdrawal of foreign capital is accompanied by ever-increasing wealth and labour movements. The domestic micro-, small- and medium-sized enterprises – whose significant part was established under constraint without entrepreneurial experiences in the period of "garage capitalism" and suffered from the lack of capital – practically used up their profits and had no resources to accumulate capital, so they were not able to move up into higher categories. This partly resulted from the high level of taxes and contributions, which created extraordinary capital recovery requirements for enterprises.

Foreign-owned enterprises and subsidiaries increased their role in Hungarian exports to the greatest extent; thus, in this respect, the country's economy became absolutely dependent on the performance of these multinational companies in the analyzed enterprise population. Consequently, in a combined way, the Hungarian export performance finally showed two main characteristics: the foreign-owned companies generated an overwhelming part of the export revenues of enterprises, which was accompanied by an outstandingly high degree of organizational concentration in a European context.

In the observed period, the wholly foreign-owned enterprises were a driving force concerning GDP output, so at the end of the period, the domestic and foreign-owned enterprises both produced half of the GDP of those ventures involved into the analysis.

Polarisation by domestic and foreign owners as well as the fact that foreign-owned enterprises account for an increasing share in Hungarian exports have a detrimental influence on the domestic competitiveness of small and medium enterprises. Owing to the low-level participation of these latter in exports, there is no „learning-by-exporting" effect[7], reduction of X-inefficiency[8] or export market stimulated innovation and productivity.

Appendix

The "Observatory of European SMEs" survey (*The Gallup Organization* [2007]) contains information on the percent of sales generated by new or significantly improved products or services for each firm. This percentage can be used as an indicator of the firm's innovation efforts, which is run against export variables: an export dummy (whether or not the firm exports) and an export intensity dummy (ratio of exports to total sales). Using the export dummy, the results show that exporters are more innovative and have five times more sales of new or improved products. When export intensity is used, the innovation premium is even higher. The additional empirical analysis also showed that the innovation indicator is positively related to the proportion of imported inputs.

Export innovation premium (OLS regressions)

Denomination	2005		2006	
	Export dummy	Export intensity	Export dummy	Export intensity
Export variable (β)	5.43*** (0.77)	10.75*** (1.42)	5.28*** (0.78)	8.41*** (1.53)
Observations	3,617	3,613	3,69	3,69

Note. Constant term and control variables (country, sector and size class) were not reported. Standard errors in brackets: * significant at 10 percent; ** significant at 5 percent; *** significant at 1 percent.

Source: The Gallup Organization [2007]: *Observatory of European SMEs. Technical and Evaluation Report*. Flash Eurobarometer 196. http://ec.europa.eu/enterprise/enterprise_policy/analysis/doc/2007/04_technical_report.pdf; Commission of the European Communities [2008]: *Commission Staff Working Document. Accompanying Document to the Communication from the Commission on the European Competitiveness Report 2008*. SEC(2008) 2853. Brussels. pp. 42–43.

[7] Learning-by-exporting effect: firms participating in foreign markets are exposed to the best-practice technology and receive knowledge and information about processes and products.

[8] X-inefficiency: the difference between efficient behaviour of firms assumed or implied by economic theory and their observed behaviour in practice.

Two Social Aspects of Business Survey Activity in Hungary: Respondent Behaviour and End-User Needs

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In the present paper two important factors of the business survey activity are examined: the behaviour of responding companies and the need of end-users. In order to learn more about these two topics, two special surveys were conducted. The first one was carried out among non-responding firms, while the other ad-hoc survey gave a picture on the opinion and the needs of the consumers of survey figures. The authors focus on the following questions: Who exactly respond to the questionnaires and what is the reason for non-responding? Are the end-users really interested in business tendency survey data? Do they really need them? Do they percept the different nature of official statistical and business tendency survey information? Do they use them in business or private decisions? The latter part of the article analyses the demand for and popularity of the results of the business tendency surveys conducted by the GKI Economic Research Company from the point of view of Hungarian users.

KEYWORDS:
Information.
Economic indices.

Business surveys have been conducted in the economically developed part of the world for decades. In the East-Central European region, this method of information collection was adopted in the early 1990s. In Hungary, business surveys are popular among economists using primary research methods. The GKI Economic Research Company (hereinafter GKI) has been carrying out monthly surveys in the manufacturing industry, retail trade and the construction sector since 1996 and in the service sector since 1998. As well as GKI, several other institutes conduct this type of survey, such as Ecostat Government Institute for Strategic Research of Economy and Society, Kopint-Tárki Institute for Economic Research Ltd. and Hungarian Chamber of Commerce and Industry.

The essence of this method is that company managers are regularly approached to complete short questionnaires that can be filled out easily, without the mediation of an interviewer (whether in person or via telephone). The questions usually do not pertain to quantified information, but an evaluation of current and expected situations. The assessments and expectations are measured on a scale with three grades (managers may evaluate the level of inventories as high, average or low compared to the normal season). The non-quantified answers given to the questions can be transformed into quantified results. The responses received can be summarised easily and quickly, and any unrealistic answers from individual companies do not cause much harm, in contrast to the official collection of statistical figures. Following the arrival of responses, survey results can be published within a short period of time.[1] From the averages of the responses given to the questions, business confidence indices can be produced. They are suitable for compressing the sentiment of producers or service providers into single numbers.

In the field of business surveys, two distinct schools have emerged. The first school regards purchasing practices and their changes among industrial companies as the factor characterising the business cycle most adequately. Consequently, the representatives of this approach visit the purchasing managers of companies with their questionnaires, and the purchasing manager indices are compiled from their responses. This method is mainly popular in the US but it has become accepted in Europe as well (for example it is used by the Hungarian Association of Logistics, Purchase and Inventory). The second school focuses on the responses of executive managers of companies. Its surveys contain questions to evaluate the general state of the business and the perspectives of production (service), sales, inventories, employment, etc. This research method is generally used in Western Europe, and also in the transition countries of Central and

[1] It is important to note that GKI publishes its industrial confidence index two months before the official figures of the Hungarian Central Statistical Office are released.

Eastern Europe. In the EU member states, industrial surveys have the most significant traditions, although surveys have been conducted in the construction, retail trade and service sectors as well for several decades. These EU-commissioned surveys are coordinated by the Directorate General for Economic and Monetary Affairs of the European Commission. GKI is the Hungarian participant of this project.

Business survey activity has two important social aspects: it needs responses from the companies to compute the survey results and these figures must be logical and understandable to their readership, to the end-users. In this paper – on the basis of ad-hoc surveys – the most relevant features of the "input" and "output" sides are examined.

Since responding to business surveys is not compulsory in Hungary, their conduct is impossible without the participation of a representative sample of companies. When this occurs, researchers are unable to evaluate the responses properly. Therefore it is very important to review respondent behaviour from time to time, and for this reason, GKI also conducted a special survey to explore the respondents' intentions, motivations and behaviour patterns as was mentioned before.

In recent years, the number of economic information sources and the quantity of published information has increased throughout the world, including in Hungary. "Consumers" of economic information can now choose from a great variety. It is also possible to obtain a great range of empirical results using different methods. In that situation, what can we say about the end-users? Are business survey results really important to them? If one day we ceased publishing the results, would anyone take notice?[2] In order to get information about end-user habits and practices, GKI undertook a second ad-hoc survey with the aim of reviewing the opportunities for achieving better synchronicity between survey makers and the "consumers" of survey results. This included an online survey among participant companies of business surveys, organised interviews with representatives of governmental bodies and professional public, and also a media observation. On the basis of these surveys and interviews, the present study describes the opinions and attitudes of various end-user groups concerning Hungarian and international survey results.

1. Respondents and non-respondents

GKI approaches 5 200 companies (1 300 firms per sector) with legal status.[3] The basic forms of surveys are questionnaires, which are sent to the firms by post. In

[2] These worrying questions have occurred to other people, too. The European Commission has ordered an external evaluation of the Joint Harmonised EU Programme of Business and Consumer Surveys. In addition to other issues, the resulting evaluation focused on the social effects of surveying and the needs of end-users. In 2007, the OECD conducted a special survey on the dissemination practices of member states.

[3] The detailed description of survey activities in Europe can be found on the next homepage: http://ec.europa.eu/economy_finance/db_indicators/surveys9179_en.htm

2006, the possibility of online responding was offered as well. Since then a special area on the homepage of GKI can be reached to respond to business survey questionnaires.[4] On the basis of the average of 2001–2007, the response rate is the highest in the industrial sector (23–27 percent) and the lowest in the service and construction sectors (16–22 percent). These rates are significantly lower than the average of the EU (about 70 percent) and that of most European countries.[5] The Hungarian figures are similar to the response rates experienced in Greece. The low propensity to respond is in line with the Hungarian "habits". Other institutes conducting business surveys in Hungary have to face the same low response rate as well.

The responses received from business surveys are sufficiently representative in sectoral and regional terms, that is to say, the sectoral and the regional structure of the Hungarian economy does not differ significantly from the proportions of the sample. Nevertheless, this is not true for the size structure: small companies are less willing to provide information about themselves (so, they are generally underrepresented) than medium-sized and larger ones. As regards validity of research results, it is not necessarily negative since medium-sized and large companies are key in most segments of the Hungarian economy. The homogeneity of response samples is satisfactory also in terms of both company size and sectoral structure. This means that the internal structure of the samples shows a high degree of stability and therefore, when interpreting the results, it is not necessary to pay attention to effects related to changes in the sample structure. (The subdivisions of the corporate sector are more heterogeneous. In this field the requirements of the European Union are not too stringent; more emphasis is laid on stability than on representativeness. This approach is justified by the diversity of member states in terms of their economic structure, economic development level and size.)

An ad-hoc survey was conducted in order to explore the main features of respondents. The aims of this special survey were to learn more about responding behaviour and to obtain information on the background of non-response. From about 1 000 non-respondents of the industry and service surveys, 150-150 firms were approached by phone interviews. The random selection of the interviewees was ensured. The response rate of the survey was about 70 percent, as a result of the implemented method. Naturally, there are "hard core" non-respondents who refuse all invitations to data collection. It is very difficult to get any information about this group, and thus, the ad-hoc survey was not capable of learning more about them either. Nevertheless, on the basis of the results of phone interviews, it may be concluded that they consist of a relatively small number of managers. (See the figures of the "never" row in Table 2.)

[4] However, integrating modern IT tools into the process has not increased the propensity to respond.

[5] In most European countries, responding to government-sponsored business surveys is compulsory. This is not the case in Hungary.

Table 1

Position of respondents
(percent)

Position of the respondent	Number of employees				Industrial	Service	Total *N*=258
	–20	21–50	51–250	251–	companies		
Executive	83	70	55	61	76	65	70
Production, sales manager	–	3	8	4	5	1	3
Other middle manager	17	19	26	35	16	28	22
Employee	–	5	11	–	2	5	4
Whoever has enough time	–	3	–	–	1	1	1
Total	*100*	*100*	*100*	*100*	*100*	*100*	*100*

As Table 1 shows, it is mostly an executive who takes part in the business tendency surveys within the company. This refers to a high reliability level of the answers, even if we take into account that the respondents sometimes reflect the company's "official" position in their answers rather than giving their personal opinions.

Table 2

Breakdown of respondents by the frequency to answer the questionnaire
(percent)

Frequency to answer the questionnaire	Number of employees				Industrial	Service	Total
	–20	21–50	51–250	251–	companies		
Usually	62	57	53	65	44	68	56
Sometimes	36	35	32	35	43	27	35
Never	2	8	15	–	13	5	9
Total	*100*	*100*	*100*	*100*	*100*	*100*	*100*

According to our ad-hoc survey, the presumed response ratio is much higher in services than in industry and slightly higher in small and large companies than in medium ones. Furthermore, the response ratio increases from West to East within the country. In light of the actual response rate, small service companies state that they answer the questionnaire more frequently than they actually do.

There are many explanations why companies did not answer postal or online questionnaires. Losing the questionnaire, forgetting to answer and considering questions as relating to confidential information are reasons that randomly appear in the

sample and they usually do not have a substantial impact on the final statements of the survey. Other reasons for non-response can bias the results (sometimes extremely). For example, such situations occur when dominant companies in a sector hide their intentions, or when companies in an unfavourable business situation are afraid of losing their reputation by answering our questions, even though potential respondents are assured of the confidentiality of their answers.

In the telephone interview we also asked about the possible causes of occasional non-responses. The results are depicted in Figure 1.

Figure 1. Share of respondents by the possible causes of occasional non-response
(percent)

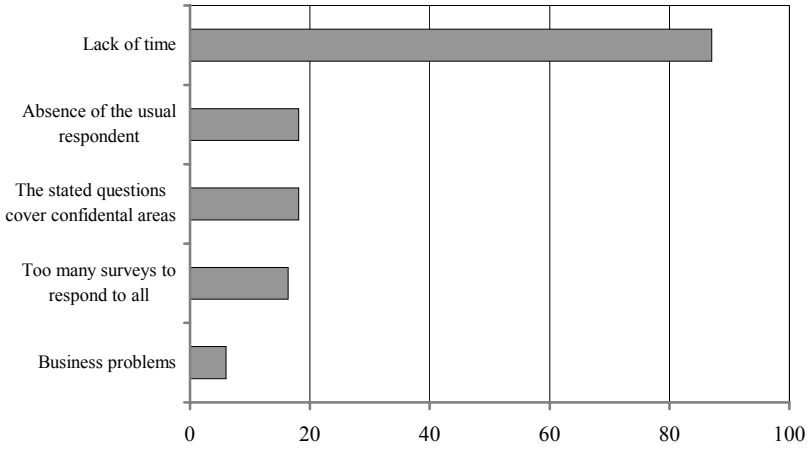


Table 3

*Share of respondents by the possible causes of occasional non-response**
(percent)

Cause of non-response	Number of employees				Industrial	Service	Total**
	–20	21–50	51–250	251–	companies		
Lack of time	92	92	95	81	90	84	87
Absence of the usual respondent	15	8	14	12	25	11	18
The stated questions cover confidential areas	4	17	14	–	15	22	18
Too many surveys to respond to all	12	17	14	25	16	16	16
Business problems	4	8	9	–	7	6	6

* It was possible to give more answers, so the sum of the frequencies can exceed 100.
** Total numbers contain answers of firms with unknown employment figures.

The most common cause of non-response is the lack of time, which is thought to modify the results only to a small extent (companies with business problems are few in number). However, nearly one-fifth of the companies refuse to responding because of the problem of confidentiality. Fortunately larger companies do trust GKI, but this only reduces and not eliminates the risks. As the data in Table 3 shows, there are no large companies that refuse to answer referring to confidentiality.

2. Dissemination process of business survey results

Before presenting the most important results of ad-hoc surveys conducted among end-users, it is useful to show the most relevant features of GKI's dissemination activity. The following four primary dissemination channels are employed.

1. Monthly reports on sectoral expectations. These are 8–10-page reports containing a detailed description of the prospects of the various economic sectors (industry, construction industry, retail trade and the service sector). They include a short summary, the description of survey characteristics, detailed survey data, descriptive interpretation of the results and (if appropriate) statistical information on the particular sector. The reports include forecasts produced by the GKI on some key economic indicators (for example GDP-generation, the output of various sectors, inflation, exchange rates, etc.). The reports are also sent to survey participants (respondents) and to subscribers.

2. Press releases. Two separate press releases are disseminated, one on the results of the consumer survey and one regarding the GKI economic sentiment index and its components (consumer and business confidence indices). These are 3–4-page documents containing charts and data. The sentiment index also includes our prognosis for the various industries. These releases are available on the GKI website and sent directly to subscribers of our newsletter (subscription is free of charge). GKI press releases are regularly published by the Hungarian News Agency Corporation (MTI) too. The agency usually adds it own comments to the findings. These reports tend to be shorter than the original GKI press release, focusing on certain parts of the document. The MTI reports become the basis of many other pieces of online news appearing primarily on news sites.

3. Based on the survey results, GKI analysts make regular statements to the media, especially on radio and in the printed and online business press. In these interviews, they try to help the public to understand the survey results and to give an international overview.

4. The GKI website contains a "Business cycle research" section where we publish the detailed database of business and consumer surveys, including both seasonally adjusted and unadjusted data. It also includes an analysis of the methodological

aspects of the research that is primarily destined for analysts. This type of publication is updated on a periodic basis.

3. Evaluations and overviews of end-users

In order to obtain information on the real needs and attitudes of end-users in Hungary, we conducted a further ad-hoc research. Table 4 summarises the main target groups of our business tendency surveys and the methods employed.

Table 4

Ad-hoc research in the circle of end users

Target group	Method
Participant companies of business surveys	Postal questionnaires, online survey
Governmental bodies	Personal interviews
Media	Media observation
Professional public	Online survey and personal interviews

The most important topics of the survey are as follows.

Do end-users get our messages?
Are they interested in the survey results?
Are the dissemination channels effective?
What is the opinion of end-users concerning survey result reports?
What are their suggestions and recommendations?

