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Deliverable No. 15

The impact on economic structure and labour markets of increased competition pressure
from a formal-informal perspective

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EXECUTIVE SUMMARY

The paper is an attempt to reflect the potential and already observed impact of the presence of the informal economy in the countries under investigation on the functionality of the emerging market economy, particularly on its competitive side, if any, on labour markets and on the business environment. A possible line of research could also be the impact the new competitive pressures building within these economies may have on the equilibrium existing between the formal and informal sectors of activity.

It consists of two parts, following an introductory chapter. The first part is a synthesis of country reports (Hungary, Bulgaria and Romania) concerning the main topic under analysis, as well as the social-economic balance between income and consumption in these societies. It also points out, where data available, to other transition countries in South-East and Central Europe, for comparison purposes. The second part is building on available data - for the country-partners in the project – referring to the informal economy indicators, and variables-factors of inter-dependence between informal activity and competitive markets in officially registered economy. The income and consumption data of the country reports has been transferred to this second chapter of the paper, giving more weight to the topic of labour market analysis in a formal-informal environment. The data has been provided by country teams and computed, assembled and analysed for correlation by the partners in the project and the Romanian co-ordinator.

The country reports were built on the basis of the following guidelines, where data was available:

- A general description of the informal sector development during transition years, including sector structure (economic sectors with preferential informal activity) and incentives for splitting between underground and genuinely informal activities;
- Changes and trends observed in regional/local structure of unemployment and employment; this will encompass the rural-urban division, as well the employment-unemployment-inactivity rates, in a dynamic perspective;
- Dynamics of consumption of households (dis-aggregation between employees, unemployed, self-employed; inclusion of self-consumption, based on Household Surveys), on a household grouping basis (quintiles, deciles, etc.);
- Impact on informal activities of emerging market economy structures (entry of new companies, closure or privatisation of state-owned mega-enterprises, entry of foreign companies and distribution networks, etc.) and of the opening of the economies to foreign trade and direct investment (the effects of the future Single European Market). The negative effects of the informal sector's presence on the foreign investment should also be tackled, with particular stress on administrative and relational barriers (corruption, weak structures);

- Dynamics of the relationships between labour markets (informal-formal) and the global informal activity, and country-specific factors of influence for the formal-informal equilibrium.

The subsection dedicated to the labour market analysis also contains a special comparison between Hungary and Romania related to the issue of non-wage paid labour, which is proved to be one of the most important determinants of the development of informal activities.

From the findings of the authors presented above and from the summaries of the results of the studies overviewed within the related literature on informal economy in the three countries under investigation, we may conclude on several interactions that are taking place between variables that are specific to the development of informal activities and the variables characterising the emerging market structures within these transition economies.

1. The differences between the share of informal sector and the share of the underground sector in the overall national output vary from one country to another within the sample of three referenced countries. The informal economy has a larger share than the underground sector in Romania, while in the case of the other two transition countries (Bulgaria and Hungary) there is a much narrow gap documented in various studies.
- The reason lies in the different sectoral structures of the value added and of the labour force that are characteristic to the above referred economies. In Romania, the share of agriculture is higher both in GDP and in employment, and given the observed correlation between the size of rural and agrarian sector and the size of the informal economy, one would expect to see a wider presence of informal activities within the socio-economic system.
2. The developments within the informal sector in each of the countries investigated in our analysis follow similar patterns. However, there are different time paths for Hungary, Bulgaria and Romania, with the latter two countries showing a lag behind Hungary in terms of restructuring their economies, reaching the status of functional market economies and thus witnessing a reduction in the share of the informal sector in overall economic activity.
- In the beginning of transition, all countries witnessed a strong increase in the share of the informal sector in overall economy, followed by a decrease after reaching a stable growth path. The main reasons for the outburst of hidden activities were everywhere the dismantling of the former centralised institutional system at a higher pace than the building of new market mechanisms, as well as the variability and intensity of the regulatory framework. Hungary was more rapid in building market institutions and opening its economy. As a result, the competitive pressures made their appearance at earlier stages of transition within the Hungarian economy and the main drivers to informality lost faster their importance in motivating economic agents to switch to hidden activities than in the other two South-Eastern European countries. The

evidence of the earlier presence of competitive structures in Hungary is documented in the papers belonging to work-packages 1 and 2 of this project.

3. The empirical evidence shows that the increase in the share of informal activities and in the size of informal economy had almost the same determinants in all the three countries.
 - The group of drivers includes the growth rate of the economic output, the income tax rate, the size of non-wage paid labour force, the unemployment rate and the long-term unemployment rate, and the real wage index. The increase in income inequality, the high variability of the fiscal system and the increasing gap between the level of official tax rates and the effective tax revenue shares in the GDP, the institutional structure and the administration interference in the economy (the high intensity of regulations) and the high volatility of inflation were also important factors of influence in generating more underground/informal actions.
4. Informal economy was an escape solution for new SMEs to survive competition from subsidised state-owned institutions and foreign-owned subsidiaries, which used monopolistic tools to gain higher shares on the fragile and weakly protected (against monopolistic behaviour) emerging markets.
 - Faced with increasing bureaucratic obstacles and growing corruption, more and more SMEs increased their informal activity. Bureaucracy is perceived as being a major cause of the growth of the informal sector. Empirical evidence (Daianu et al 2001) demonstrates that the “most important barriers to business are more economic rather than institutional” and that the public is very concerned with corruption, administrative barriers and bureaucracy. These are, by order of ranking: taxes and regulations, inflation, unsafe financial system, policy instability, exchange rate depreciation impact, anti-competition practices, corruption, the judiciary system, economic crime, and poor physical infrastructure.
5. The expansion of the informal economy is documented to have increased the income inequality at the top end and the low end of the household decile distribution in both Hungary and Romania. The same phenomenon is evidenced in the Hungarian and Romanian literature in terms of regional distribution. It seems that the increased competitive pressures in emerging market economies are working in the same direction.
 - It was reported that in Hungary the very rich and the very poor increased their inequality gaps versus the rest of population during the period of expansion of informal/underground economy. The same phenomenon is also documented in the case of Romania during the late 90s. On the other hand, the poorest county in Hungary and the rich region of Budapest are reported to have the highest shares of informal sector. The same is true for the Romanian regions, where Bucharest and the extremely poor regions struggle with the presence of underground activities at a higher extent. The competitive forces of a free market are producing the same effect, at least during the initial years following restructuring, as the rich people and the rich