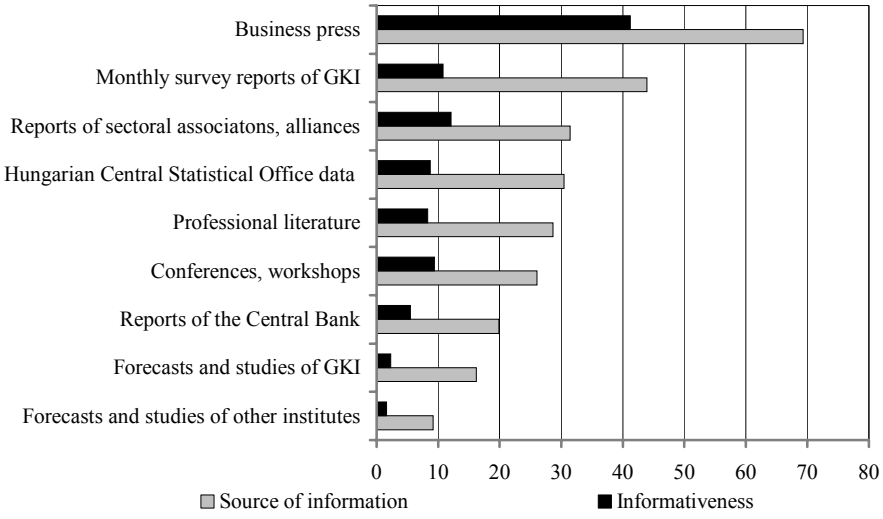
In the next four subsections, we present the most interesting experiences of this investigation.

3.1. Responding businesses

In order to examine the attitudes and opinions of businesses (concerning the dissemination of survey results), some additional questions were added to the questionnaire sent to regular respondents of our monthly business tendency surveys. The company's partners will automatically receive the report once they have returned our

monthly questionnaire, so it is assumed they are familiar with these reports. Their opinion is obviously important, as the quality of our reports can affect their willingness to respond. 785 completed responses were received under this survey. The sample consists of industrial companies (31%) retail trade companies (25%), construction companies (23%) and businesses operating in the service sector (21%).

Figure 2. Information sources used by companies and their informativeness
(Percent of respondents)



Let us first examine the importance, for respondent businesses, of business survey results amid "a sea of information". Of the respondents, 44 percent reported that the GKI's monthly business tendency surveys (BTS) provided them with regular industry-based information. On the one hand, it means that their majority do not treat our results as a source of information. On the other hand, however, it certainly shows that almost half of the firms do. Comparing this rate to that of the other sources quoted, they are only preceded by one other source in terms of relevance for individual businesses: 69 percent of respondents reported that they use the business press as a regular source of information. The press can obviously provide more detailed, broader and more diversified information on a great many subjects. Under such circumstances, the 44-percent rating appears to be a relatively good result, especially as 85 percent of the respondents reported that at least one of their employees regularly viewed these reports. The third and fourth most important information sources are the reports of trade associations and alliances and the Hungarian Central Statistical Office.

Table 5

Information sources used by companies on a regular basis
(Percent of respondents)

Information source	Less than 20	21–50	51–250	251–1000	More than 1000
	employees				
Business press	58	72	74	90	88
GKI monthly reports about sectoral expectations	46	46	40	36	12
Reports of sectoral associations, alliances	33	32	28	41	50
HCSO data	25	29	30	51	88
Professional literature	27	25	31	49	25
Professional conferences, workshops	22	28	26	44	10
Reports and analysis from the Central Bank	13	19	29	23	37
Average number of sources used	2,2	2,5	2,6	3,3	3,1

Based on the facts discussed formerly, it is concluded that the business survey results of GKI are considered useful by our regular respondents. Behind the total rates, there are significant differences among sectors and size groups (based on employee number). As Table 5 shows, small and medium-sized enterprises find GKI business survey reports more useful than big companies do. Members of the latter group view the business press, statistical data, industry and central bank reports, as well as trade literature to be more relevant for their purposes than business survey reports. This should not come as a surprise though, as large companies tend to operate in broader markets than smaller ones. Businesses with a staff of over 1 000 generally have specialised departments for information collection and analysis. At the same time, small and medium enterprises have fewer human resources, so they tend to use fewer and "easier" information sources. Fifteen percent of businesses with less than 20 employees consider our reports as the single most informative source of information, as opposed to businesses of over 1 000 employees, none of which indicated the same. One fifth of businesses specializing in construction treat GKI reports as their most informative source of information. The equivalent rate is 7 percent for both the industrial and retail sectors, while 12 percent of all service-geared businesses rated the GKI as their top choice for information.

The picture differs again as far as the informative nature of the various data sources is concerned. While the GKI's sector-based monthly survey reports lag behind the business press and the reports of sectoral associations and alliances in terms of informativeness, businesses use GKI-information more often than studies pub-

lished by other organisations and institutes. Next, we examined the utilisation of survey reports by the responding companies. In order to analyse this, they were first asked about the number of their employees following the survey reports on a regular basis. It was found that while in most cases (72%) at least two employees read our studies with some regularity, more than four persons were reported by 7 percent of respondents. A higher number of readers are reported in particular by companies of over 250 employees (the average value of the sample is close to 5). The monthly reports issued by GKI tend to be read mostly by senior (84%) and mid-level managers (38%).

Respondents were also asked to rate the GKI business surveys on a scale of 1 (poorest) to 5 (best) for clarity, relevance and novelty. There were significant differences in the judgement of these factors. We received the best average rating (4.4) for clarity. According to our respondents, the surveys are highly understandable: 92 percent of businesses consider that they are good or excellent from that respect. Our reports on industry tend to be slightly less intelligible, however. That is probably because most industrial sectors are considered in these reports so industry reports are lengthier compared to those on other economic sectors.

Finally, we asked our respondents about the extent to which their personal expectations are similar to the expectation summaries published in monthly survey reports. Of them, 91 percent responded that the published results are, on the whole, similar to their own expectations. The ratings of construction-industry businesses exceeded the average: 95 percent of them reported that the results are, in most cases at least, similar to their own expectations. It was found that the larger the company, the less it would find BTS results a true indicator of their own perceptions.

3.2. Government bodies

In Hungary, two main government organisations responsible for the various aspects of economic policy are the Central Bank and the Hungarian Ministry of Finance. Both are regular users of the results of GKI's business surveys. In order to examine their opinion and attitudes vis-à-vis the dissemination of survey results, we interviewed the representatives of these institutions. Our main experiences are set out in the following.

At the Central Bank, the business and consumer survey results from GKI are read on a regular basis. This institution provides financial support to our research. At the Central Bank, our dataset is not adopted for regular (modelling) calculations but is taken into account for various purposes. Survey results are used as a tool to obtain information on business cycles, and they are normally downloaded from the website and/or directly ordered from GKI.

The survey indicators from GKI are regularly featured in two central bank publications available at the Central Bank website:

> Each month, the Central Bank publishes a "Chart-pack" on recent economic and financial market trends, which is a sort of economic review. These publications regularly show the re-weighted version of the consumer confidence index.[6]
>
> The quarterly "Report on Inflation" series contain consumer and sectoral business confidence indices. In addition, the Central Bank also publishes data concerning capacity-utilisation in the industrial sector.

The Central Bank regularly takes into account and issues the business climate indices of IFO (Institute of Economic Research, Germany) and the European Union (European Commission – Euro Area Business Climate Indicator (EABCI)).

Experts of the Central Bank are generally satisfied with the dissemination process (accessibility, actuality and the method of dissemination) as well as with the content of GKI analyses, which are mostly reported to live up to their requirements.

Analysts at the Ministry of Finance regularly follow the GKI results with attention. GKI survey results appear each quarter in the Quarterly Monitoring Report of the Ministry. The reports include a description and even a graph on the evaluation of the Hungarian and European Union indices. Experts in the Ministry of Finance use GKI's business and consumer results because they find them one of the most reliable ones available in Hungary, they excel in assessing the prospects and attitudes of businesses and Hungarian consumers. However, the organization cannot rely on GKI reports alone. While they consider our construction-industry analyses to be the most useful one, they point out that the indices pertaining to other sectors are only appropriate for the assessment of the current situation rather than for future forecasts. Apart from the confidence indices, they use and publish the limits-to-production factors in the construction industry.

Strengths of the survey include up-to-dateness and its relatively long historic data series, two aspects clearly quite important for analysts. Among the drawbacks, they mention the relatively low rate of response compared to the IFO surveys. While the analysts receive the results mostly through the web, rather than directly from the GKI site, they download international data series from the European Commission website. In addition to the Hungarian IFO survey results, EU aggregate data series are normally also analysed at the Hungarian Ministry of Finance. The main information sources used for economic forecasting include the Hungarian Central Statistical Of-

[6] The re-weighted consumer confidence index takes into account GKI survey sub-indices of the highest correlation with the time series of household consumption expenditure. For more details see *Vadas* [2001].

fice, the Central Bank, the Hungarian and international literature, and finally the Eurostat and the OECD. The latter two are considered to be the most reliable sources according to the answers.

In Hungary only a small group of analysts are deeply interested in the data series concerning economic expectations. These experts, however, are familiar with the survey results and methodology, regardless of the dissemination process. Anyone wishing to increase the popularity of the surveys in Hungary therefore faces a challenge. Further improvements in terms of online dissemination were suggested, and up-to-date and international data would be welcome on the GKI's homepage.

3.3. Media

Although the GKI has its "own" distribution channels (e-mail newsletters and reports sent to respondents), it is obvious that without the help of the media, the dissemination process of survey results cannot be really effective. While the media represents a great potential, it can certainly cause problems, too.

Its first and most important requirement is accuracy. Besides, we have taken into consideration other aspects in the publication of the BTS results in order to reach a wider audience. The interest factor and the clarity of information are also key elements in this process. However, accuracy and interest sometimes get into conflict. This will typically occur in the following situations.

Changes in trends are often too small or are within the margin of error. Unchanging trends are less interesting to the media and are less likely to attract readers' attention.

Monthly fluctuation sometimes contradicts long-term average trends. When communicating the results, one has to decide whether a change in trends is a real turning point or just temporary.

There is a strong demand for publishing regional data for the regional press. Results, however, are inaccurate at that level of Hungary due to the small sample. Despite the existence of considerable demand, we gave up publishing regional data concerning the consumption confidence index after a few years.

Some of the studies emphasise advantageous or disadvantageous trends based on their authors' political views rather than on the basis of objective economic processes.

In the GKI publications of business and consumer survey results, new trends are often highlighted in the headline (for example the index has reached a record peak for the year; however, it is still below the value of two years ago) in order to attract

more media interest. Within the main body of the text, however, every effort is made to provide balanced information and put the data into context.

Table 6

Hungarian business and consumer survey results in the Hungarian media by source organisation
(Percent of respondents)

Source	Written Media	Radio and TV
GKI (Business and Consumer Tendency Survey)*	56	46
GfK (Hungary Consumer Tendency Surveys)*	21	15
KOPINT–TÁRKI (Business Tendency Survey)**	5	18
Ecostat (Business Tendency Survey)***	18	21
Total	*100*	*100*

* Monthly data.
** Quarterly data for industry, construction industry and retail trade.
*** Limited survey.
Source: Observer–GKI analyses.

As it was mentioned formerly, GKI press releases are also regularly carried by MTI.

Two major economic dailies are published currently in Hungary. Both regularly bring out Hungarian business and consumer results. The articles include descriptions focusing on the novelty of the trends. Most of them lack any graphs yet they sometimes show the long-term trends of the GKI confidence index. Major Hungarian weekly economic magazines do not publish the survey results due to their short-lived interest. The reports are sometimes also picked up by the general daily press. In the latter case, the content and length of the articles tend to depend primarily on their relative interest compared to concurrent political or economic events.

In general, it can be concluded that the media in Hungary is interested in the evaluation of companies' and consumers' expectations. While they often publish the results, their interest span tends to be rather short-lived. Journalists do not care about the methodology, deeper analyses or the understanding of the whole procedure. In the nineties, when the GKI started the research, we published several studies about the methodology. Today, experts are familiar with the survey activity of the European Commission and the methodological background, which is not true of journalists.

Some international survey results are also published by the Hungarian press. That is not surprising, Hungary is a relatively small country with an open economy and thus, international trends need to be closely observed.

The composite indices most frequently cited by the Hungarian media focus on the US economy. The reason is quite obvious, the US is the world's largest single economy. Since the outbreak of the sub-prime mortgage crisis, the media has paid more attention to American data than before. The IFO and ZEW (Centre for European Economic Research) indices are also popular in the Hungarian press, forasmuch as Germany is the country's most important trade partner. Remarkably, however, the business climate index of the European Union rarely makes it to the news.

Table 7

Publication of foreign composite indices in the Hungarian media, 2007
(Percent of respondents)

Denomination	Printed Media	Radio, TV
Germany – IFO	20	13
Germany – ZEW	19	1
USA	30	29
European Union (EABCI)	2	14
Other	29	43
Total	*100*	*100*

Source: Observer–GKI analyses.

3.4. Professional public

It has been mentioned formerly that we also tested the trade public through a special questionnaire (sent by e-mail attached to our regular newsletter) as well as interviews with expert analysts. This sub-section is a summary of the most important findings revealed by the combination of the two methods.

Nearly all respondents (91%) are interested in receiving the monthly reports from GKI about business and consumer expectations: 33 and 58 percent, respectively, of our professional customers pay regular or occasional attention to these reports. While this may seem rather self-evident, being subscribers to our e-mail newsletter, the latter is not true of the majority of the interviewed experts who still tend to pay attention to this type of information.

Our messages get across to the professional public through different channels. The most important one is our e-mail newsletter (92 percent of respondents receive information in this way), the Internet is the second most important channel. A majority of respondents view the GKI website (or other sites carrying business news), either on a regular or occasional basis (24 and 40 percent respectively). Printed busi-

ness dailies and radio/television were reported by 25 and 23 percent, in the order given. Those who pay attention to business and consumer survey results on an occasional basis only reported sourcing information from the electronic media (radio and television) and the printed press with significantly higher frequency than those who regularly follow our reports with attention.

Our ad-hoc surveys results reveal that members of the professional public are, in general, better informed than the participants of our monthly surveys. Respondents in our business surveys obtain information regularly from 2.5 sources, that is to say the "average respondent" has reported paying attention to two or three types of information sources. The equivalent average value among representatives of the professional public is almost four.

Almost all members of the latter group regularly read the business press (Internet or printed). The relevant rate among the responding businesses is 69 percent. However, there is a bigger difference between these two groups as far as the use of statistical data is concerned: 30 percent of the survey participants use that source of information, while the equivalent rate among the representatives of the professional public is 62 percent. A noteworthy correlation exists between the use of statistical and that of survey data: users of survey data also tend to follow statistical information with closer attention than those who do not use survey data.

For the professional public, the forecasts and other studies of GKI are slightly more popular than reports only containing survey results. The dissemination of survey results is one of the most important activities of GKI, obviously not the only one. According to the responses to our ad-hoc survey, this is acknowledged by the professional public. So, let us summarize the results: for our regular business respondents, GKI's monthly survey reports are the second on the list of the most important information sources, whereas they are only fourth on the lists of professional respondents.

As far as the information value of our survey reports is concerned, there is no reason to be dissatisfied. The professional public seems to have passed a fairly favourable judgement. Representatives of this group view our survey result reports as their third most informative source of information. This opinion is not far from that of our regular business respondents.

Similarly to the responding businesses, subscribers to our newsletter were also asked to rate our surveys on a scale of 1 (poorest) to 5 (best) with regard to clarity, information value and novelty in general. The results are very similar to the summarised ratings of regular business respondents. The clarity of monthly reports received the best rating: the average mark is 4.3, with some marked differences among the factors. We received lower ratings for the novelty and relevance of information factors. Here, the average marks were 3.9 and 4.0 respectively. These latter evaluations were better than the ratings given by regular business respondents.

Figure 3. Information sources used by the professional public on a regular basis and their informativeness
(Percent of respondents)

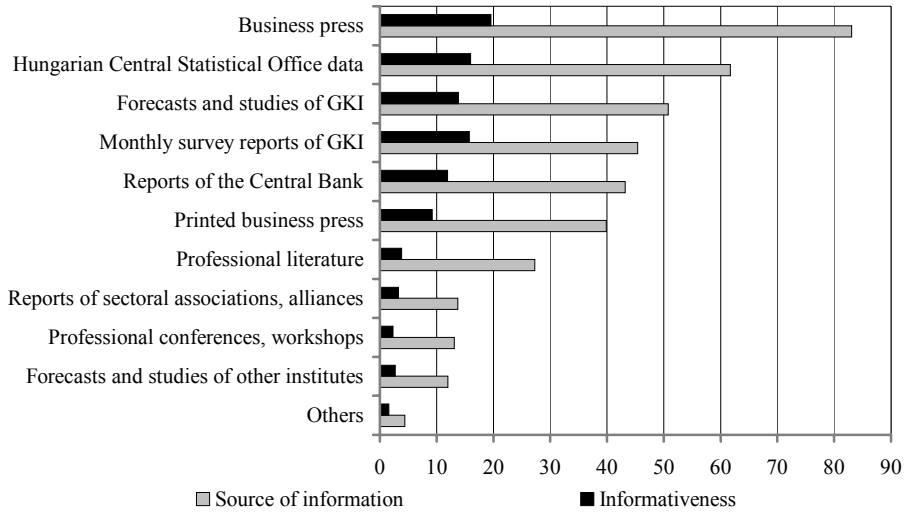
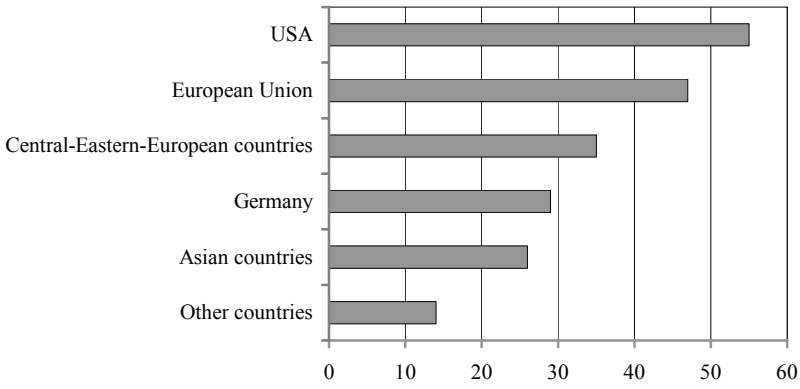


Figure 4. The composite indices of geographical units paid attention to by professional public
(Percent of respondents)



Comparing the data in Table 7 and Figure 4 you can evaluate the "supply" and "demand" of foreign composite indices. The US ranks first in both lists. There is, however, a significant difference as far as the European Union is concerned. In spite of the sporadic appearance of the EABCI in the news carried by the Hungarian media, it is found highly relevant by representatives of the trade public. The indices pertaining to Germany and the surrounding countries are also regarded as interesting to Hungarian experts and analysts.