regions are much more capable of attracting and using the scarce available resources that exist within the yet weakly structured socio-economic system. While the development of market mechanisms helps in generating larger middle-income strata of the population, with less income inter-gaps, the households living below poverty line or close to it will miss the tools and know-how to reach the existing resources and will lower their standard of living even more (at least in relative terms). The informal economy and the competitive pressures working in the same direction in increasing income and regional inequalities should be an alarming signal for the policy makers!

6. Finally, we may say that the most important resource that is shared by formal and informal economy as well and receives the greatest impact from competitive pressures and from any policy actions is the labour force (population in general). Evidence from above referred studies suggests that individuals tend to act already as if they were in an overall free market environment, but within the global system represented by formal and informal economies jointly. The first years of transitions were characterised by an increase of the share of self-employment in total employment, increase of unemployment and, generally, increase of non-wage paid type of employment, which has been proved to be one of the main drivers (if not the main driver) of informal economy.

Although the initial factors that drove people and firms to work underground may have disappeared after several years of transition and the establishment of functional market economy in these countries (considering the lags between them in the various stages of transformation), the share of non-wage paid labour in total employment continues to stay relatively high in all the referenced economies. This is a sign for the existence of a strong pattern of hysteresis in the labour markets of these countries, which may add to the administrative barriers and may delay the needed adjustments in mobility and flexibility (which are partially missing for the moment on these labour markets). And this may result in negative feedback given to the development of the competitive free market system.

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COMPRESS – Project under the 5th Framework Programme ERA

Deliverable 15 – Work Package 4

“The impact on economic structure and labour markets of increased competition pressure, from a formal-informal perspective”

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I. Introduction

The informal economy flourished in transition countries, during the ‘90s, as these countries were leaving behind a social, political and economic system which has had been strongly centralised, dictatorial in many cases, forcing a low degree of freedom for many market-specific activities (including informal activities, as well). All the economic activities that fall outside the purview of government accounting are known by various names in the literature: informal, atypical, parallel, unofficial, shadow, hidden, black, underground, and illegal. The lack of consensus in formulating a unified structure of theories, precise definitions and methods suggests that important questions are not answered, and sometimes we do not even state the questions correctly. Can the overall size of the informal (shadow, hidden) economy be estimated, and its changes over time? Do countries at different stages of development possess different types of underground economies? What is the relationship between global competitiveness, market-specific behaviour at micro level, or household patterns of consumption and labour supply and the size of the informal (shadow, underground) economy?

The existing and increasing literature which is related to this topic (Milanovic (1998); Ott (2004), Neef & Stanculescu (2002)) already demonstrates that in the beginning of the transition, the share of the informal sector increased in all transforming

countries. This might have been either because the absolute size of the sector had expanded or because it had shrunk less than the formal economy had. These nations were challenged to build up – as quickly as possible – a new system to replace the old one, this time based on market forces and the reign of economic and social equilibrium. As many authors have already pointed out (Blanchard (1997)), the speed of destruction for the old system was higher, in the beginning of transition, than the speed of building the new market economies, together with their institutions. Newer weakly structured economies appeared on the ground of the former socialist (communist) countries (Dobrescu (2000)), and it is probably here where we encounter the main explanation for the very high rate of growth of the informal economy in these societies. Studies on Hungarian unofficial/hidden economy (See Tóth-Sik (2002) in Neef-Stanculescu (2002)) or on Croatia and Romania already argued that “the proliferation of underground economy came to a halt in the middle of the 1990s or by the end of the decade, then, as the GDP began to rise after a long recession period, it started to shrink.” In the early period of transition, numerous factors drove the increase in the weight of underground economy and the majority of these factors could not be avoided, but only reduced. However, with the strengthening of the private market-oriented economy, the attitude of the various economic actors (behaviour of households, behaviour of firms, and behaviour of tax administration) and the social determinants of the informal/unofficial/hidden economy were continuously improving. As a result, in the second half of the 90s (Hungary, Croatia, new EU Member States) or in the beginning of the new Millennium (Bulgaria, Romania) the weight of informal economy started to decline.