4. Conclusions

In our paper two important factors of business survey activity were examined: the behaviour of responding companies and the need of end-users. In order to learn more about these two topics two special surveys were conducted. The first one was carried out among non-responding firms. Its most important consequence is that majority of Hungarian companies do not have any fundamental rejection of business surveys, the rate of "hard core" non-respond can be estimated nine percent. Sixteen percent of companies have concerns about the confidentiality of the survey. The other ad-hoc survey has given a picture about the opinion and the needs of consumers of survey figures. In Hungary, there are strong competitors to GKI on the survey market, all fighting for the attention of end-users. This situation is typical not only of Hungary, as "Business Climate Indicators are less frequently used at the national level, because they face strong competition from alternative products (*EC* [2006] pp. 36–37.)". The various end-user groups have significantly different requirements. The media are after "big news" and reports in the press are often superficial. The trade public needs more detailed data and international comparisons. Survey reports are more relevant for small and medium-sized firms than for big companies.

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Poverty, Deprivation, Exclusion: A Structural Equations Modelling Approach

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The main purpose of the paper is to build a path model of latent variables: poverty, relative deprivation and social exclusion. Applying the SEM methodology, the poverty is measured in a multivariate approach eliminating the need to cut off the poor's subset by a fixed poverty line. The focus is on estimating hypothetical structural path coefficients on the one hand and testing their significance on the other. The computations are carried out using the Statistica 8.0 software based on the 2003 Hungarian Household Survey, taking the household as the unit of observation.

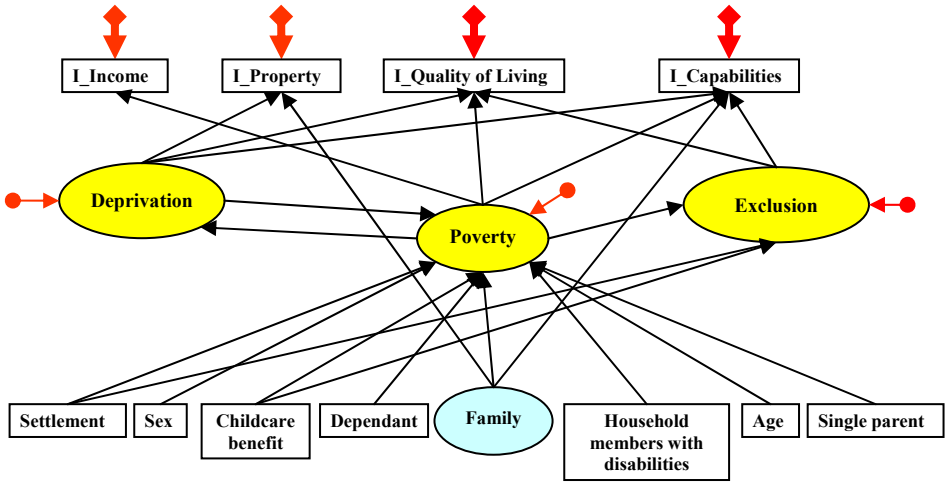
KEYWORDS:
SEM models.
Poverty.
Deprivation.

In our conception, the constructions of poverty, relative deprivation and social exclusion in a society constitute a multivariate structural equations system of latent variables. The endogenous variables in this hypothetical latent causality structure can be considered also exogenous in other equations of the path diagram. (See Figure 1.) The paper suggests a way to estimate and test hypothetical relations among these constructions with no need to split the society into "the poor" and "the non-poor" clusters by a strict poverty line. Obviously, the meaning of the latent constructions is given by their measured manifest variables, which can also be distinguished either endogenous or exogenous.

1. Conception

The initial conceptual model is described in Figure 1. Considering the path diagram, boxes identify manifest variables, while ovals show latent variables.

Figure 1. Initial multiple indicator multiple cause model



Note. The arrow ⟶ stands for a residual latent variable pointing to its own latent variable, and it is termed EPSILON# in Table 1. The arrow ⟷ marks a set of residual latent variables corresponding to their own manifest variables but they are not included in Table 1. Manifest variables without a residual variable are obviously exogenous.

An arrow between two variables represents a regression coefficient. The main goal is to estimate and then test these parameters. Especially, a manifest variable explained by a latent variable is termed "indicator". An "I_" type box with an arrow pointing to it indicates a set of indicators corresponding to the latent variable connected with. Some indicators are allowed to belong to several I_ boxes. Furthermore, each endogenous variable has an error (residual) variable represented by a single arrow pointing to it.

Considering the *latent part* of the model, we define the following constructions. Firstly, the endogenous variables are:

1. Poverty: the household is living in poverty (for example at the bottom of the income scale);

2. Deprivation: the household is deprived of several goods therefore its members may feel poor compared to the richer ones;

3. Exclusion: the household is excluded from certain socio-economic functioning.

The only exogenous latent variable is:

4. Family: the family background behind the household (for example the extent to which the household is supported by the whole family).

Secondly, regarding the manifest variables, the exogenous variables (with their scale in a square bracket) are:

1. Settlement [capital, large city, city, village]: the type (level) of the settlement where the household lives;

2. Sex [male, female]: the gender of the head of the household;

3. Childcare benefit [yes, no]: whether the head of the household receives a childcare benefit (allowance);

4. Dependant(s) [0, 1, 2 or more]: the number of dependants younger than 25 in the household;

5. Household member(s) with disabilities [yes, no]: whether there is a permanently sick person in the household;

6. Age [20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75]: the age class of the head of the household as defined by the lower bounds;

7. Single parent [yes, no]: single parent with a child or children.

Finally, the considered endogenous manifest indicators (grouped by their contents) are as follows (as mentioned earlier, "I_" stands for "Indicator Set"):

8. I_Income variables:
a) Income per capita: annual per capita income (thousand HUF);
9. I_Property variables:
a) Flat_HUF: the value of the flat assessed by the head (million HUF);
b) Flat2 [yes, no]: whether a member of the household owns a second flat;
10. I_Quality of living variables:
a) Running water [yes, no]: whether there is running water in the household;
b) Flat problems: the number of several types of defects experienced in the flat;
c) Durables: the number of durables in the household;
d) Environment: qualities of the environment surrounding the flat;
e) Car_HUF: the value of the car of the household assessed by the head (million HUF);
f) Car_Km: the annual performance of the car of the household (thousand kilometres);
g) Public health: the number of household members eligible for public health service treatment/benefits;
11. I_Capability variables:
a) Education [1, 2,…,13]: the educational attainment of the head of the household (for example 1 means uncompleted elementary school, while 13 is for PhD degree);
b) Unemployed household member(s) [0, 1, 2, 3 or more]: the number of unemployed persons in the household;
c) Default: The number of the types of earlier unpaid bills;
d) Retired household member(s): The number of pensioners in the household.

Based on the data of 3 571 Hungarian households of 2003, the corresponding parameter estimation results (coefficients, standard errors, *t*-statistics and their probability significance values) are included in Table 1. According to these results, the *insignificant relations* – at 10 percent significance level – are as follows.

Table 1

Parameter estimation results

Parameter	Coefficient	Standard Error	*t*	Probability
Structural part of the model				
(POVERTY)-1->(DEPRIVATION)	–15.441	0.034	–452.015	0.000
(POVERTY)-2->(EXCLUSION)	–0.866	0.036	–23.870	0.000
(DEPRIVATION)-3->(POVERTY)	1.493	0.073	20.442	0.000
(FAMILY)-4->(POVERTY)	–0.071	0.044	–1.622	*0.105*
(EPSILON1)-5-(EPSILON1)	1.244	0.213	5.847	0.000
(EPSILON2)-6-(EPSILON2)	258.943	0.000		
(EPSILON3)-7-(EPSILON3)	0.249	0.062	3.995	0.000
Exogenous manifest part of the model				
[Settlement]-8->(POVERTY)	–0.331	0.040	–8.290	0.000
[Settlement]-9->(EXCLUSION)	0.034	0.015	2.360	0.018
[Sex]-10->(POVERTY)	0.098	0.068	1.451	*0.147*
[Childcare benefit]-11->(POVERTY)	0.013	0.070	0.182	*0.855*
[Childcare benefit]-12->(EXCLUSION)	0.026	0.029	0.910	*0.363*
[Dependants]-13->(POVERTY)	0.107	0.026	4.033	0.000
[Household member(s) with disabilities]-14->(POVERTY)	0.005	0.061	0.079	*0.937*
[Age of the head of the household]-15->(POVERTY)	–0.018	0.011	–1.624	*0.104*
[Single parent]-16->(POVERTY)	0.297	0.131	2.261	0.024
Indicator manifest part of the model				
(POVERTY)-17->[Running water]	–0.079	0.001	–76.911	0.000
(POVERTY)-18->[Default]	0.022	0.012	1.888	0.059
(POVERTY)-19->[Flat problems]	–2.088	0.152	–13.778	0.000
(POVERTY)-20->[Unemployed household member(s)]	–0.642	0.093	–6.890	0.000
(POVERTY)-21->[Retired household member(s)]	–0.012	0.010	–1.185	*0.236*
(POVERTY)-22->[Income per capita]	40.312	6.842	5.892	0.000
(DEPRIVATION)-23->[Durables]	0.237	0.071	3.337	0.001
(DEPRIVATION)-24->[Car_HUF]	–339.757	25.721	–13.209	0.000
(DEPRIVATION)-25->[Flat_HUF]	1.430	0.139	10.293	0.000
(DEPRIVATION)-26->[Flat2]	–0.086	0.016	–5.496	0.000
(DEPRIVATION)-27->[Environment]	0.273	0.021	13.147	0.000
(DEPRIVATION)-28->[Unemployed household member(s)]	0.208	0.023	8.898	0.000
(DEPRIVATION)-29->[Education]	–2.830	0.141	–20.094	0.000
(EXCLUSION)-30->[Car_Km]	–0.286	0.182	–1.575	*0.115*
(EXCLUSION)-31->[Public Health]	–0.006	0.004	–1.590	*0.112*
(EXCLUSION)-32->[Unemployed household member(s)]	–0.592	0.089	–6.623	0.000
(EXCLUSION)-33->[Education]	–2.167	0.148	–14.658	0.000
(FAMILY)-34->[Flat2]	0.615	0.008	80.979	0.000
(FAMILY)-35->[Education]	-0.140	0.077	–1.805	0.071

Note: The "-#-" wire between two EPSILON# variables indicates covariance, or variance when computed as a self-covariance.

In the structural latent part:

1. "Poverty" regressed on "Family background",

In the exogenous manifest part:

2. "Poverty" regressed on "Sex";
3. "Poverty" regressed on "Childcare benefit";
4. "Poverty" regressed on "Household member(s) with disabilities";
5. "Poverty" regressed on "Age of the head of the household";
6. "Exclusion" regressed on "Childcare benefit";

In the indicator manifest part:

1. "Retired household member(s)" regressed on "Poverty";
2. "Car_Km" regressed on "Exclusion";
3. "Public Health" regressed on "Exclusion".

Based on the model, the following conclusions were drawn from the structural latent part: *1*. if someone is poor, then he/she is consequently deprived and vice versa; *2*. if someone is poor, then he/she accordingly excluded; *3*. the family background does not have impact on the poverty status of the household;

from the exogenous manifest part: *4*. the poverty level is not influenced by the sex and age of the head of the household or childcare benefit assistance or the existence of a sick person in the household; *5*. the settlement type, the number of dependants younger than 25 years in the household and the single-parent household structure affect the poverty level; *6*. unlike childcare benefit assistance, the type of the settlement determines the level of exclusion;

from the indicator manifest part: *7*. retirement is not an indicator of the poverty level; *8*. annual performance and *9*. eligibility for public health service do not provide an indication of the exclusion level.

2. A methodological overview of the asymptotically distribution free estimator

Due to the fact that the socio-economic measurement variables are rarely distributed normally, a brief overview of the so-called asymptotically distribution free estimator methodology of Structural Equation Models (SEMs) applied previously is given as follows.

2.1. The structural equations path model

Collecting all the variables considered in the vector **v**, the structural equations path model (SEPATH) takes the form

$$\mathbf{v} = \begin{bmatrix} \mathbf{y}_L \\ \mathbf{y}_M \\ \mathbf{x}_M \end{bmatrix} = \begin{bmatrix} \mathbf{B}_{LL} & \mathbf{B}_{LM} & \mathbf{0} \\ \mathbf{B}_{ML} & \mathbf{B}_{MM} & \mathbf{0} \\ \mathbf{0} & \mathbf{0} & \mathbf{0} \end{bmatrix} \times \begin{bmatrix} \mathbf{y}_L \\ \mathbf{y}_M \\ \mathbf{x}_M \end{bmatrix} + \begin{bmatrix} \mathbf{G}_{LM} & \mathbf{G}_{LL} \\ \mathbf{G}_{MM} & \mathbf{G}_{ML} \\ \mathbf{I}_{MM} & \mathbf{0} \end{bmatrix} \times \begin{bmatrix} \mathbf{x}_M \\ \mathbf{x}_L \end{bmatrix} \qquad /1/$$

or briefly we get

$$\mathbf{v} = \mathbf{B}\mathbf{v} + \mathbf{G}\mathbf{x} \qquad /2/$$

from which the reduced form is as follows:

$$\mathbf{v} = (\mathbf{I} - \mathbf{B})^{-1} \mathbf{G}\mathbf{x}, \qquad /3/$$

where **y** and **x** are vectors of endogenous and exogenous variables respectively, *L* and *M* subscripts indicate latent and manifest variables respectively, **I** is the identity matrix, and finally, **B** and **G** are corresponding matrices of structural coefficients to be estimated. The number of manifest variables is *p*.

Because the estimation procedure is based on fitting the distinct sample covariances among the manifest variables as a function of the parameters to be estimated, extraction of the manifest variables included in the vector $\mathbf{m}_p$ – as a function of the exogenous variables only – is necessary. Firstly, the filtering step is

$$\mathbf{m}_p = \underbrace{\begin{bmatrix} \mathbf{0}_{p,l} & \mathbf{I}_{p,p} \end{bmatrix}}_{\mathbf{D}} \times \begin{bmatrix} \mathbf{l}_l \\ \mathbf{m}_p \end{bmatrix} = \mathbf{D}\mathbf{v}, \qquad /4/$$

where **D** is a dummy-type filter matrix, and finally, with the substitution of **v**,

$$\mathbf{m} = \mathbf{D}(\mathbf{I} - \mathbf{B})^{-1} \mathbf{G}\mathbf{x}. \qquad /5/$$

2.2. Parameter estimation and identification

Now, using some covariance algebra, the covariance matrix $\mathbf{C}_{m,m}$ of the manifest variables of order (*p,p*) can be expressed as a function of the coefficient matrices and the covariance matrix $\mathbf{C}_{xx}$ of the exogenous variables:

$$\mathbf{C}_{m,m} = \left(\mathbf{D}\left(\mathbf{I}-\mathbf{B}\right)^{-1}\mathbf{G}\right)\mathbf{C}_{xx}\left(\mathbf{G}^{T}\left(\mathbf{I}-\mathbf{B}\right)^{-1^{T}}\mathbf{D}^{T}\right), \qquad /6/$$

where *T* means transposed.

A single covariance between variables *j* and *t* can now be derived from the model by a nonlinear f_{jt} function as follows:

$$Cov\left(m_j, m_t\right) = f_{jt}\left(\mathbf{B},\mathbf{G},\mathbf{Cov}_{xx}\right), \quad (j,t) = 1,2,...,p\left(p+1\right)/2 \qquad /7/$$

or

$$Cov\left(m_j, m_t\right) = f_{jt}\left(\theta_1,\theta_2,...,\theta_q\right), \qquad /8/$$

where the vector $\boldsymbol{\theta} = \left(\theta_1,\theta_2,...,\theta_q\right)$ contains the free parameters to be estimated based on nonlinear equations $p\left(p+1\right)/2$ in number. Hence the degree of freedom of the SEPATH model is

$$df = \frac{p\left(p+1\right)}{2} - q - r, \qquad /9/$$

where *r* is the number of the endogeneous latent variables.