Informal activities may help reducing the increasing income gaps among the groups of population, but, at the same time, they are slowing down the durable growth potential of a country (Ciupagea in Neef & Stanculescu (2002)). Ambivalence characterises positive as well as negative functions of informal economies impacting on the economy and society. The effects of large shares of informal activities within the economy and society are to be seen in several areas, such as:

1. *The economy's global development* receives the impact from the parallel activities going on in the informal sector both at micro and macro level, as well as in both real side and financial-monetary side. The formal national socio-economic system is open to influences coming from the rest of the world and from the domestic parallel and possibly hidden activities. Competitive pressures generated by the continuous opening of the economy towards the international markets and by the on-going restructuring of the previously centralised economic system are interacting with the outlaw free market behaviours that are specific to the informal socio-economic system. The two parts of the global system compete for the same labour resource and for the same financial resource and capital, but the channels and tools available to reaching these resources are unevenly distributed among agents acting separately within each of the parts. Some of the linkages having a usual causality flow from informal to formal are summarised as follows (we list firstly the positive functions, then the negative potential impact):
 - Transactions' speed is faster in informal sector, generally; this may be beneficial to the entire economic system, particularly in the beginning of a transition

process, when competitive structures are not yet mature and market institutions are hardly paving their way. Informal small trade, real estate, transportation, business and agricultural services thus act as a dynamic catalyst for many economic mechanisms. Informal economies increase the flexibility and efficiency of particular sections of the economy, and they certainly condition cleverness and market versatility of the more qualified actors – but at the same time breed corruption and the circumventing of laws.

- Many informal services and some small informal specialised productions and business services fill gaps both in the net of household provision and in the system of formal manufacturing and business services. There is a large share of population in the referenced countries that would not be able to afford even minimal personal and social services (from hair dressing and car transport to household repairs or catering), and cheap informal trade helps to save on their meagre incomes.
- Informal business services and small production units lower the costs of economic modernising and thus contribute to the development of the Romanian economy. However, many informally actives suffer exploitation and are facing price dumping (that is, self-exploitation), and consequently often the quality of the informal goods and services offered is less than mediocre. In addition, the more capital intensive these informal production units are, the more dependent on the activity and products of the formal sector, thus reducing their markets in comparative terms.
- Informal sector may be de-coupled sometimes from the formal economy, thus putting barriers to the development of an integrated system. As the speed of transactions is different and the availability of resources unbalanced between the two sides of the entire system, the overall development suffers and cannot allocate the scarce resources efficiently.
- The channels through which competition and know-how may spread within the entire economic system are distorted. The question is how far informal economies contribute to the slow and irregular development of the markets and of the economic networks in Romania, and to that is difficult to answer. Empirical evidence and experts' perception in respect to branches like agriculture, construction and retail trade is that the impact of informal sector is important. In regions like the more industrialised parts of Latin America or Northern Africa, which are also characterised by partial modernisation, distorted economic structures, weak states and corruption, large-scale poverty and proliferating informal economies, policy makers increasingly tend to tolerating and developing small scale informal economies. The aim is to strengthen potentials and networks of reciprocal aid and self-help, discharge the state from certain social responsibilities, increase the productivity, and develop market-related attitudes (de Soto, 1989).

- Foreign trade is affected and openness is delayed as a process on going. In the beginning of the transition process, a large part of the foreign trade was under-declared (in terms of volume) artificially rising the export price or the import price per unit of exchanged goods. In the area of foreign as well as domestic trade, tax avoidance, lack of standardisation and registration miss-procedures were high during the whole decade and only in present times tend to recede. The hidden trade flows were preventing not only taxes to be collected to the state budget, but they favoured discrimination and monopolistic behaviour and impeded externally-driven competition to foster market-oriented relationships in domestic economy.
2. The volume and the redistribution of income within the society
- There is higher real income for the population, as informal incomes are rapidly spreading around through the household network. This also represents help for the entire economic development, as higher income translates into higher consumption, thus inducing growth via domestic demand's increase.
 - There is a pressure on income gaps (inequality) to widen which is fuelled by the existence of a large share of informal economy;
 - The budget's revenues are distorted and diminished, while reducing the capacity of the nation to provide enough support for social assistance. The high degree of tax and social contributions evasion makes one main cause of the low performance of the state in transition countries (and corruption – as well as low wages in the state service – are contributing to another main cause: the weakness in law enforcement). In industries - especially in the heavily subsidised energy sector - the effects of informal activities are the highest, since tax and social contributions evasion add quite often to the big tax arrears and the large scale use of informal workers. In transport and in many services, tax evasion is common practise (Dăianu e.a., 2001). On the household side, the rich are particularly clever in hiding incomes. This brings in a dual distortion in income allocation within these societies.
 - Informal activities usually help in bridging sectors and economic agents there where opportunities already exist; they seldom appear on bare ground. Consequently, the regional disparities are usually enlarged by the informal sector's relative growth.
3. The potential for durable/sustainable growth of the nation (the long-run growth)
- By reducing the budget revenues, the possibility of financing the human factor quality (health, education and research) is diminished;
 - Taking every opportunity into account, informal activity increases the regional discrepancies sometimes, as opportunities are unevenly distributed by regions;
 - There is no interest given – in the case of informal sector – to externalities; consequently, there is a higher probability of inducing a non-ecological type of growth in those areas where informal share is higher.

II. Informal economy in transition countries

There are two main issues to be clarified before initiating any analysis of the informal activities in countries that surpassed a transition and are now new EU Member States or candidates for EU integration. On the one hand, the term “informal economy” should be better defined and distinction made between various other terms belonging to the same family of non-official (non-registered) activities. On the other hand, one should consider and list several methodologies aimed at assessing the volume of informal economy as compared to the registered part of the economic activities of a nation. Such an exercise may allow searching afterwards for inter-relationships between the two sides of the same entity (the socio-economic system).

II.1. Definitions and methodologies within the field of informal activities

According to different authors (Frey & Schneider, 2000), the informal “phenomenon is known, and has been discussed in the literature, under many different names: informal, unofficial, irregular, parallel second underground, subterranean, hidden, invisible, unrecorded and shadow economy or moonlighting”. Quite often and in several languages the term used is black economy.

II.1.1. Definitions

Probably, the most precise definition points out to the informal economy as part of what is opposed to the officially registered economy; from this point of view, one may speak of the non-accounted or non-registered economy (or activities). According to Eurostat and to the methodology used by national statistical offices in Europe (Ungureanu-Ivan, 1999), **the non-accounted economy** represents the entire volume (and corresponding value) of economic activities that cannot be computed from statistical inputs (in other wording, those activities that escape from statistical observation).

Following this definition, the official economy will always exclude two major activities:

(a) “Production that by convention is not part of GNP, in particular private household activities”. Depending on the approach and measurement technique, Frey & Schneider estimate that the household sector could comprise between 30% and 50% of GNP.

(b) “Tax evasion is not value adding but re-distributional and is therefore not included as such in the above definition. However, in general, no taxes are paid on underground activities (such as moonlighting for house building) which are value-adding. Thus, underground activities and tax evasion are related but certainly not identical”.

According to the definition of Schneider (2004), the **shadow economy** (which may be another name for the non-accounted economy) includes unreported income from the production of legal goods and services, either from monetary or barter transaction, and includes all economic activities that would generally be taxable were they reported to the tax authorities. Taking the definition into account, informal activities should not be mixed up with illegal ones. **The illegal economy** includes those activities producing goods and

services that cannot be sold or possessed by law or those that are legal but are provided by unauthorised economic agents.

One important sub-category of the informal economy, which surpasses the borders of informality and interferes with the official economy as well, is the underground (hidden) economy. **The hidden/underground economy** includes the activities that, despite being legal, are hidden to public authorities by their providers, under the form of fiscal evasion or non-compliance with the legally required administrative procedures. The hidden economy is containing all the underground activities, which are not illegal by definition, but result from attempts of economic agents to reduce their production costs by not complying with legal and administrative standards. It also refers to activities that cannot be reported within the national accounts, due to deficiencies existing in the statistical national system.

According to the same statistics-related sources, **the informal economy** is defined as the volume of activities performed by economic agents characterised by low organisational capacity, by uncertainly defined division between labour and capital and by informal work contracts. It mostly enters the area of household economy, and can be part of the underground economy if it fails to register statistically by intention.

Castells and Portes (1989) characterize the central feature of the informal economy as “unregulated by the institutions of society, in a legal and social environment in which similar activities are regulated”. The lacking of regulation is without doubt the main characteristic of all the different forms and kinds of informal economies. But the variety of informal activities and transactions from the individual level up to the national (or even world) economy is such that one prefers to speak of “informal activities” which include all kinds of non-declared and non-regulated markets and exchanges, productions and services.

The first and most important distinction has to be done between market- and household-related activities: informal activities encompass both traded (market) and non-traded (non-market) goods and services. Non-declared market activities of production and exchange gather two categories:

- (a) non-declared labour and barter which escape social and tax regulations, both not illegal as such;
- (b) criminal activities including illegal activities within legal firms, like tax evasion or corruption, and the diverse forms of criminal economy, which are prohibited as such.

Non-market activities also gather two categories:

- (a) household production which depends on the various assets at the disposal of the household (land or housing, available workforce, skills);
- (b) in kind transfers from family and neighbourhood networks.

Broader definitions of the informal and underground economy consequently include private household production and re-distributional activities.

II.1.2. Methodologies for the assessment of informal activities

According to different reviews [Feige & Ott, 1999; Schneider & Enste, 2000; Frey & Schneider, 2000], there are three large groups of methods for estimating the size or share of the shadow economy:

- ◆ Direct approaches, which imply the use of direct data collected from surveys and samples;
- ◆ Indirect approaches, which use discrepancies between various macro-economic indicators, such as supply of and demand for electricity;
- ◆ Model approaches like multiple-causes models [Weck, 1983] or labour supply-based macroeconomic models [Albu et al., 1998].

Due to a relatively quick transition within the statistical system, data based on the national accounting system and on standard surveys within the labour force and population have been available since earlier stages of transition in some of the transition countries (Romania, partially Hungary), while in most of these countries, information on informal activities is relatively scarce.

II.2. An assessment of non-accounted (shadow) economy in transition countries

The study of Schneider & Klinglmar (2004) is one of more and more numerous attempts to do a consistent comparison of estimates of the size of the shadow economies in 110 countries. The research dis-aggregates the data by three country groups (developing countries, transition countries, highly developed OECD countries) for the same fixed period, using similar methodology combining indirect and model approaches (physical input method, currency demand method, DYMIMIC model) and reporting data for the year 2000.

In the case of transition countries the measurement of the size of the shadow economies used the DYMIMIC model approach. 23 transition/transformation countries (from Albania and Azerbaijan to Ukraine and Yugoslavia) have been investigated and the average size of the shadow economy relative to official GDP is 38% for the year 1999/2000. Bulgaria and Romania are in the middle field (36.9% and 34.4% respectively) while Slovenia (27.1%) and Hungary (25.1%) are closer to the lower end. The calculations were based on “Worldbank Data” (Washington D.C., 2002). Table 2.1 shows only a part of the results.

Table 2.1- The size of the shadow and official economy of 23 European and Central Asian Transformation Countries (partial)

Transformation Countries	GNP at market prices (USD, billion)	Shadow Economy in % of GNP
Bulgaria	116.7	36.9
Hungary	440.6	25.1
Romania	363.8	34.4
Slovenia	180.7	27.1
Average of 23 countries	320	38

Source: Schneider-Klinglmar (2004), Table 3.4, p.10.