2.3. Asymptotically distribution free estimator

The so-called quadratic form fitting function to be minimized with respect to $\boldsymbol{\theta}$ to yield $\hat{\boldsymbol{\theta}}$ is

$$F = \left(\mathbf{s}-\sigma\left(\boldsymbol{\theta}\right)\right)^{T}\mathbf{W}\left(\mathbf{s}-\sigma\left(\boldsymbol{\theta}\right)\right) \rightarrow \min, \qquad /10/$$

where **s** is a vector of order $p(p+1)/2$ consisting of the distinct (non-duplicated) elements of the sample covariance matrix **S** of order (p,p), $\sigma\left(\boldsymbol{\theta}\right)$ is the corresponding same order vector of the hypothetical covariances based on the model, and finally **W** is a positive definite weight matrix of order $(p(p+1)/2, p(p+1)/2)$.

The optimal weight matrix – based on sample size *N* – is the sampling-distribution inverse covariance matrix of **s** denoted by $(\mathbf{C}_{ss})^{-1}$ where the covariance between two sample covariances follows from

$$\frac{1}{N-1}Cov\left(s_{jk}, s_{lt}\right) = \sigma_{jl}\sigma_{kt} + \sigma_{jt}\sigma_{kl} + \frac{N-1}{N}\kappa_{jklt} \qquad /11/$$

with the kurtosis measure

$$\kappa_{jklt} = \sigma_{jklt} - \left(\sigma_{jk}\sigma_{lt} + \sigma_{jl}\sigma_{kt} + \sigma_{jt}\sigma_{kl}\right) \qquad /12/$$

based on the forth-order product moment defined as

$$\sigma_{jklt} = E\left(x_j - \mu_j\right)\left(x_k - \mu_k\right)\left(x_l - \mu_l\right)\left(x_t - \mu_t\right), \qquad /13/$$

where μ_j stands for the population mean of the variable x_j, E means expected value and j, k, l, t are for indices of manifest variables.

Apparently, in the large sample case, the elements of the asymptotic weight matrix are given as

$$w_{jk,lt} = \sigma_{jklt} - \sigma_{jk}\sigma_{lt}\,. \qquad /14/$$

Specially, assuming that all the variables have a common $\kappa = \sigma_{jjjj} / 3\sigma_{jj}^2 - 1$ degree of kurtosis, we obtain the so-called elliptical estimator with forth-order moment of

$$\sigma_{jklt} = \left(\kappa + 1\right)\left(\sigma_{jk}\sigma_{lt} + \sigma_{jl}\sigma_{kt} + \sigma_{jt}\sigma_{kl}\right). \qquad /15/$$

Finally, writing the fitting function in the alternative form of

$$F = \frac{1}{2} tr\left\{\left(\left[\mathbf{S} - \hat{\mathbf{S}}\right]\mathbf{V}^{-1}\right)^2\right\} \to \min\,, \qquad /16/$$

(*Bollen* [1989]), where *tr* is for trace, the so-called generalized least squares (GLS) estimator is used when the positive definite weight matrix **V** of order (*p,p*) is the sample covariance matrix **S** itself, and the iteratively reweighted GLS is applied when the weight matrix is the fitted covariance matrix $\hat{\mathbf{S}} = \boldsymbol{\Sigma}\left(\hat{\boldsymbol{\theta}}\right)$ updated in each successive iterative step based on the latest parameter estimation $\hat{\boldsymbol{\theta}}$.

2.4. Evaluating goodness-of-fit: Model selection

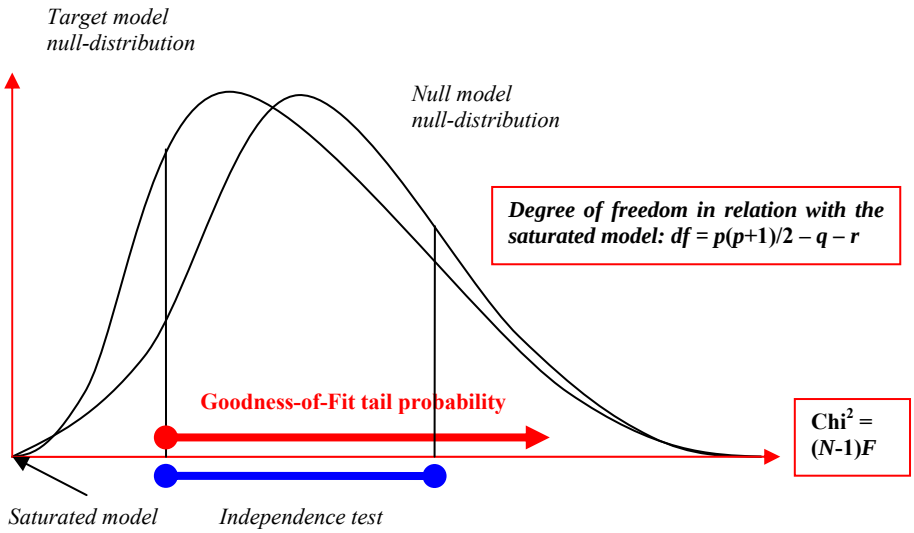
The model evaluating process means testing the distance between

1. the target (currently estimated) model and the so-called null model by the independence test (where the null model is defined with no latent variables at all);

2. the target (currently estimated) model and the so-called saturated model with a perfect fit by the goodness-of-fit test; and

3. the currently estimated target model and another candidate target model with more or less parameters by the nested models test.

Figure 2. Goodness-of-fit of nested models



Note. The null distribution assumes that the null hypothesis is true.

The details characterizing the initial target model are:

1. The sample size: $N = 3571$;

2. The number of manifest variables: $p = 21$, the number of endogenous latent variables: $r = 3$;

3. The number of freely estimated parameters: $q = 56$;

4. The goodness-of-fit Chi-square value of the null model: Chi2 = 37577.82 with df = 20*21 / 2 = 210;

5. The converged value of the objective function: $F = 5$;

6. The goodness-of-fit Chi-square value of the currently estimated target model: GF_Chi2 = 17850 with $df = 231–56–3 = 172$ and tail probability = 0.000.

7. The goodness-of-fit heuristic measures are presented in Table 2.

(For the meaning of these measures see *Bollen* [1989] or *Hajdu* [2003].)

Based on the small (0.000) tail probability, on the one hand, the distance from the saturated model is significant (due to the large sample size) hence indicating a poor fit. On the other hand, the values of the heuristic measures included in Table 2 show a considerable initial goodness-of-fit to be improved by a refined more complex model. (For instance, the Bentler comparative fit index measures a 52.69 percentage distance from the null model relative to the distance between the null and saturated (i.e. the two extreme) models.)

Table 2

Heuristic goodness-of-fit indices

Index name	Index formula
Population non-centrality index *	$NCI = \frac{\chi^2 - df}{N-1} = 4.9504$
Steiger–Lind root mean square error *	$RMSE = \sqrt{\frac{1}{df}\max\{NCI, 0\}} = 0.1697$
McDonald non-centrality index	$MDNI = \exp\{-0.5\max(NCI, 0)\} = 0.0841$
Population gamma index	$\Gamma_1 = \frac{p}{2NCI + p} = 0.6796$
Adjusted population gamma index	$\Gamma_2 = 1 - \frac{p(p+1)}{2df}(1-\Gamma_1) = 0.3621$
Jöreskog–Sörbom GFI	$GFI = 1 - \frac{2F}{tr\left(\left[\mathbf{S}\hat{\Sigma}^{-1}\right]^2\right)} = 0.5240$
Adjusted Jöreskog–Sörbom	$AGFI = 1 - \frac{p(p+1)}{2df}(1-GFI) = 0.3621$
Akaike information criterion *	$AC = F + \frac{2q}{N-1} = 5.0314$
Schwarz's Bayesian criterion *	$SC = F + \frac{q\ln(N)}{N-1} = 5.1283$
Browne–Cudeck cross validation index *	$CV = F + \frac{2q}{N-p-2} = 5.0316$
Bentler–Bonett, Tucker–Lewis non-normed fit index	$NNFI_{t/b} = 1 - \frac{df_b}{df_t}\frac{\chi_t^2 - df_t}{\chi_b^2 - df_b} = 0.4224$
Bentler comparative fit index	$BCFI_{t/b} = 1 - \frac{\chi_t^2 - df_t}{\chi_b^2 - df_b} = 0.5269$
Bollen's Rho	$\rho_{t/b} = 1 - \frac{df_b}{df_t}\frac{\chi_t^2}{\chi_b^2} = 0.4200$

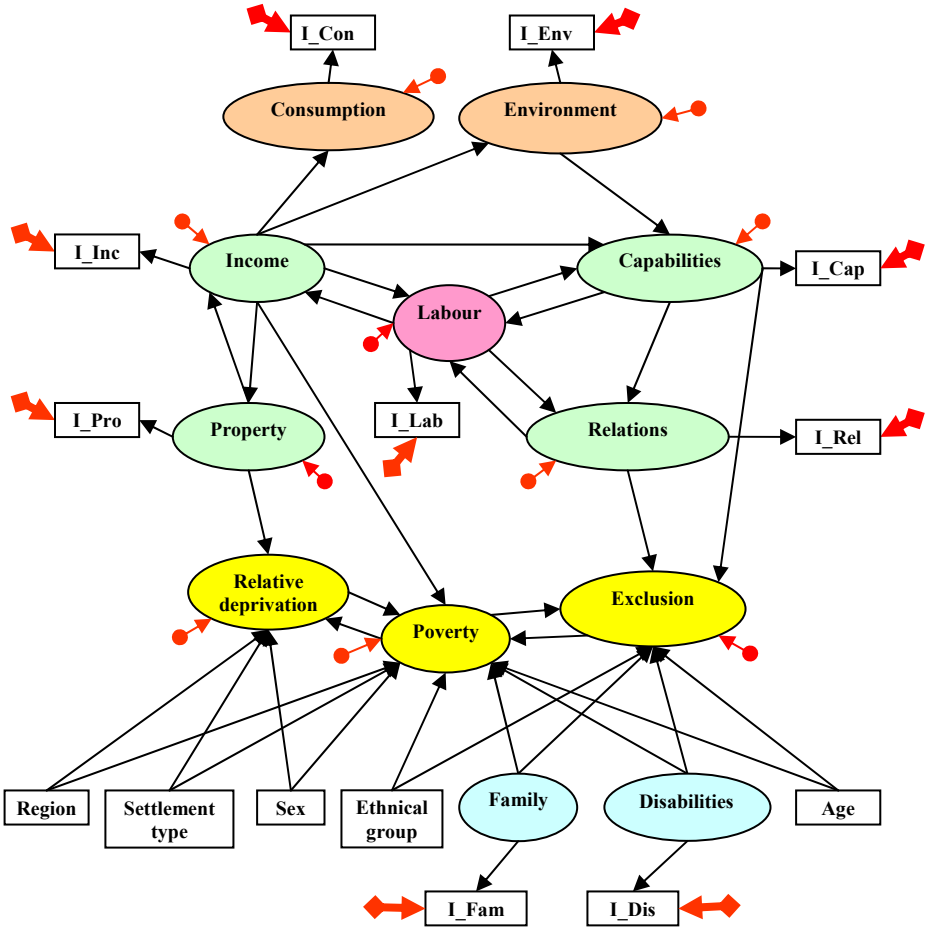
* The indices indicated by an asterisk select the preferred model at their minimized values.

Note. Sample size = N; p = the number of manifest variables; q = the number of free parameters. Subscription t indicates the target (more complex) model and b stands for the baseline null model; $F = \chi^2/(N-1)$ is the converged value of the "fitting function".

3. An extended model

A hypothetical extended and modified candidate model is suggested in Figure 3.

Figure 3. The extended hypothetical structural model



The list of the latent variables is as follows. Firstly, the endogenous variables defined are: *1*. Poverty; *2*. Relative deprivation; *3*. Social exclusion; *4*. Labour; *5*. Property; *6*. Income; *7*. Consumption; *8*. Environment; *9*. Capabilities; *10*. Relations.

Secondly, the exogenous variables are: *11*. Family; *12*. Disabilities.

Thirdly, the exogenous manifest variables considered are: *13*. Region; *14*. Settlement type; *15*. Sex of the head of the household; *16*. Ethnical group; *17*. Age group of the head of the household.

Finally, the endogenous manifest indicators (all of them can consist of several items, and note that "Poverty", "Deprivation" and "Exclusion" have no direct indicators) are: *18*. Indicators of income level (I_Inc); *19*. Indicators of properties (I_Pro); *20*. Indicators of capabilities (I_Cap); *21*. Indicators of relations (I_Rel); *22*. Indicators of labour (I_Lab); *23*. Indicators of consumption (I_Con); *24*. Indicators of the environment (I_Env); *25*. Indicators of the family background (I_Fam); *26*. Indicators of being disabled (I_Dis).

The hypothesis behind this model – among other candidates – can be computed and tested based on the model selection methodology described previously. These computations are not presented in this paper, they shall be subject of further investigation.

4. Conclusions

The paper suggests a new way of testing relationships among the constructions of poverty, deprivation and social exclusion with no need to split the society into "the poor" and "the non-poor". Hence, these latent dimensions can be measured based on several socio-economic variables using a multivariate approach. The paper gives an initial latent structure model and then suggests a refined version of it. In addition, in order to select among competing models, a brief overview of goodness-of-fit methodology of SEMs with the parameter estimation method behind it is also presented.

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The article gives detailed information on the metainformation system of the HCSO. It presents the history from the beginning up to the latest improvements. A separate chapter of the paper provides an international overview.

KEYWORDS:
Statistical methodology.
Development program.
Database.

The first chapter gives information on the definition of metadata. The second chapter covers the history of the metainformation system of the Hungarian Central Statistical Office (HCSO) and the various stages of the system improvement from the beginning until today. The third chapter presents the main subsystems of the metadatabase, while the fourth chapter provides an international overview. The fifth chapter includes the results of the latest development available on the website of HCSO.

1. The role of metadata in statistics

Metadata are data on data. They adequately describe, determine data. Therefore, wherever we are engaged in data handling, we have to produce metadata as well. This is especially the case for compiling statistics.

If we say that the value of industrial production decreased by 3.2 percent, we can find two metadata beside the statistical one: the denomination for describing the content (change of industrial production) and the unit of measure (percent).

However, these are not yet satisfactory for the right explanation of data. In order to make data valuable for users, we have to add more metadata. For example the following:

– the time period of data (for example May of xxxx. year);
– the reference time period to which we compared the examined period (for example the same time period of the previous year);
– the definition of "Production value" as a concept;
– the definition of "Industry" or those classes of NACE Rev.2., which belong to the "Industry" branch;
– the scope of observation (statistical units) (for example economic units employing more than 5 persons);
– the type of the survey (full scope or based on a representative sample);
– in case of applying a representative sample, we have to add the method of estimation;
– the method of imputation for non-response;
– the calculation method of indices;
– the application of seasonal adjustment;
– the punctuality of data.

There are several more metadata, which we could add to the previous list, these were just some examples. The more metadata we add to a statistical data, the more certain we become that the user does not misunderstand the statistical data and he/she analyses it well.

Statistical data without adequate metadata are barely understood. The scope of metadata added to data depends on the type of users or on the aim of data usage. A person of the general public is not interested in the method of calculation if he/she wants to know for example the rate of inflation. But economists, researchers or analysers highly need metadata on the methodology used and the quality aspects of statistical data.

Metadata can fulfil several requirements. Among these, the most important one is to give users information on the content and quality of data or on the method of data production. Hence, there are metadata, which support, document the work of persons engaged in data processing.

The automation and integration of statistical data production requires more and more parameters for operation. These are also metadata, and in such cases we can talk about metadata-driven processes.

If we describe data and processes in the same way in every statistical domain, the whole statistical system becomes more uniform and integrated. Standardization is brought to the fore also at the international level, especially in case of data transmission. The need for including standardised metadata in data transmissions arose long time ago in order to understand data better. As a solution, the statistical data and metadata exchange (SDMX) standard was established with the sponsorship of seven international organisations.

The knowledge of planning and handling metadata should be a part of statistical knowledge. Information that is necessary for the practice of statistics as a science and as a profession can be systematized as follows (*Pukli–Végvári* [2004]):

– information on general statistics;
– special information of statistical domains;
– information on planning, maintaining, improving the statistical information system.

The metadata system is a sub-system of the statistical information system. It covers the databases of metadata, as well as the activities and IT tools necessary for handling them.

The international statistical organisations have recognised the importance of metadata, thus their work programmes always contain relevant issues. A major milestone was the establishment of the METIS Group as an international research forum of the subject. It was founded by the UN Statistics Division and the Economic

Commission for Europe. The forum made it possible to exchange experiences associated with statistical work. The main aim of the research was to work out guidelines on models concerning statistical data and metadata (*UN* [1995]).

At the European level, the most important forum for metadata is the META Working Group, which coordinates the work of national statistical institutes in the subject of the metainformation system.

2. History of the meta-information system improvement at the HCSO

The Hungarian Central Statistical Office recognised the importance of metadata in the 1970s. Although the available resources and the intensity of improvement changed, this issue is constantly on its agenda.

The direction and degree of development depended on several issues. Among them, the most important ones are:

– support from the top management;
– condition of the IT background;
– importance of different sub-processes within statistical data production.

The history of the metainformation system improvement of the HCSO can be divided into the stages to be stated next.