Highly developed OECD countries have much smaller estimated share of their shadow economy in total than the other country groupings. For 21 OECD countries (from Austria and Canada to Switzerland and USA) the results are not only shown for the year 2000, but also over an extended time period, from 1989 to 2002/2003. For the 21 OECD countries a combination of the currency demand method and the DYMIMIC method were used. Here Greece has the largest shadow economy, 28.3 % of official GDP, in the middle-field is Germany with a shadow economy of 16.8% of the official GDP, Austria is at the lower end with 10.8% of GDP and the United States with 8.6% of official GDP. For these 21 OECD countries we can see a clear overall increase of the share of shadow economy in total during the 90s, but if one looks only at the second half of the 90s, he may see that for the majority of OECD countries the shadow economy is not anymore growing in weight, but slightly decreasing.

On average the shadow economy grew its share in total GNP from 13.2% to 16.4% between 1990 end 2003 in the OECD countries. But we can not draw a general conclusion whether the shadow economy was further increasing or decreasing by the end of the 90s. It differs from country to country, and in several countries successful efforts have been made to stabilise the size of the shadow economy, while in other countries, such as Germany, these efforts were not fruitful up to year 2003.

Table 2.2 - The size of the Shadow Economy in 21 OECD countries (partial)

OECD countries	Size of the Shadow economy (in % of GDP)					
	1989/90	1994/95	1997/98	1999/2000	2000/2001	2002/2003
Unweighted Average of 21 OECD countries	13.2	15.7	16.7	16.8	16.7	16.4

Source: Schneider-Klinglmar (2004), Table 3.5, p.12.

Without going into the details of describing different methods used in estimating the share in total GNP of the shadow economy in different countries belonging to different “regimes”, we have to make a note and underline that Schneider and Klinglmar (2004) is using basically different combination of methods for the three country groups. For the developing countries the physical input (electricity) method, the currency demand, and the model DYMIMIC approach were used. For the transition countries only the DYMIMIC approach and for the OECD countries a combination of the currency demand method and the DYMIMIC method were used.

“Shadow” labour can take several forms: the underground use of labour may consist of a second job after (or even during) regular working hours, work by individuals who do not participate in the official labour market, or employment of people who are not allowed to

work in the official economy. Empirical research on shadow economy labour market is even more difficult than the calculation of value added. Providing empirical facts, Schneider & Klinglmar are using different country estimations for seven OECD countries, Austria, Denmark, France, Germany, Italy, Spain and Sweden. In Austria the shadow economy labour force has grown between the years 1990 and 1997 from 10% to 16% of the official labour force. In Denmark, making calculation for years 1980 and 1994, the shadow economy participation in per cent of total official labour force has increased from 8% to 15%. In Germany using interval calculations for 1974-82 and 1997-98 the same figure rose from 8% to 12% and to 22% which is a very strong increase. Calculating the shadow economy GDP (working population) per capita we can see that in all countries investigated, this ratio is considerable, on average in all countries about 30%.

Searching for the main causes of determining the shadow economy, according to Schneider and Klinglmar (2004), almost all studies in the literature found that the tax and social security contribution burdens together are two of the main causes for the existence of the shadow economy, and even major tax reforms with major tax rate reductions will not lead to a substantial decrease of the shadow economy. E.g. analysing the effects of Austrian tax reform in earlier studies, Schneider declared that a major reduction in the direct tax burden did not lead to a major reduction in the shadow economy. Because legal tax avoidance was abolished and other factors, like regulations were not changed, the actual tax and regulation burden remained the same for a considerable part of the tax payers. For Austria the driving force of the shadow economy activities is the direct tax burden including social security payments, followed by the intensity of regulation and complexity of the tax system. The same type of conclusions is provided by Daianu et al. (2001) in their study on the Romanian underground economy; the authors point out to tax burden and the intensity of regulations as to the main two drivers of the underground activities.

Evidence on the effect of taxation on the shadow economy is presented in numerous studies. Some researches conclude that it is not the higher tax rates what increase the size of the shadow economy, but the ineffective and discretionary application of the tax system and the regulations by the governments. A positive correlation was found between the size of the shadow economy and the corporate tax burden. Institutional characteristics, like the efficiency of the administration, the extent of control by bureaucrats, and corruption play major role in the “bargaining” between the government and the taxpayers. The increase of the intensity of regulations, like labour market regulations, trade barriers, and labour restrictions for foreigners – often measured in the numbers of laws and licenses requirements – is another factor for reducing the size of unofficial activities. However, in more and more studies we can find empirical evidence on the fact that every available measure of regulation is significantly correlated with the share of the unofficial economy, and the sign of the relationship is unambiguous: more regulation is correlated with a larger shadow economy. Further findings show that smaller shadow economies appear in countries with higher tax revenues, if achieved by lower tax rates, fewer laws and regulations and less corruption. Countries with a better rule of the law, which is financed by tax revenues, also have smaller shadow economies.

In order to study the effects of the shadow economy on the official one, some basic hypotheses are made available in the literature. The general belief is that the informal sector influences - positively or negatively - the tax system, the efficiency of resource allocation between sectors, and the official economy as a whole. Another hypothesis is that a considerable and large reduction of the shadow economy leads to a significant increase in tax revenues, to a greater quantity of public goods and services, which can stimulate economic growth. Some authors found empirical evidence for this hypothesis and conclude that an increase in the relative size of the informal economy reduces economic growth under certain assumptions.