2.1. "Heroic times", establishing the bases

In the 1970s, special focus was placed on researching the integration of information systems in the working groups of international organisations and in the HCSO as well. The centre of research was the Computing Research Centre in Bratislava, which was supported by the UN. The research objective was to plan and to introduce the integrated statistical information system (ISIS), and the annual seminar on ISIS served as a forum for analysing the results. Although metadata-related researches were led by Swedish experts, Polish, Czechoslovakian and Hungarian specialists also played a significant role in this field.

The top management of the HCSO established a separate organisational unit for the improvement of the statistical information system. At that time the current database management systems did not exist. In 1974, the HCSO procured the MARK IV

file management system, which could describe data irrespective of the programme and thus, it served as a base for the development of the database. This system was called STAR (Statistical Database System).

Thereupon the production database structure was finalised, to which metadata describing the statistical data content for users had to be connected. Metadata were also stored in MARK IV files. For the realisation of the system, an IBM mainframe and a batch process were available.

The types of metadata connected to the database were the following: *1*. Hierarchy of statistical domains and files; *2*. Measures (including observed and aggregated variables) with their unit of measurement, periodicity, reference period and information on comparability; *3*. Nomenclatures (classifications); *4*. Nomenclature items; *5*. Variety of nomenclatures, which is the subset of elements; *6*. Nomenclatures determining the level of aggregation; *7*. Cross-references between nomenclature items; *8*. Statistical concepts.

Concerning the content, the foundation of the present metadatabase was laid down at that time. While the most important metadata types were already available, upload caused a problem. In order to integrate other domains or fields into the system, their structure had to be planned. This caused a restructuring of the system, requiring great effort from statisticians and IT experts. Therefore, the expansion of the system was very slow.

The connection between the database and metadata was ensured by the naming convention for identifiers.

As the technical conditions did not allow the on-line availability of data, the description of metadata was disseminated through white papers (MARK IV had an excellent text processing solution). The following catalogues were compiled:

– Measure catalogue: variables stored in the database and aggregated measures;

– Catalogue of nomenclatures and classifications: list of the items of nomenclatures, classifications and nomenclature varieties;

– Dissemination catalogue: denomination of measures and classifications associated with keywords;

– List of the definitions of statistical concepts: definitions of the most important concepts.

As this catalogue system was in close connection with STAR databases, it was known as “STAR catalogues” among users. Later, it was supplemented with further catalogues, such as the catalogue of data collections and publications and a catalogue of statistical questionnaires with cell identifiers. The whole system composed the so-called “Data documentation system” (*Baracza* [1980]).

2.2. SOLAR, the first metadata-driven system in the HCSO

In the beginning of the 1980s, a need arose for developing interactive accessibility of the data of the database for users so that they could make aggregation on data after choosing the right metadata. This demand was met by the statistical online data query system (SOLAR) (*Györki–Papp* [1985]). By this time the IBM mainframe became available from terminals.

To realise the system, new metadata were required. The most important one among them was the group of those measures that could be processed together. A cardinal item of the system was the data vocabulary, which contained the description of the system for users and for the software as well (*Györki* [1980]).

The software was metadata driven with respect to dissemination and operation with data, furthermore, there was an opportunity for automation in case of data upload.

The system was finalised after a long in-house development phase; the users started to use it and gave positive feedback on its functionality. Although it didn't become widespread, a great deal of experience was gained on metadata needed to develop a metadata-driven system and on the functionality required from such a complex system.

2.3. The introduction of the database management system and the spread of PC clients

In the beginning of the 1990s, there was an opportunity for the HCSO to renew its IT system with HP Unix operation system, ORACLE database management system and PC clients. The main task of this time period was migration of data and programme systems. As the MARK IV files and the files containing metadata were relational, they could be easily migrated to the ORACLE database but for queries and maintenance new applications had to be developed.

Instead of migrating SOLAR, the HCSO wanted to choose another system, which covered more existing software items. As the development of this system was carried out with third generation tools, it was difficult to follow the software/hardware conditions and there was not enough capacity for the development.

2.4. Methodological documentations

The terminology of several statistical domains was compiled in the 1970s and 1980s and was disseminated on white papers. This serial also included the folders of

the most important statistical classifications. In a few domains, summary leaflets on statistical methods were published too. The denominations of the serials were:

– Statistical Concepts;
– Statistical Nomenclatures;
– Statistical Methodological Papers.

In 1995, the top management of the HCSO established a Methodological Working Group to elaborate the so-called basic documentation of statistical domains. As a result, the methodological "assets" of the HCSO was surveyed, and a HCSO presidential order entered into force on the planning of statistical data collections in 1997. This work has laid down the foundation for the compilation of the methodological documentation of the subsequent statistical domains.

2.5. Methodological description in publications

Methodological descriptions have been provided to the tables in the HCSO publications since the 1980s, and on the HCSO website, data have been published in STADAT system since the middle of 1990s. Data are available for users in ready-made tables supplemented with methodological descriptions, which contain the most important concepts of the given statistical domain.

2.6. The support of the statistical data production with metadata

This subchapter provides information on the subsystems of the metainformation system concerning statistical data production.

Data collections, data providers

The recording system of *data collections* was developed within the framework of the metainformation system. The data collections of the statistical service are included in the National Statistical Data Collecting Programme for the compilation of which the HCSO is responsible. (Besides, it also contains data collections enacted by other institutions.)

The records of economic units as *data providers* are covered by the Business Register. Their attributes and the corresponding attribute values are described by the sub-system "Nomenclatures" of the metasystem.

Cross-references between data collections and data providers are recorded by the system of survey control (GÉSA). This controls the dispatch of questionnaires, re-

cords data capture, encodes the reasons for late responses or non-responses. In order to operate GÉSA, new metadata were needed for the accurate description of questionnaires, instructions and supplements and for the determination of the scope of data providers, etc. (*Györki* [1996]).

All three mentioned types of objects partly existed even in MARK IV. The usage of more and more metadata made the systems more complex during transition to ORACLE.

Data preparation

At the end of the 1990s, there was a need for uniform handling of data preparation (data entry and editing). In order to manage this problem, a system called ADÉL was established. The related metadata provides logical and physical description of questionnaires, their correspondence and the definitions of check rules.

Electronic data collection

Since 2005, more and more data collections have been using the electronic data collection system of the HCSO, in which registered users get their own list of questionnaires to be completed. During the fill-in process, the system makes an automated validation, and thus, the supplied data are automatically loaded into the ADÉL system. The database loading and impersonating part of the system is metadata driven. From 2008 onwards, the completed questionnaires received by e-mail are also loaded into the database on the basis of the questionnaire cells–measures, nomenclatures–database cells relation.

Data processing

The standardisation of data processing and the establishment of the metadata-driven data processing system (Uniform Data Processing System) are still in planning phase.

2.7. Data warehouse, dissemination database

A multi-dimensional database management system was procured by the HCSO (ORACLE Express and later Hyperion) at the end of the 1990s. Although external experts were needed for its realisation, the principles and plans to make the system metadata driven were compiled by HCSO experts.

The system covers two main parts: *1*. A data warehouse for the internal users of the HCSO; *2*. A dissemination database for external users.

The data warehouse stores the prepared and documented statistical data and makes them available for interactive use. According to their needs, users may compile tables, graphs, maps in a dynamic way.

The dissemination database is such a part of the data warehouse that does not cover confidential data and is available via the internet.

For the following purposes, the data warehouse needed more metadata besides the ones it had used: *1*. the determination of data request is based on metadata (measures, dimensions, etc.); *2*. there are metadata for the right interpretation of data (definitions of measures and concepts; from 2009 the complete methodological documentation of the statistical domains); *3*. the maintenance of data is metadata driven.

The dissemination database is available on the HCSO website both in English and Hungarian from the middle of 2004.

2.8. Completion of subsystem "Concepts"

The need for completing the statistical concepts has a long history in the HCSO. The IT background had got ready for the maintenance of concepts but the enormous job of uploading the approved, bilingual notions of all statistical domains was only carried out in the time period between 2005 and 2008.

The subsystem "Concepts" is complete by now. It includes approximately two thousand concepts, which have definitions, cross-references, sources, etc. For further improvement of this subsystem, "supervision" is performed, that is to say, consistency and cross-references between the concepts of different statistical domains are checked by methodological supervisors. The supervision is carried out within a certain statistical domain and also between different statistical domains.

2.9. Completion of subsystem "Nomenclatures, classifications"

In the metadatabase of the HCSO, there are hundreds of nomenclatures both for the data collection phase and for data processing, information. Within the framework of the 2007–2009 development, different classifications were selected for inclusion on the website. They were mainly international classifications (for example NACE, ISCO, COICOP, COFOG, etc.). All the prioritised classifications were loaded into the metadatabase, if it has not already been done. For giving adequate information to users, a short description on these classifications (on their content, legal base, structure, history, applications, etc.) was prepared. Currently, there are twenty-four classifications on the HCSO website.

2.10. The methodological documentation of statistical domains on the website

The 2005 HCSO strategy contained the task of supplementing the metainformation system with a new subsystem, which sets down the methodological background of statistical domains. Thus, supplementing the existing system with new metadata, it was established as an integrated part of the metainformation system. It is available from September 2008 both in Hungarian and English on the website of the HCSO (www.ksh.hu/Data/Metainformation). The new sub-system informs users of the content, legal base, concepts, classifications, data sources, methods, dissemination forms, etc. of a certain statistical domain.

After studying the websites of other statistical institutions and international standards, the methodological documentation schema for every statistical domain was finalised as follows:

– Short description;
– Concepts;
– Classifications;
– Methodology of data production;
– Data quality;
– Data sources.

The detailed schema can be found in Annex 1 (www.ksh.hu/statszemle). During the development phase, methodological documents were compiled for approximately hundred statistical domains. This was followed by a revision procedure covering the following stages: *1*. Methodological reading, which was carried out by erudite experts of the HCSO according to general methodological and quality rules. *2*. External user reading, that is, revision of metadata on the website, from a common, external user's point of view. This phase was performed by the experts of the concerned ministries, professional organisations and universities. *3*. Linguistic reading done by HCSO experts specialised for this work. They ensured the clarity, grammatical correctness and uniform use of words.

HCSO publications always included chapters for methodology, but they varied from one statistical domain to another. Therefore, the new methodological documentation has the following advantages:

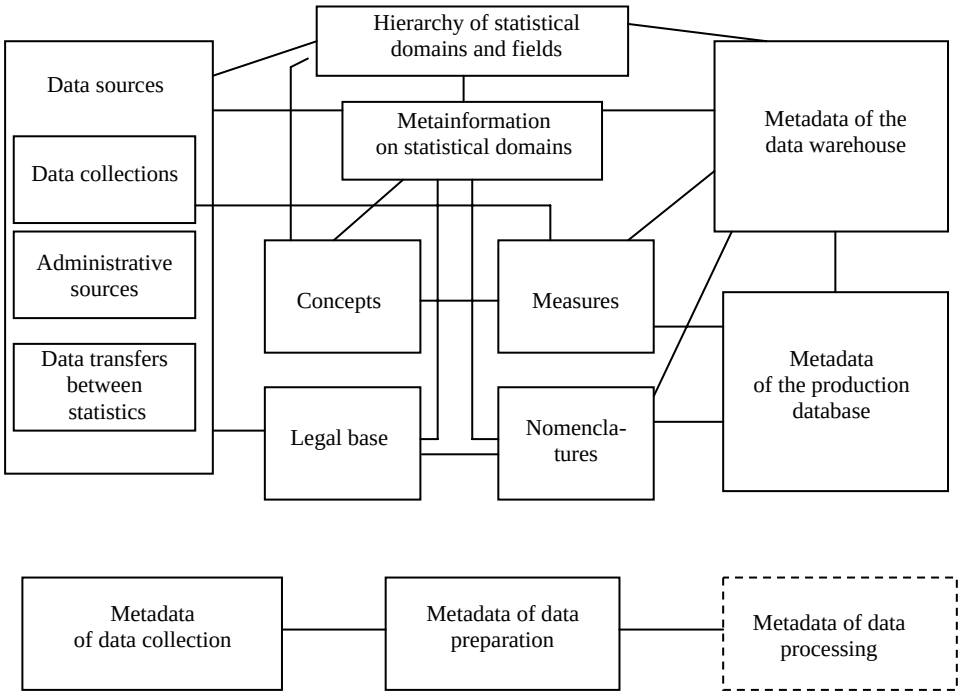
– methodological descriptions became uniform;
– there are more available metadata (new chapters embrace short descriptions, methodology, quality);
– these documentations are more detailed and cover the changes through time;

– the documentations are available for everyone on the website of the HCSO.

3. Main subsystems of the metainformation system

The Hungarian metainformation system is integrated which is well illustrated by Figure 1. In this chapter its main subsystems are presented.

Figure1. Main subsystems of the metainformation system



Note. The box with broken lines refers to further improvement plans.

3.1. The hierarchy of statistical domains and fields

The "*Hierarchy of statistical domains and fields*" is the systemic grouping of statistics by content. Its structure is composed of three levels. The first level includes 6, the second 32 and the third 95 domains and fields.

The hierarchy puts statistical domains into a system, for example:

– Social statistics
  – Employment, labour force, earning
  – Social stratification, living conditions
  – Households, families
  – Housing and public utilities
  – Health care, etc.

An example for the general fields:

– Methodology, metainformation system
  – Statistical production process and methodology
    – Survey design
    – Data collection arrangement, etc.

The "Hierarchy of statistical domains and fields" is the principal rule for the system. Both statistical and metadata (concepts, statistical domains, data sources, etc.) can be searched with the help of this structure. (See Annex 2. www.ksh.hu/statszemle)

3.2. Subsystem "Concepts"

As it was mentioned previously, the subsystem "*Concepts*" contains definitions, their validity periods and sources as well as cross-references between concepts. For example:

Mother tongue

> Definition: Mother tongue is the living language which one learns in childhood (as first language), in which he/she generally speaks with the family members and which one declares to be his/her mother tongue, free of any influence and true to reality. The mother tongue of dumb and infants unable to speak is the language in which their closest relatives regularly speak.
> Source of definition: HCSO
> Related term: Language spoken besides one's mother tongue
> Related term: Nationality

3.3. Subsystem "Nomenclatures, classifications"

The subsystem "*Nomenclatures, classifications*" contains the identifier, the denomination and, if it is necessary, the definition of classification items.

For example:

COICOP – Classification of Individual Consumption by Purpose

01 Food and non-alcoholic beverages
011 Food
0111 Bread and cereals (ND)
0112 Meat (ND)
0113 Fish and seafood (ND)
0114 Milk, cheese and eggs (ND)
0115 Oils and fats (ND), etc.

Subsets can be selected from nomenclature items which are called “Varieties of nomenclature”. There is also an opportunity to make correspondence tables between nomenclatures.

For example: a part of the correspondence table between NACE Rev.1. and NACE Rev 2.

NACE Rev.2:	NACE Rev 1.1:
0111 Growing of cereals (except rice), leguminous crops and oil seeds	0111 Growing of cereals and other crops n.e.c.*
0112 Growing of rice	0111 Growing of cereals and other crops n.e.c.
0113 Growing of vegetables and melons, roots and tubers	0111 Growing of cereals and other crops n.e.c.
	0112 Growing of vegetables, ornamental plants
0114 Growing of sugar cane	0111 Growing of cereals and other crops n.e.c.
0115 Growing of tobacco	0111 Growing of cereals and other crops n.e.c.

* n.e.c. stands for not elsewhere classified.

3.4. Subsystem “Measures”

The subsystem “*Measures*” cover variables, attributes used in data collections and aggregated measures (for example: amount of total harvested production (ton), size of harvested arable land (hectare), average yield of arable crops (kg/ha), etc.)

An important piece of information on a measure is the level of aggregation, which is described by the nomenclature (for example territorial units, group of arable crops, legal forms of enterprises, etc.).

The category "Variety of measure" is used for expressing the different aggregation levels of a certain measure. But further definitions and explanations can be also added.

Measures have a central role in the metainformation system. As the system stores the cross-references of measures, the following information can be found out:

– What statistical concepts do we need to know in order to understand a measure?
– Which data collection contains that certain measure?
– Which data cube in the data warehouse contains the measure? etc.

3.5. Subsystem "Legal base"

The subsystem "*Legal base*" is a record for legal rules, handbooks, recommendations, etc. on which statistical work is based. The enactor can be either a Hungarian or an international organisation. The register contains the denomination and type (act, regulation, etc.) of the legal base and (if available) the accessibility.

For example: Commission Regulation (EC) No 912/2004 of 29 April 2004 implementing Council Regulation (EEC) No 3924/91 on the establishment of a Community survey of industrial production (Text with EEA relevance)

In the metainformation system, the legal base can be attached to a statistical domain, a data source or a classification.

3.6. Subsystem "Data sources"

The subsystem "*Data sources*" covers the main sources of statistics: data collections and administrative data sources as well as data transfers between statistical domains.