After testing different model specifications for panel data analysis Schneider & Klinglmar introduce a model where the dependent variable is the annual GDP per capita growth rate and the shadow economy is one of the independent variables. The regression clearly shows a statistically significant negative relationship between the shadow economy of developing countries and official rate of economic growth, and, a statistically significant positive relationship between the shadow economy and growth of industrialised countries. Using the same procedure for transition countries, a statistically significant positive influence of the shadow economy of transition countries was found by Schneider-Klinglmar (2004), and again, a statistically significant negative influence of the shadow economy on developing countries. In transition countries the inflation rate has a negative influence, like the government consumption or the size of the state sector. The lagged annual GDP per capita growth rate has a large positive statistically significant influence, and the total population has a positive but small impact on growth. The capital accumulation is not statistically significant. In summary, all three sets of regression clearly indicate that the shadow economy has a statistically significant influence on official economic growth. For transition countries and OECD countries this influence is positive, while for developing countries the shadow economy has a negative influence on official growth.

In earlier studies of Schneider & Enste (2000) and Schneider (2002) the dynamics of the shadow economy of 22 transition countries has been analysed and both the physical input (electricity) method and the DYMIMIC method have been used for the periods 1990-93, 1994-95 and 2000-1. The results are partly shown in Table 2.3, presenting only the results of four transition countries what we are really interested in. The 22 countries were divided into two groups, one of them was the group of 13 former Soviet Union Countries and the other one is made of the nine Central and Eastern European countries: Bulgaria, Croatia, Czech Republic, Hungary, Macedonia, Poland, Romania, Slovakia, Slovenia. In summary, the size of the shadow economy as a proportion of the GDP in each countries, and the average size of shadow economy in these nine Central and Eastern European countries have risen. The non-weighted average has risen until year 2000/1 from 22.4% to 25.1%, and from 23.4% to 29.2% respectively. The Hungarian data show a very drastic increase in the middle of 90s in the case of physical input method, and only a very moderate increase in the case of DYMIMIC approach.

Table 2.3 - The Size of the Shadow Economy in Transition Countries (selected information)

Transition Countries	Size of the Shadow Economy (in % of GDP)				Shadow Economy Labour (%) 1998/99
	Physical Input Method Johnson et. al. (1997)		DYMIMIC Method		
	1990-93	1994-95	1990-93	2000/01	
Bulgaria	26.3	32.7	27.1	36.4	30.4
Hungary	20.7	28.4	22.3	24.4	20.9
Romania	26.0	28.3	27.3	33.4	24.3
Slovenia	22.4	23.9	22.9	26.7	21.6
Unweighted Average of 9 Central and EE countries	22.4	25.1	23.4	29.2	23.3

Source: Schneider (2002), Table 2, p.7.

We have to keep in mind that Schneider (2002) and Schneider-Klinglmar (2004) do not focus on tax evasion or tax compliance. Christie & Holzner (2004) present a new indicator of the size of the shadow economy based on the estimation of tax compliance in the household sector. The outcome of this work is the household income taxation method (HITM) presented in the paper. These estimates are used for countries of Central, Eastern and Southeast Europe using 2001 data. The definition of the shadow economy is: all unreported income and barter activities related to legal goods and services. The ‘economic activity’ should be understood as productive economic activity that generates value added. This definition of the shadow economy can be expressed according to OECD terminology: the shadow economy includes all of what is called ‘underground activity’ (legal activities that are deliberately hidden in order to avoid taxation and/or compliance with regulations), and the undeclared parts of ‘informal activity’ (activities conducted by incorporated enterprises in the household sector), and ‘production of households for own final use’ to extent that these should be subject to taxation. The size of the shadow economy (‘informal sector’) is defined as the sum of informal wages and informal profits. Formal wages are wages declared to the tax authorities, measured wages are those found in the national accounts. The published figure for household final consumption is considered to be exhaustive, and can help for estimating total household income and informal incomes. The quantity what the household income taxation method estimates is the share in GDP of household income which should be subject to taxation, but it is not.

Without going into details in determining the total household income and the statutory household tax rate of various countries, we would like to underline some basic properties of the tax structure data estimation method of Christie & Holzner. In the case of Albania and Romania for example, where agricultural income was exempted from income taxation (at least at the time of the surveying), the tax base of average income tax rate was reduced by the share of agricultural income in total household income. For Albania this share is 49.1% in 2001 and for Romania the share is 13.4%. In Albania 71.6% of employment is engaged in the private agricultural sector and that in Romania agriculture and forestry accounted for 40.9% of employment in 2001. In the Czech Republic, Slovakia, Poland and Hungary, where agriculture represents less than 5% of GDP, agricultural income is deductible.

The empirical results of Christie-Holzner (2004) are partly shown in Table 2.4 for some countries among twelve countries of Southeast Europe (SEE) and for some countries among eight Central and East European Accession Countries (AC), where the eight countries are: the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia.

Table 2.4 - Estimates of shadow economy contribution from households, 2001, % (selected information)

	Total Household income as share of GDP	Statutory household tax rate	Total household tax revenue as share of GDP	Declared household income as share of GDP	Household income declaration rate	Undeclared household income as share of GDP
SEE average of 12 countries	85	38	21	55	64	30
Albania	88	30	11	35	40	52
Bulgaria	78	38	17	44	56	34
Croatia	75	49	28	57	76	18
Romania	81	41	14	35	43	46
AC average of 8 countries	72	44	22	50	69	22
Czech Rep.	67	39	19	48	72	18
Hungary	70	45	22	49	70	21
Poland	78	48	22	47	60	31
Slovenia	72	50	27	55	76	17

Source: Christie-Holzner (2004), Table 2, p. 13.