An example for metadata on data collection is as follows:

Consumer price survey, 2008

Enactor: Hungarian Central Statistical Office
Legal status: Compulsory data collection
Change of data collection: Unmodified data collection

Frequency of data collection: Monthly
Scope of data providers: Designated shops, repair shops, marketplaces, etc.
Deadline of arrival: 27th–29th of the reference month
Mode of data collection: Representative data collection
Mode of implementing data collection: By enumerators

The next example is for metadata on administrative data sources:

Address register of the Central Office for Administrative and Electronic Public Services (data for the international migration statistics), 2008

Organisation supplying the data: Central Office for Administrative and Electronic Public Services
Frequency of data receipt: Twice a year
Content of data receipt: Data of foreigners having address in Hungary, data of emigrating and returning Hungarians: name, mother's name, sex, date of birth, place of birth, citizenship, date of changing citizenship, marital status, legal title of registration, reason and date of getting into the register

Besides this, the records of administrative data sources cover data on the availability of experts for the given administrative data.

Since, instead of external sources, other statistical domains are the major source of statistics, it is necessary to record data transfers between them. The description contains the measures, aggregation level and periodicity of data transfer. For example:

The final expenditure of GDP
Data transfer from Dwelling construction and cessation
Serial No.: 1
Denomination of transferred data: Size and number of flats
Content of transferred data: Number of flats, dwelling construction by constructor groups
Frequency of data transfer: Quarterly

3.7. Subsystem "Metainformation on statistical domains"

The subsystem "*Metainformation on statistical domains*" is the newest development in the metainformation system. It covers textual information on statistical do-

mains on the one hand and cross-references between the metainformation subsystems on the other. The text description comprises of three main parts:

– Short description;
– Data production methods;
– Data quality.

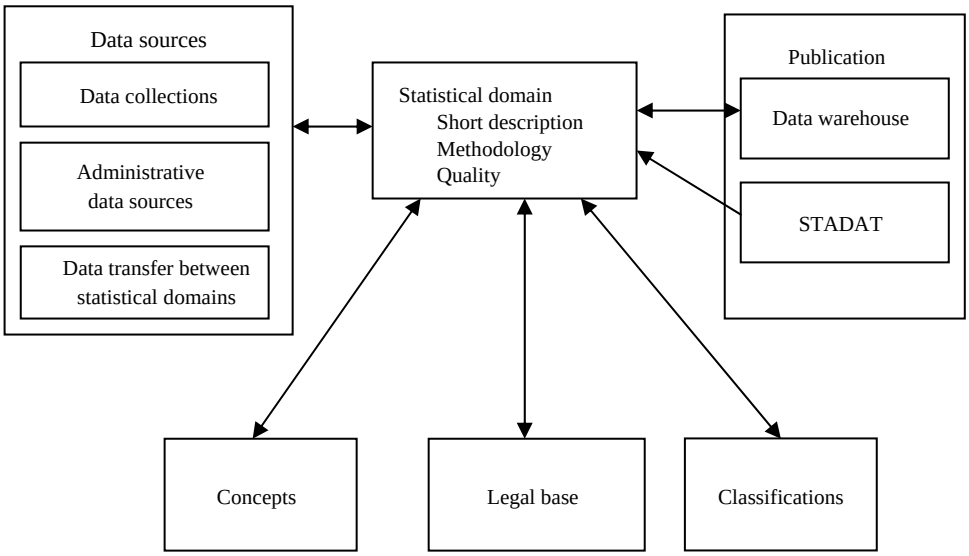
The *short description* covers the following: responsible department; responsible person; purpose and content of the given statistical domain; classifications used; data sources; forms of dissemination; timeliness, revision policy and practice; history of the statistical domain.

The "*data production methods*" part includes the following headings: population, sampling frame; sampling; data capture and data editing methods; imputation; data processing, estimation, calculation and compilation; methodological publication(s).

Main issues of *data quality* are: relevance; accuracy; comparability, coherence (comparability between geographical areas (with other countries, within the country); comparability over time; coherence with other statistics); quality report.

The subsystem "Metainformation on statistical domains" connects the other subsystems of the metasystem to the statistical domains as it is shown in Figure 2.

Figure 2. Connection between statistical domains and other subsystems



These connections make it possible to search easily the concepts, classifications, legal bases and data sources of a given statistical domain.

There is a link from publications to the statistical domains. The button "Methodology" navigates the user to the subsystem "Metainformation on statistical domains".

3.8. Subsystem "Data warehouse"

As the most important part of subsystem "*Data warehouse*", the data cube covers data which can be processed together. Besides denomination, there is information on the reference period and reference observation units in its description.

The dimensions of the data cube are described by the nomenclatures of the metasystem. One dimension may contain several nomenclatures. A hierarchy can be built from the items of dimensions and its levels can be denominated. There are measures in a certain dimension of the data cube. Their descriptions are included in the subsystem "Measures" of the metainformation system. For example:

– Data cube: Vocational education;
– Reference units: Institutes of initial education;
– Reference period: 2005–2008;
– Dimensions: Time period, type of education, field of training in initial education;
– Measures of the cube:
  – Number of students in vocational education (heads;
  – Number of female students in vocational education (heads);
  – Number of students passed vocational exam (heads).

This data cube belongs to the statistical domain "Formal education". Clicking the button "Methodology", the whole documentation can be read.

3.9. Metadata of the production database

Metadata of the production database connects the description of concepts, classifications and measures to the tables of the production database. According to the naming convention, the columns of the tables have measure identifiers and their rows have nomenclature identifiers. That is how the columns of the tables navigate the users to the concerning documentation.

3.10. Grouping the metadata of the production database

Metadata of the production database can be divided into three groups. Metadata of the "*Data collection arrangement*" phase embraces information on data collections, questionnaires, instructions, supplements; on the scope of data providers so that an algorithm can be designed to send questionnaires out and to control data capture; on the organisation and employees of the HCSO; on work flow parameters.

Metadata of "*Data preparation*" include the cells of questionnaires by their physical location; the cross-references between cells of questionnaires and measures, nomenclatures as well as database cells; and the check rules.

The planning of the "*Data processing*" subsystem along with that of its metadata is currently underway.

4. Relevant international standards and the practice of other statistical institutes

This chapter provides information on the international standards as well as on the metainformation system of other statistical institutions and compares the latter with that of the HCSO.

4.1. International standards

Adequacy to international standards has become more and more important for Hungary since its EU accession. To this end, the Eurostat and the HCSO compared the metainformation systems of the European national statistical institutes (NSIs).

Since every NSI wants to meet its own users' requirements in the establishment of its metainformation system, the purpose of these comparisons was not the ranking of NSIs. The aim was always a mapping of best practices.

Among the formerly mentioned standards, the most important ones are SDMX and the Euro-SDMX Metadata Structure (ESMS) because these are the standards which ensure the comparability of different metainformation systems and thereby, the comparability of statistical data.

Structured data and metadata exchange

The abbreviation SDMX means structured data and metadata exchange, but it is actually more than that. Besides the standardisation of the IT background for the statistical data and metadata exchange, it standardises the recommended content and concepts

of the metainformation systems as well as statistical data processing. The most important white paper of the SDMX standard is the Content Oriented Guidelines, which contains the formerly mentioned elements. This standard was established by seven international organisations (Bank of International Settlements, European Central Bank, Eurostat, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank). Adequacy to the SDMX standard can hardly be stated since its application is not compulsory. The reason for this is that although the standard was established for the whole world, it is unlikely to prescribe for all the NSIs to restructure their whole statistical system accordingly. However, it is advisable to introduce SDMX into the whole statistical data processing if there is no "traditional" metainformation system at a NSI. Besides, the NSIs are required to map their system to the SDMX standard for ensuring international comparability.

For further information on the SDMX standard please visit www.sdmx.org homepage.

Euro-SDMX Metadata Structure

The establishment of the standard ESMS was induced by the 2008 version of SDMX. It is actually the European version of SDMX (but it does not contain all concepts used in that). This standard focuses on the special requirements of the EU and as a result, ensures the comparability of different metainformation systems and statistical data. Its concepts are published in an EU Recommendation (*EU* [2009]).

4.2. The practice of other statistical institutes

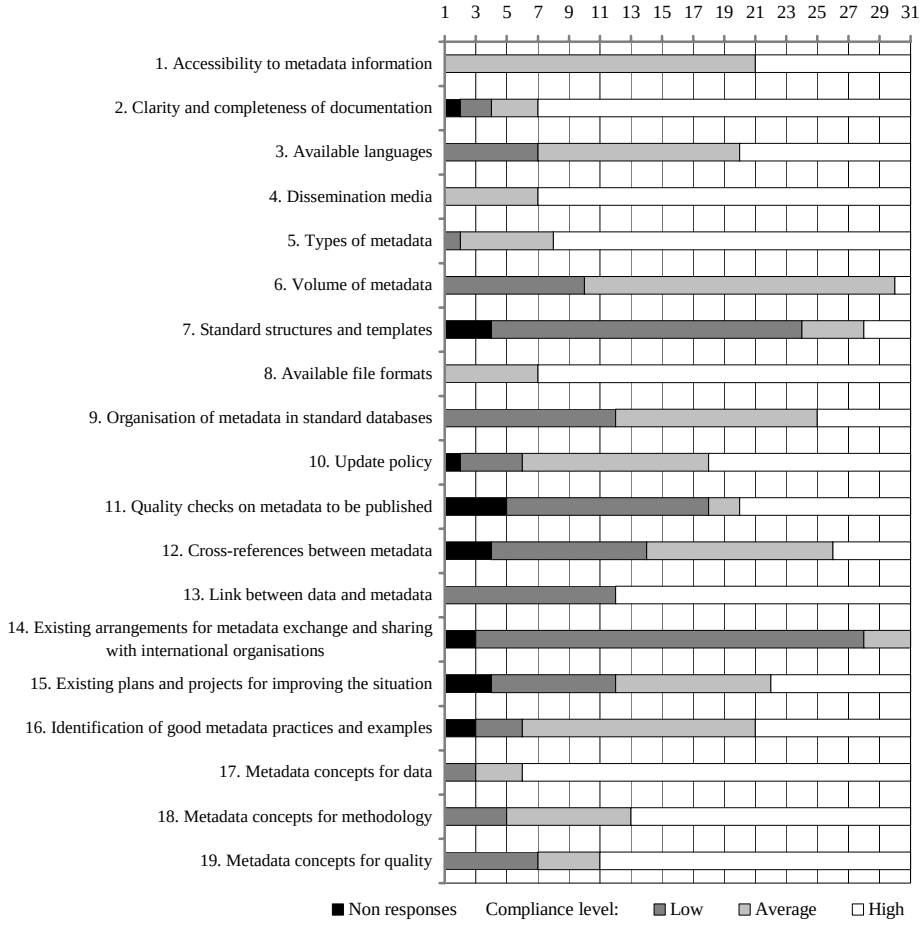
This subchapter is based on the case studies presented at the 2009 METIS Working Group Meeting. As further sources, personal experiences and the analysis of a Eurostat survey were used. This latter was based on a questionnaire on the actual condition of the metainformation systems of different European NSIs and on the analysis of NSI websites containing large amount of metadata. The survey was carried out in 2008, and its results were published in June 2009. The analysis of results was interpreted at the 2009 META Working Group Meeting in Luxembourg. The questionnaire was sent to 31 countries and it contained several questions on the metainformation system. (See Annex 3 www.ksh.hu/statszemle) Based on the analysis, the next statements can be made for all the countries.

The following criteria are highly met:

– Clarity and completeness of documentation;
– Dissemination media;

– Types of metadata;
– Available file formats;
– Metadata concepts for data;
– Metadata concepts for methodology;
– Metadata concepts for quality.

Figure 3. The number of NSIs by compliance level



Source: Document of Meta Working Group, 2009. Eurostat. Luxembourg.

The following criteria are met on average:

– Accessibility to metadata information;
– Available languages;

– Volume of metadata;
– Organization of metadata in standard databases;
– Update policy;
– Quality checks on metadata to be published;
– Cross references between metadata;
– Link between data and metadata;
– Existing plans and projects for improving the situation;
– Identification of good metadata practices and examples.

The following criteria are poorly met:

– Standard structures and templates;
– Information on existing arrangements for metadata exchange and sharing with international organisations.

A more detailed introduction of Norway, Portugal, Canada and New-Zealand is given next.

The structure of the metainformation system

In *Norway*, the metadata need of the statistical data processing system is filled by several sub-systems. They are the following:

– Datadok for archiving;
– Vardok for variables and their definitions;
– Stabas for standard classifications;
– Meta website for making the Norwegian system visible for external users;
– A database for data preparation;
– Metadata for researchers;
– A sub-system of statistical methodological documentation;
– StatBank, which is similar to the dissemination database of the HCSO;
– Metadb containing historical data on social security and national education.

In *Portugal*, the metadata need of the integrated statistical data processing system is also satisfied by several sub-systems. (See Figure 4.)

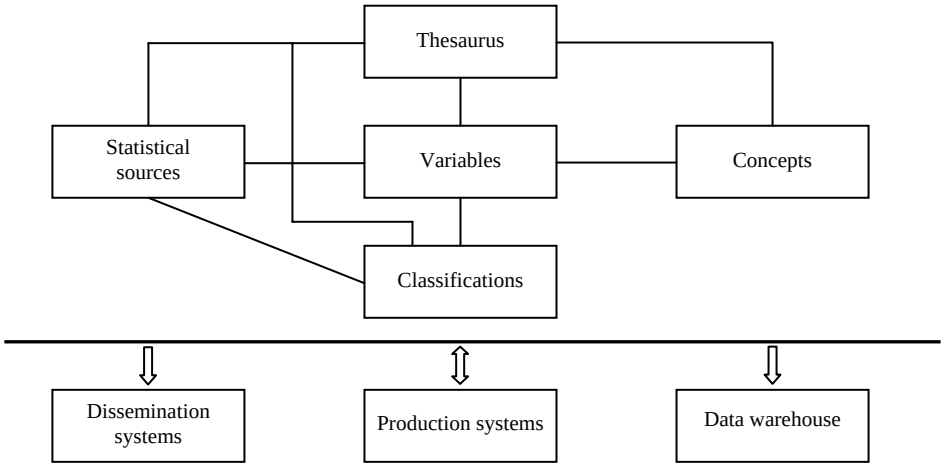
Its sub-systems are as follows:

– Concepts;

– Classifications;

– Statistical sources, which cover methodological documentations, variables, and – in the future – the metadata of administrative data.

Figure 4. The structure of the metainformation system of Statistics Portugal



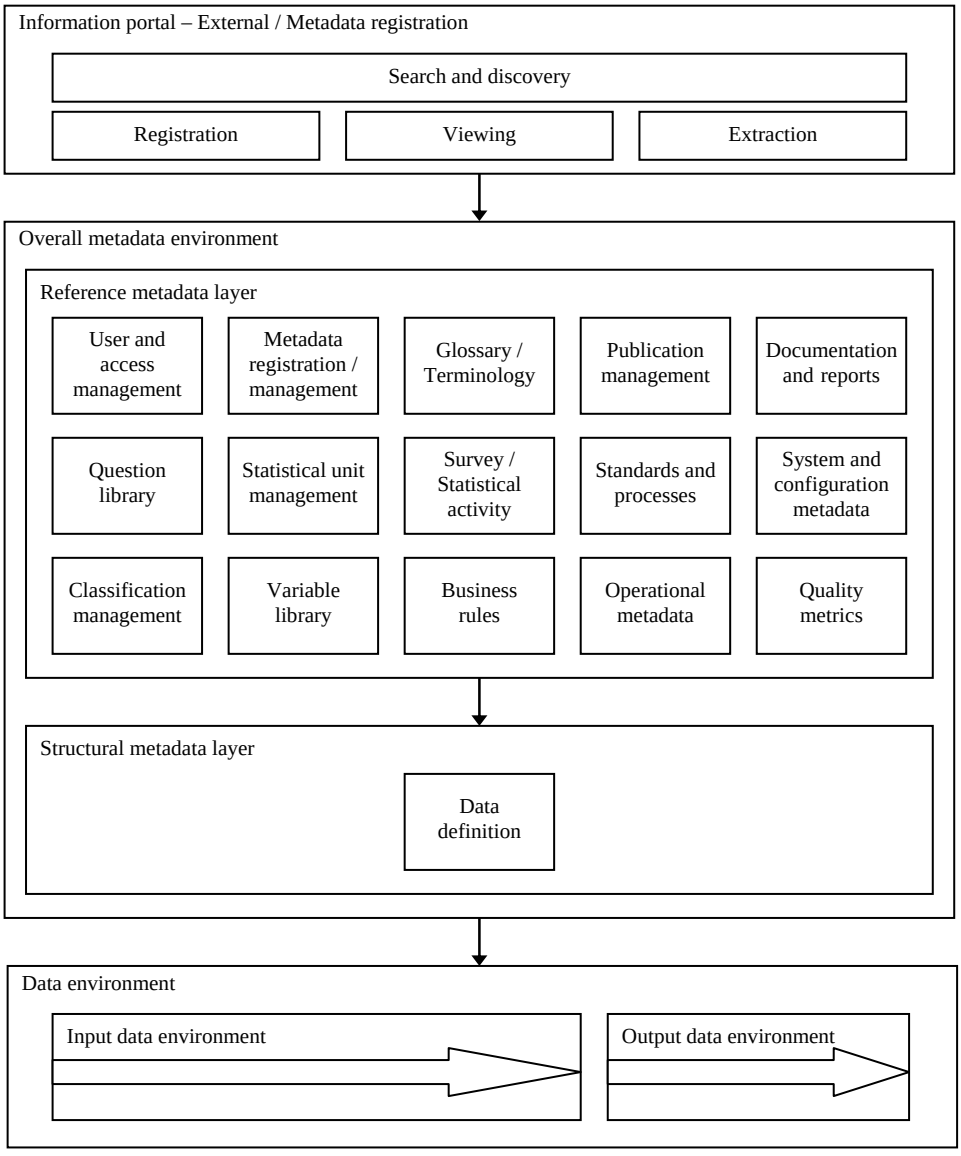
Source: METIS session document, 2009.

The reason for choosing *Canada* and *New-Zealand* for the analysis is the fact that the systems of these countries contain elements, which became part of the SDMX standard. The statistical data processing model of New-Zealand was the role model for the generic statistical business process model (GSBPM) in SMDX. It is a uniform model used throughout the world. Statistics Canada has made the New-Zealand-model-based GSBPM complete by adding two further sub-processes: "Archiving" and "Evaluation". Although these systems could be analysed in several ways, we emphasize only their organisational issues and structure, as the most cardinal ones. (See Figures 5 and 6.)

As it is shown in Figure 4 and just like in the formerly mentioned countries, the metadata need of the statistical data processing is met by several sub-systems. In the figure, for better understanding, the connections between the sub-systems are not illustrated. However, in reality, these sub-systems are connected to each other forming an integrated metainformation system.

Statistics Canada currently uses a metainformation system called IMDB (Integrated Metadatabase), which is handling metadata for data preparation and dissemination. (See Figure 6.) The metadata need of other statistical data sub-processes are satisfied by several additional metadatabases. Statistics Canada is working on a system for managing metadata through the whole statistical data processing.

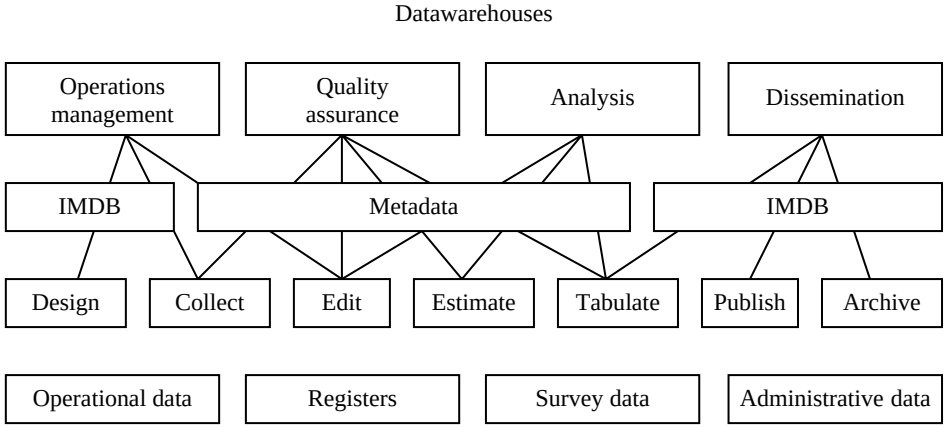
Figure 5. The structure of the metainformation system of Statistics New-Zealand



Source: METIS session document, 2009.

In the HCSO, the structure of the metainformation system (see Figure 1) contains the results of the latest improvement, which aimed at improving the metainformation system of the institute.

Figure 6. The role of IMDB at Statistics Canada



Source: METIS session document, 2009.

It is rather difficult to compare the metainformation systems of different countries. There is a great deal in their content that is similar. It is clear that the aim of every NSI is to make metadata suitable for describing more phases of the statistical data processing than it is done today in order to establish an integrated system.

Organisational issues

In the HCSO, the responsibility, concerning the metainformation system, is shared. The subject-matter departments are responsible for the metadata of those statistical domains, which they are in charge of. The IT Department is having control over the IT background. The Statistical Research and Methodology Department is responsible for working out the methodology, drawing up and enforcing the common rules and for checking quality. The Dissemination Department is accountable for disseminating metadata in different publications. The responsibilities are clear and distinct as recorded in the Establishment and Operation Rules. Since responsibilities and tasks are shared in the HCSO, there are four persons engaged in the methodological and IT background of the metainformation system. Besides, approximately fifty persons working at the subject-matter departments are responsible for maintaining metadata of subject-matter statistics. The advantage of the Hungarian structure is that by applying common rules, the special needs of subject-matter statistics can be taken into consideration.

There are several solutions for placing a metainformation system within an organisation. Some organisations apply a centralised (for example Statistics Portugal), others a decentralised method (for example Statistics Finland), and of course, there

are also cases for mixed applications (Statistics Norway, Statistics Canada, Statistics New-Zealand, HCSO). Every NSI chooses the most favourable solution for itself according to its traditions.

5. Metainformation system developments on the HCSO website

The meta-website displaying metadata fills an old gap. In its planning phase, meta-websites of other national statistical institutes (their content, functionality, etc.) were taken into account. We considered only those models exemplary, which showed an integrated system. The strength of the solution chosen by the HCSO is that it is database-based; therefore cross-references between subsystems and objects can be stored. As a result, users have an option for the navigation between objects on the website.

The number of metadata available on the meta-website, 2009

Denomination	Number
Definition of concepts	1 996
Classifications	24
Item definitions of classifications	22 339
Statistical domains	104
Of which:	
Statistical domains including concepts, classifications, legal base, respondents	104
Statistical domains including also short descriptions	77
Statistical domains including also methodology and quality	61
Further metadata:	
Data collection as a data source	247
Administrative data as a data source	98
Legal base with a link to the statistical domain	144

The core of the system can be summarized as follows: metadata can be achieved by users either using the link between data and metadata or starting from the root menu.

The first case means that there is a “Methodology” button next to the statistical data, which navigates the users to the corresponding metadata (methodological document).

In the second case, users can have information on the statistical domains (their concepts, classifications, data sources, etc.) irrespective of the statistical data. (For further information, please visit the website of the HCSO (http://portal.ksh.hu/pls/ksh/ksh_web.meta.main?p_lang=HU)).

Metadata are updated daily on the webserver owing to which the users can have up-to-date information on the statistical domains.

In the previous year, the "Metainformation" website had an average of 1 650 Hungarian and 250 English speaking visitors per month. Visitors may send their remarks via e-mail address (meta@ksh.hu) to the subject-matter statisticians and to the developers of the metainformation system to support the further improvements.

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Website of SDMX http://sdmx.org/

Website of Statistics New-Zealand http://www.stats.govt.nz

Website of Statistics Norway http://www.ssb.no/

Students' Perception of the Development of Skills and Competences at the Budapest Business School

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The paper presents a study of students' opinions regarding the use of skills and competences while working on real life projects within the framework of the Student-Enterprise Programme run by the Budapest Business School. The purpose of the programme is to allow second- and third-year undergraduate business students to apply and integrate the theoretical knowledge as well as the expertise learnt in the classroom to the real world. The authors also investigate employers' evaluation of the skills and competences demonstrated by the students while working on these consulting projects provided by the Business School's partner organisations.

KEYWORDS:
Higher education.
Enterprise.
Business communication.

The rapid social and economic "upheaval" brought on by the opening up of markets and their globalisation has compelled companies to focus on how they can adapt to these new changes. The changes have affected the conditions of employment on the one hand and the corporate structure on the other. A key element in this process of adaptation is the management of human resources. Human resources are no longer considered to be simply a means of production, but an organic part of management since they play a crucial role in the long term competitiveness of companies. This being so, companies pay special attention to the skills and competences of new recruits and make a point of further developing their existing expertise on the job. What employers seek in new recruits differs considerably from what the expectations were more than a decade ago. Earlier the emphasis was solely on professional knowledge. Though it is important nowadays too, employees should also demonstrate knowledge of languages, be computer literate, efficient, persevering, results oriented, and be able to communicate effectively, work in teams, have integrity, creativity, and be prepared to take on board new developments in their line of work. It is necessary to note that in many cases the final decision is, however, not based on the existence of the formerly mentioned skills, but on the so-called "soft skills" that are difficult to measure (*Bazerman–Neale* [1992], *Belbin* [1997], *Györgyi* [2007]). In sum, when recruiting new employees, companies seek various types of personalities (*Belbin* [1997]) and often find themselves in a quandary when trying to decide which of the candidates would be the right person for the job. Which way the scales tip depends, to a large extent, on whether the candidates *1*. are able to present a positive image of themselves, *2*. have the skills the employer is looking for, and *3*. are able to present these skills in a way that will catch the potential employer's attention.

For institutions of higher education in Hungary, the formerly described developments pose a considerable challenge. If they want their graduates to succeed in life, they need to tailor their programmes to comply with the demands of employers. At the same time, however, they are bound by the academic standards prescribed by the National Accreditation Board. The need to incorporate skills development into the curriculum is further highlighted by the criticism levelled by employers against higher education, contending it does not equip students with skills and competences that could be put into practice as soon as they start work. This view is borne out by a recent study (*HVG* [2008]), which gives information on all educational programmes in Hungary. The study claims it is still not clear to what extent institutions of higher education take into consideration the requirements of the job market when designing their programmes. It would seem the institutions and the job market operate inde-

pendently of each other. At a time, when colleges/universities are competing fiercely for students, those stand a good chance of actually recruiting them that offer not only professional knowledge but also training in skills and competences. The findings of the study show the majority of graduates are likely to start work in small or medium size enterprises (SME), and will be working on projects their SME tenders for, so it is of considerable importance that they be able to join in the work immediately.

Consequently, institutions, if not on their own accord, may be compelled to pay more attention to the requirements of the job market because once students realise what employers want from them, they will, with all certainty, try to persuade their institutions to follow suit. It is anticipated that students will be in a unique position to experience at first hand what skills and competences they need to have in order to operate efficiently in the world of work, since in the course of their studies they are expected to keep moving to and fro between the institution and the job market. Based on the experiences gained in the job market, students will take a more active part in designing their own study programme to be able to live up to the expectations of the job market (*HVG* [2008]).

In keeping with the formerly described trends, the Budapest Business School (BBS) has introduced a new curriculum design ensuring that students are provided with a solid theoretical foundation parallel to developing the competences they will need not only during the course of their studies but also when entering the world of business (for example business writing, presentation skills, meetings skills, negotiation skills, study skills, business research, assertiveness, stress handling, etc.) (*Boda–Kerekes* [2002]). As a second step, BBS introduced the Student-Enterprise Programme (SEP) four years ago in order to promote the integration of the knowledge learnt in the classroom into the real world.

This study reports on the examination of students' opinions regarding the use of skills and competences in real life projects. We contrast this with the opinion of the company mentors on their perceptions of the extent to which students can use their theoretical knowledge and expertise. This experiment shows the efforts we at BBS have been making to bring institutions of higher education and employers closer to each other. We think our Student-Enterprise Programme does just this since it is based on the close collaboration of the institution and the companies where most of our students find employment after graduation.

1. The Student-Enterprise Programme

The SEP has been running at BBS for four years at undergraduate level. The programme involves groups of students working on projects provided by various com-

panies such as Coca-Cola, PriceWaterhouseCoopers, UPC, Asea Brown Boveri (ABB), Millward Brown Hungary, Palace Cinemas, IBM, etc. While working on these projects, the students learn how to work on their own and in teams. Parallel to experiencing the problems presented by working in teams, they acquire first-hand knowledge of the culture of business. Since many of the companies participating in the project are multinational, students can improve their written and oral communication skills in a foreign language which is English. The projects provided by the companies are real, not doctored or taken out of books. The students act as consultants reporting directly to the client companies and their work is directed by managers acting as company mentors. Four tutors acting as faculty mentors also facilitate their work.

Having worked on the projects throughout the semester, at the end, the students are expected to have developed a good working relationship with their company mentor. The project also helps them gain an insight into an organisation with potential for placement and employment and learn how real organisations are structured and operate. They also acquire the skill to manage themselves successfully in business culture. It is important to give students the opportunity to learn and hone these skills, thereby giving them a competitive advantage following their graduation from BBS.

2. Methodology

The aim of the investigation was to find out, as a first step, what students' perception of the programme was, whether they became familiar with the internal structure and operations of companies and they really found it useful in helping them put the theoretical knowledge gained in the classroom into practice and in developing a range of skills and competences that can later on be useful for them in the world of work. This study reports only the results of the analysis of the responses given to the questionnaire focusing on these points. The examination of whether, as a result of working on these projects, certain abilities are actually developed, would constitute a part of another investigation.

In the semester under investigation, the number of students was 27 because this is an optional subject and the number of students registering may change from semester to semester. Since the sample of students was small, we decided to use a questionnaire which would enable us to get a reasonable amount of information fairly quickly. (See Appendix.) We expected the responses to give us a good overview of students' attitude towards the programme and their opinion about the extent to which they

could use various skills and competences. If, during the analysis of the data, certain points were to arise that needed further study, they could be explored later on by conducting in-depth interviews with the students.

The questionnaire consisted mainly of closed questions and was divided into four sections:

– general information relating to interest in and relevance of the project;
– skills and competences needed to complete the task (they were chosen on the basis of the results of a survey among employers);
– evaluation of own performance during the project;
– comments on any aspects of the programme.

The participants had to evaluate the statements on a scale of five where 1 stood for the lowest value and 5 for the highest. The rest of the points on the scale represented various degrees of the students' positive or negative attitude. When analysing the responses, we looked at the frequency of each value. Since the sample was small, when showing the results of the analysis in a bar chart, the values 5 and 4 were rated as high and the values 3, 2 and 1 as low. This mode of presenting the results of the analysis let us pinpoint the potentially problematic areas which can later be investigated.

The students were given the questionnaires by the programme assistant before the conclusion of the course and were asked to return the filled questionnaires when they came to the programme office to have their mark recorded in their academic lecture book. Since the submission of the questionnaire was linked to an official assessment event, the return rate was high. The questionnaires were anonymous, though students could give their name if they wished to do so.

In order to check how valid and realistic our assumptions are concerning students' ability to apply theory to practice, to get an insight of business culture and to use the knowledge gained to help them succeed in the world of work, three questions were posted on the e-learning web-site used by the participants. The return rate of this questionnaire, which gave us useful information in improving the programme, was also high. Students were also asked to give an overall rating of the programme and to add comments if they wished to do so.

A similar questionnaire consisting of the first two parts of the one administered to the students was given to the company mentors to fill in. Our aim was to get the company mentors' opinion on the students' performance during the time they were working together. It is thought that the comparison of responses would enable us to see how realistically the students assessed their ability to use various skills and competences.

2.1. The participants

Participants included 27 third-year business students who took part in the SEP in Academic Year 2008/09. The students taking part in the programme were on the full-time BSc International Business, BSc Finance and Accounting and BSc Commerce and Marketing Programmes. By the third year, students have studied economics, statistics, finance, accounting, marketing, management, and business law. The SEP is a designated option on all the programmes run by BBS.

The programme is advertised to third-year students because we believe this learning experience will lend more credence to their studies. The students work in teams of five or eight on one of the projects submitted by the companies, and the company mentors assess the performance of the groups.

2.2. The projects

The projects tend to vary from semester to semester, but most of them require the students to do some kind of research either by administering questionnaires, interviewing people, or simply by studying relevant documents. More specifically, the projects for the 2008 autumn semester required the teams to

– conduct research in order to measure brand equity (and its components) of selected accounting firms in Hungary from the perspective of Hungarian students;

– carry out a market research for the Hungarian market regarding a new ABB product related to Energy Management Studies;

– analyse Palace Cinemas customer web usage in respect of market, progress and dynamics. A strategy for Hungary should be recommended in order to maximise usage and increase admissions to cinemas;

– conduct research to measure the effects of the construction of Metro4 on the real estate market (both commercial and residential);

– prepare an overview of the market by examining the market position and main consumer strategies of the key OTC (over the counter) players in Hungary after the pharmacy liberalisation.

3. Results

The first section of the questionnaire was aimed at finding out how interested the students were in the project, how relevant they thought the tasks were, and whether,

in the course of their work, they managed to gain any practical insights (for example, if they were able to apply theory to practice).

The overall majority of the respondents said the project was interesting and highly relevant. However, in the case of practical insight, only a little more than half of the participants (56%) were of the opinion that the project enabled them to apply theory to practice.