The average for Southeast Europe is higher than the average for the accession countries. In the SEE group Albania have the highest estimates, followed by Romania, Macedonia and Bulgaria. Some results are in contrast with recent literature on the region, thus it could be that household final consumption as well as GDP may be incorrectly measured in these countries. As for the accession countries, Poland has the highest estimate, given its large agricultural sector, while the lowest estimates are for Estonia and Slovenia.

Though Christie-Holzner (2004) can not directly compare their estimates with those made by Schneider and Klinglmair (2004) for the period 1999-2000, they only compare the positions of the estimates within each estimation set ranking resulting from different approaches. We can see the main differences in positions of the estimates for Slovenia and Romania (Slovenia is at the low end now, while Schneider-Klinglmair(2002) estimated relatively larger position for Slovenia, while HITM places Romania at the top end, but according to Shneider-Klinglmair (2004) Romania has only an average-sized shadow economy). But both sets of estimates place Bulgaria and Hungary in similar positions with respect to each ranking. According to the authors the main reason for these differences seems to be linked to the specific focus of HTIM method on household taxation, because the DYMIMIC model takes multiple causes and indicators into account. Romania has low tax revenues compared to its statutory tax rate, while Slovenia has rather high tax revenues compared to their respective statutory tax rates.

In a methodological section of Christie-Holzner (2004) the authors discuss about the problems of coverage and data issues. It may be said that the quantity of the shadow economy income due to households per GDP ratio, that is the undeclared household income per GDP ratio captures some of the informal income generated by the corporate sector as well, but not all of them. The statutory tax rate, if based purely on those taxes that apply to the household sector, will be lower than it should be, it means that the correct size of shadow economy income will certainly be higher than the HITM estimates. For example, two missing items which HITM method can not account for: re-invested informal profits and hoarded or exported capital. Data availability is also a major constraint. In order to produce a more reliable estimate of the statutory household tax rate, it is necessary to gather information not only on the tax structure, but also on the household income distribution. Income distribution must be corrected since there will generally be an under-estimation or under-declaration of the real income distribution. The approach requires improvements with regard to the issues of savings and cash hoarding, the non-captured informal activities of the corporate sector, and the taxation of savings.

According to Mária Lackó's computation, the weight of Hungarian underground economy changed relatively to the official GDP from 25.2% to 20.8% between 1989 and 1998, where the maximum value was 33.1% in 1993 (see Table 2.5 and Lackó (2000b).) Starting from the relatively high but middle size value of "transition" underground economy in 1989, after the first year of the new political regime we can see a jumping up period between 1990 and 1993, but a definite slipping down figure after 1994. From these results we can not draw yet any conclusion whether the weight of shadow economy is further increasing, decreasing or being stabilised at the end of the 90s, because this calculation was finished in 1998. But both the calculated value (21%) of Christie-Holzner (2004) and the value (24%) of Schneider (2002) for Hungary in 2001 seem to be relevant and can be fitted to the figure of Lackó.

Comparing again the positions of the countries within each of the three estimations set distributions, we can see that Lackó's ranking is in contrast with Schneider (2002), but absolutely corresponding to the ranking of Christie-Holzner (2004). Between 1991 and 1996 in most of the years Romania has the highest estimate, followed by Bulgaria, Hungary, and Slovenia. Slovenia is almost always at the low end, while Schneider-Klinglmar(2002) estimated relatively larger position for Slovenia. HITM places Romania at the top end, similarly to Lackó (2000b). All of the three sets of estimates place Bulgaria and Hungary in the middle field and in similar positions with respect to each ranking.

Table 2.5. - Share of the Underground Economy (HE) in % of Household Electricity Consumption (HEC) and in % of GDP

Countries	Years							
	1990	1991	1992	1993	1994	1995	1996	1997
Bulgaria								
HE in % of HEC		22.9	21.8	19.6	20.0	19.1	20.0	
HE in % of GDP		35.0	33.3	30.0	30.5	29.2	30.5	
Croatia								
HE in % of HEC			26.6	28.5	28.1	23.8		
HE in % of GDP			40.7	43.6	43.0	36.4		
Czech Republic								
HE in % of HEC				18.1	16.0	13.8	12.3	
HE in % of GDP				27.7	24.4	21.0	18.9	
Hungary								
HE in % of HEC	17.3	20.9	20.8	21.7	19.9	19.1	18.0	16.8
HE in % of GDP	26.4	31.9	31.8	33.1	30.5	29.2	27.4	25.5
Poland								
HE in % of HEC	22.8	21.3	20.6	20.6	18.5	15.4	11.9	8.7
HE in % of GDP	34.8	32.6	31.5	31.5	28.3	23.5	18.1	13.4
Romania								
HE in % of HEC	16.5	24.5	26.5	26.4	23.8	19.2	16.6	
HE in % of GDP	25.3	40.5	40.6	40.4	36.4	29.3	25.4	
Russian Federation								
HE in % of HEC			23.2	23.7	26.7	26.6	25.6	
HE in % of GDP			35.5	36.3	40.9	40.7	39.1	
Slovenia								
HE in % of HEC	18.6	19.4	21.8	19.5	17.0	15.3	13.9	
HE in % of GDP	28.4	29.7	33.4	29.8	26.0	23.4	21.2	
Slovak Republic								
HE in % of HEC				22.2	21.7	19.3	16.6	
HE in % of GDP				34.0	33.1	29.5	25.3	
Ukraine								
HE in % of HEC			21.9	30.6	36.1			
HE in % of GDP			33.5	46.8	55.2			

Source: Lackó (2000b), Table 6, p. 61.