Figure 1. Students' perception of interest, task relevance and insight gained
(percent)

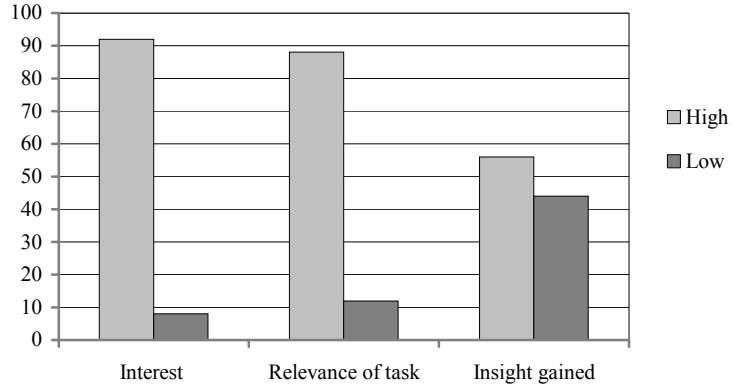
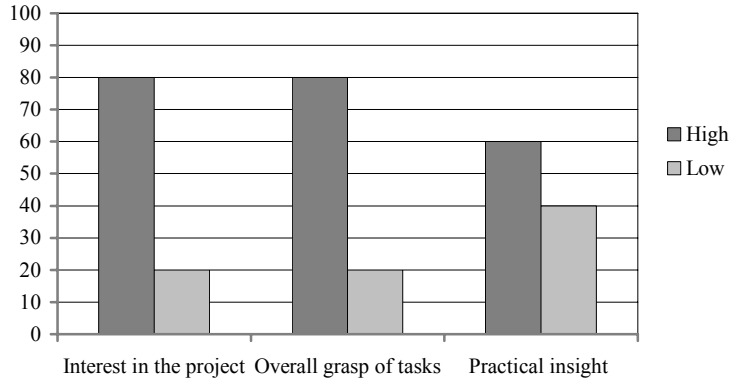


Figure 2. Company mentors' perception of interest, task relevance and insight gained
(percent)

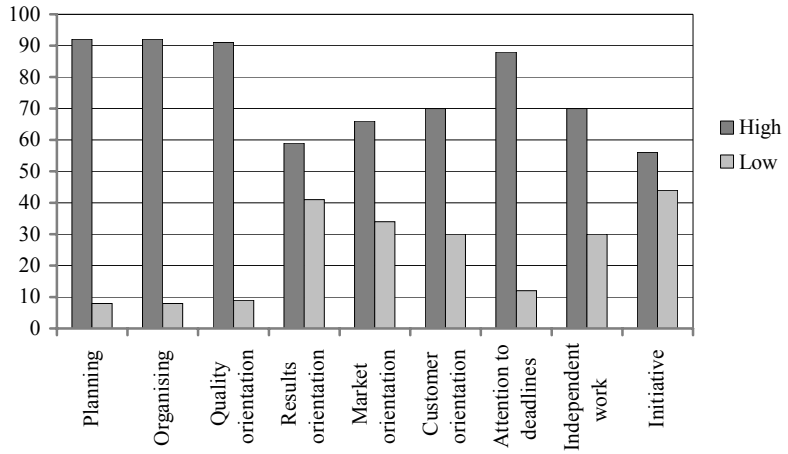


The company mentors' assessment corresponds to that of the students; according to them the students are interested and the task is thought to be relevant to them. As for practical insight, the majority think that students do not demonstrate this skill while working on the project.

The second section of the questionnaire was directed at finding out which of the skills and competences listed were needed in order to complete the task. They were taken from the questionnaire used by the Dutch *Avans Hogeschool's International School* [2003] to evaluate students after having completed their placement.

Figure 3 shows the overall majority of students assessed the projects as requiring them to use planning and organising skills, to be quality oriented and to pay attention to deadlines. However, relatively high percentage of students, 41 and 44 percent respectively, were of the opinion that they were not expected to be results oriented and to use their initiative. Furthermore, a little more than a quarter of students (34 and 30 percent respectively) thought the projects did not require them to be market and customer oriented. Surprisingly, a little more than a quarter of the students said they felt there was little scope to work independently.

Figure 3. Students' perception of the skills and competences needed
(percent)



In many respects the company mentors' evaluation corresponded to that of the students.

Similarly to the students, the company mentors saw their team as having and being able to use planning and organising skills. The same applies to quality orientation and keeping deadlines. In the case of results orientation, the company mentors assessed students as being focussed and striving for a final solution, whereas students think this is not the case. The majority of company mentors assessed students as being customer oriented, though there were some (20%) who said students would need to pay more attention to customer needs. They were divided in their assessment of the students' marketing orientation, ability to work independently and to use their

initiative in solving the problem. A relatively high number (nearly 40 percent) said they did not observe students demonstrating these skills.

Figure 4. Company mentors' perception of the skills and competences needed
(percent)

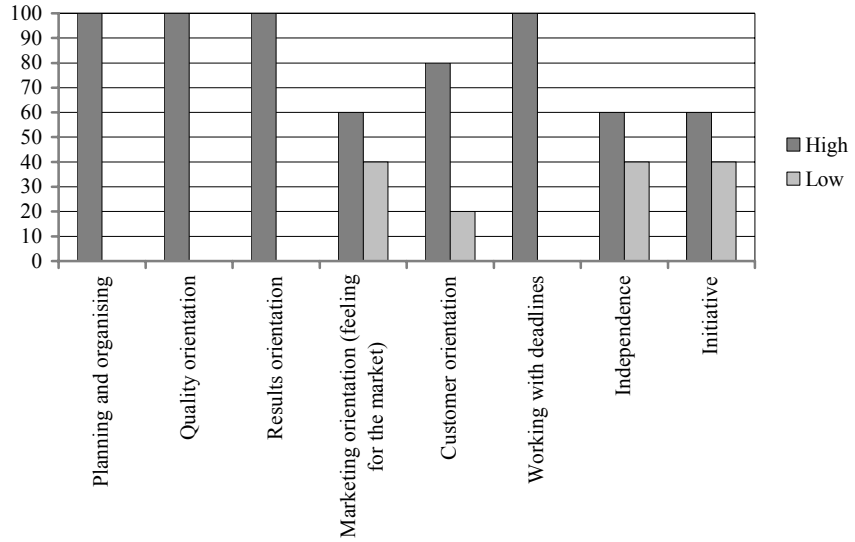
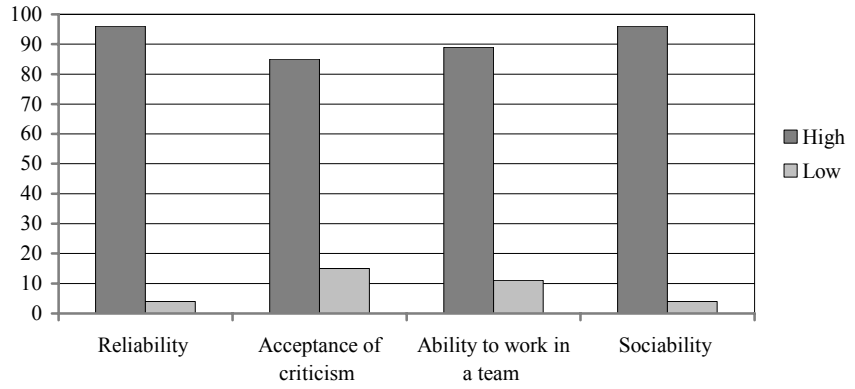


Figure 5. Students' perception of their personal performance
(percent)



The third section asked participants to evaluate their personal performance in terms of reliability, sociability, ability to accept criticism and work in teams. The majority of students said they were reliable throughout the project, were good at accept-

ing criticism both from the client and from group members, got on well both with the client and with their fellows, and did not find it difficult to work in teams.

As regards their language skills, the majority said they had no problems with either written or spoken English, though a little below a quarter of the students admitted to having problems with producing a piece of written work in English.

Figure 6. Students' perception of their language skills
(percent)

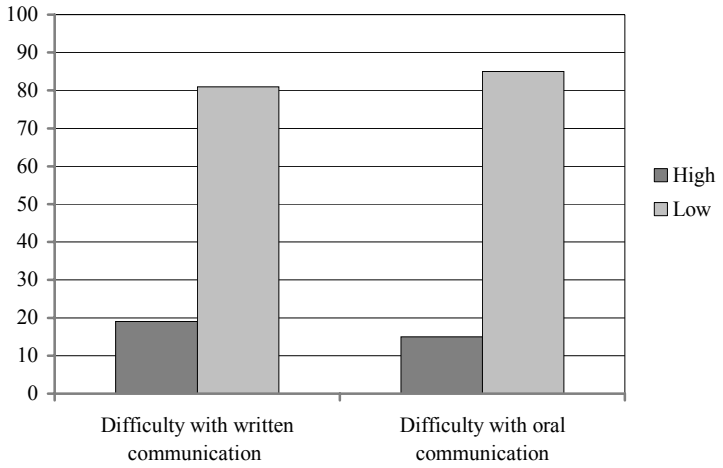
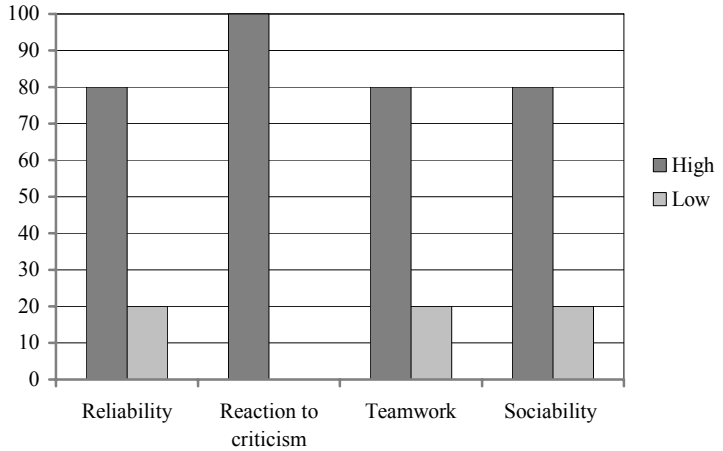


Figure 7. Company mentors' perception of students' performance
(percent)



Looking at the company mentors' evaluation of the students' performance, we can see that the company mentors were unanimous in saying that the students reacted to criticism well.

This is not quite the case as regards reliability, teamwork and sociability. In these instances, nearly a quarter of the company mentors stated that in some situations students should be more reliable, should work better in teams and be more sociable.

As regards language skills, company mentors said they detected no problems either with the students' written work, or with their oral performance.

In response to the questions on applying theoretical knowledge in practice while working on the project, learning about the real culture of a business organisation and using this knowledge to succeed in the world of business, the majority of the students (85%) said they could apply the theoretical knowledge learnt in the classroom when working on the project.

As regards learning about the culture of a business organisation, participants (67%) who said that the project did not help them in this respect outnumbered the ones who were of the opinion that it did. The responses to the question on increasing one's confidence in succeeding in the real culture of business also showed that the majority of students, albeit a small majority (55%), think that working on the project will not help them succeed in business life.

Many of the educatees also commented on the programme. However, some of them were divided on how many tutorials would be necessary during the semester. On the whole, more students said they would like to have tutorials at regular intervals. The participants were also divided on how much explanation was necessary for them to understand what the client wanted them to do. (These comments indicate that they had problems with understanding what the objective of the project was.) They were satisfied with the background materials given, though some of them said more materials would have been welcome. As regards team work, the educatees said it was more difficult to work in team than they imagined. They especially commented on how challenging it was for them to get the whole group together for a meeting. This really needed planning and organising skill on their part. All in all, the majority of students (89%) liked the programme. They said they learnt many things about themselves and about working with other people.

4. Discussion of the data and conclusions

The participants' responses, to a certain extent, bear out our views that the Student-Enterprise Programme is interesting, relevant and requires students to draw on a

wide range of skills and competences. Contrary to expectations, it does not really provide them the opportunity to put theory into practice, nor does it give them an insight into the culture of a company, or help them too much in learning how to succeed in the real culture of a business. Nevertheless, a case can be made for the need to include such programmes in the curriculum of business students.

First of all, there is a requisite for students to work on real-life projects, since in the classroom it is impossible to give them the experience they can acquire when working on projects for a company together with an employee of the particular business. The advantage of working on real-life projects is that in the process the participants do manage to gain some practical insight if the project is well chosen and the client is ready to take the students seriously and involve them, not only in the data collection process, but also in the decision making. If the task is merely to collect data without doing any analysis, drawing conclusions and making recommendations, there will be very little practical insight gained and, quite justly, participants may think that the result was not worth the effort.

Another reason why we should persist with such a programme is because it is rather difficult to reproduce real-life projects in the classroom since the case studies or projects taken from literature are usually doctored to present a given problem situation. Since these problems are, to a certain extent, artificial, the decisions made will not affect the lives of participants (*Luoma* [2004]), so quite often, due to lack of interest or insufficient preparation, students opt for totally unrealistic solutions. They do not appreciate the seriousness of the consequences of irresponsible decisions. Indeed, what they are actually doing is trying to emulate the decisions they think people in the given situation would make, however, this may have very little to do with the decisions made in real life. In other words, the participants are playing out beliefs about roles they have never actually played in real life, thus it must realistically be expected that there may be discrepancies between working in the classroom and working for a company (*Kasper–Dahl* [1991]). So if the development of practical insight is our focus, in school we could get students to work on problems and projects taken from a context they know well, such as their life at the Business School. The decisions they make when working on such a project could affect their lives, since the recommendations, resulting from these decisions could be taken on board by the institution's management. By involving students in, for instance, improving the learning support services provided, or organising extra-curricular activities and other events, will make them feel committed to the project since it is undertaken for their benefit. Thus, it can be expected they will show more interest and initiative in finding the most acceptable solution. This would give them hands-on experience in decision-making and a chance to gain practical insight into how problematic issues within the institution can be resolved.

Projects embedded in contexts more familiar to the students would also help them get an idea of what market and customer orientation mean in real life. They would not

have to try and imagine how people in a given situation would act and the kinds of decisions they would make, since in the Business School context the students themselves are the customers in the market place where the services of educational institutions are sold. They know what they want and can well imagine how they would best like to get it. In this manner, it would be possible to convey to them how important it is to have a feeling for the market and know as precisely as possible what the customer wants. This cannot be learnt from books; one has to learn through experience, combining the knowledge of facts with a considerable amount of empathy.

With regard to how much independent work the projects require, the participants said they thought solving the problem did not demanded too much independent work. The reason for some students thinking this could be that the project was not challenging enough or that the company mentor was too dominant and did not give them a wide berth. What we can see at work here is the consequence of the traditional attitude to learning, that is to say the teacher or the company mentor is solely responsible for learning and the participants are acting merely as passive recipients of the knowledge disseminated by the teacher. Unfortunately, it is still the case today that many students are satisfied with this role, since they are not concerned with learning for the sake of knowledge, only for grades and to pass examinations. This attitude is the straightforward consequence of the tutors' role in the teaching-learning process, namely, that she/he is the one who determines the students' objectives mostly on the basis of a prescribed syllabus, she/he selects the materials thought to be relevant to the students' needs and interests, decides on the classroom procedures, allocates the time to be spent on each topic or language item and finally, evaluates and assesses the students' progress and decides on the remedial work, if necessary. Thus, there is no call for the educatees to work independently and to use their initiative since knowledge is handed to them on a plate. The teacher's intentions may be well-meaning, but the end product is that although instructors seem to devote a considerable amount of time and energy to make learning successful, these efforts are not always reflected by the results, consequently, many teachers complain of passive, disinterested, as well as uncooperative students. As is the case, such students benefit very little from the learning experience inside the classroom. However, if instructors recognise that "learning is something which can only be done by a learner, not something which can be done to or for ... [him]" (*Riley* [1982] p. 61.), then this would bring about a change in their attitude to the teaching-learning process.

Although the majority of the students understood what was required of them, there were some who thought that the explanations were too detailed and this served to confuse them. This indicates the need to hold tutorials at regular intervals so that the participants can freely discuss what it is they do not understand. At these tutorials they could discuss issues concerning the theory underpinning the problem they are

working on. They may be more ready to show their incomprehension to their tutors than to the company mentor on whom they would like to make a good impression, since at the end of the project they may be offered a placement position or a job at the company. Additionally, the tutors may be better equipped to explain problematic issues to the students than a busy company mentor.

*

The results of the investigation helped us to pinpoint certain problematic areas in the development of the competencies of students studying for a business degree. A further analysis of these areas can give ideas as to what could be focussed on in the classroom by way of preparation before a placement takes place, and also highlights what company mentors could be doing to maximise usefulness of work placements not only for the participants, but also for the company.

A point in favour of the Student-Enterprise Programme becoming an integral part of the curriculum of business students is that by working for a company under the guidance of a company mentor and being accountable to this person, participants are forced to take the work seriously, to strive to produce results and quality work, since it may happen that their future employment is at stake here. For this to be so, it needs to be emphasised to the company mentor how essential it is to treat the students as they would real employees because only then they will be compelled to take working on the project seriously.

Appendix

STUDENT ASSESSMENT FORM

We would like to get your feedback on how useful you found the Student-Enterprise Programme in developing your competences. The results of the survey and any additional comments you may make will be used to improve the programme. The information given will be handled confidentially, but it is up to you to decide whether or not you give your name.

Thank you for taking the time to fill in the assessment form.

Dr. Katalin Kollath
Course Tutor

Student name: _____ Company name: _____

	1 (low)	2	3	4	5 (high)
Interest in the project					
Overall relevance of task					
Practical insight gained					
The completion of the task required					
planning					
organising					
quality orientation					
results orientation					
market orientation (feeling for the market)					
customer orientation					
particular attention to deadlines					
independent work					
initiative					
Evaluation of personal performance					
My reliability throughout the project					
My acceptance of criticism throughout the project					
Ability to work in a team					
My sociability (relations with the management and fellow students) throughout the project					
Difficulty with written communication					
Difficulty with oral communication					

Overall assessment of the extent to which the project facilitated the acquisition of competences:

1	2	3	4	5

Additional comments – Here we would like you to comment on

– the frequency of tutorials (that is would you like more tutorials at regular intervals);

– the need to get more skills focussed training while working on the project;

– the need to be given more materials which explain the theoretical background of the projects;

– the need to be given more materials giving advice on the application of various skills;

– the extent to which you learnt about the culture of real businesses;

– the extent to which your confidence about succeeding in the real culture of business has increased.

(*If you feel you can express yourself better in Hungarian, please feel free to write the additional comments in that language*):

_____
_____
_____
_____
_____
_____

Signature: _____ Date : _____

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