In Table 2.5 of Lackó (2000b) the tendencies of underground economy shares of the transition countries seem to indicate that development of the underground economy follows an inverse U curve in the new EU Member States. Comparing the dynamics of the level and size of the underground economy among different transition countries we can analyse the link between the size of the underground economy and some characteristic features of these economies (e.g. the size of corruption, the magnitude of the official private economy, the unemployment rate and the ratio of long term unemployed). Particularly in Hungary, in the period 1989-1994, high tax burdens, relatively low state expenses, major drop in output and high inflation were the main forcing drive of the hidden activities. In the same period we can see an extraordinarily high level and growing domestic electricity consumption and other types of energy consumption, and dynamically increasing ratio of self-employed and assisting family members. After 1993, when the tax burdens of the legal economy started to decline, and company tax rate dropped from 36% to 18%, the underground economy's share started to decrease.

As we already mentioned, the empirical results show that there is a link between the size of underground economy and the intensity of regulation in different countries. The bigger the intensity of regulations in these countries, the bigger the size of the underground economy is. There is a statistically significant relationship between the size of underground economy and the tax and social security contribution burdens, since taxes affect labour leisure choices and also stimulate labour supply in the shadow economy. There is a link between the bigger size of underground economy and the higher corruption level. Also, there is a positive correlation between the size of underground economy and the corporate tax burden. The countries which are in more advanced position of economy reforming and have higher share of private sector, have a smaller share in total GDP of their underground economy.

A recent calculation of Lackó (2003) compares – based on data for the closest years available - four established methods worked out to measure the size of underground economy for 18 countries (Lackó (2003), Table 1, p.20. and in Table 2.6.). Although these methods are rather different we can see that the correlation between the results of these estimations is high. Higher underground economy value for one of the methods goes together with higher values for the others, and we can find differences only in the sequence of the countries being in very different state in reforming. The other comment is that the large variations in estimation results for the different electricity-consumption methods used may be due to the specific electricity-intensities in the sample countries. This leads one to the conclusion that any estimate should be considered with care and the more methods are used, the better.

Table 2.6 - Various estimations for the size of the underground economy in 18 transition countries (selected countries)

Method	Total electricity	Household electricity	Modified total electricity	DYMIMIC
Dimension	% of total GDP	% of official GDP	% of official GDP	% of working pop.
Author(s)	Kaufmann-Kaliberda	Lackó	Eilat-Zinnes	Schneider
Countries/Years	1995	1997	1997	2000/2001
Bulgaria	36.2	42.5	38.0	30.4
Hungary	29.0	25.5	36.0	20.9
Romania	19.1	29.4	12.0	24.3

Source: Lackó (2003), Table 1, p.20.

What can we comment on and learn from reading these comprehensive studies? The main comment is that comparative studies are needed when one needs a cross-country analysis to be performed. However, is there a need for aligning specific national factors driving the informal activities and for standardising policies that may be adopted by governments to deal with the informal sector?

The first lesson: For relevant and reliable cross-country comparison we would need full and uniform data coverage, what would be needed for using both traditional and new methods for all our countries under investigation. The lack of uniform data set for all countries is the main reason why the literature on the shadow economy fails to provide results for the whole region of transition countries derived from using one single method.

The second lesson: It would be desirable to use only one single method, or a given combination of different approaches for all investigated countries. But, can we use only one single method for description of shadow/hidden economy in countries which are in different positions of reforming? If the investigated countries are on different level of reforming, the dominant informal activities are quite different in the different countries, so we can hardly find a full and uniform data coverage for our purposes. What can we do? The only possibility is that we focus on the dominant informal activities of different sectors of the economies, and to find some similar dominant activities for comparison. But telling the truth: in this phase of our research we have only possibility for making international comparison based on some “incidental” and short term cases.

Final comment: the results of “internationally-wide” studies and research works on informal/underground economy are useful, but they do not cover extensively the specific national factors that influence the very complex system represented by the binomial structure formal-informal economy and also do not cover all its intra-relationships. This is why we turn now towards the investigation of specific literature on the informal sector which may exist in the countries of interest, in order to find out, in more detail, what are the channels of these interactions and which is the probable real dimension of the informal phenomenon.

II.3. Literature reviews on aspects of the informal sector in Bulgaria, Hungary and Romania

II.3.1. Bulgaria

The transition in Bulgaria has been taking place under conditions of belated implementation of legislative regulations on consumers’ and investitures’ protection and very slow privatisation process. The existing lack of state recommendations led to chaos and crisis in all sectors of the economy and sharp growth of the poverty rates. Under these circumstances the main factors for the development of the informal economy were set up. In table 2.7 one can follow the changes in the share of the shadow economy in the GDP and the growth of the real GDP in the case of Bulgaria. The greatest share of the underground economy was registered in 1996 when Bulgaria went through a major banking system crisis and through a hyperinflation period, which reduced considerably peoples’ income and savings. In that year the shadow economy represented 34.4% of the country’s gross domestic product according to Statistical Office’s estimates. Since then measures have been taken for stabilising the economy and the share of the informal sector (as well as the share of the underground economy) decreased and reached levels below 25%.

Table 2.7 - Share of the informal economy in the formal GDP and GDP annual growth rates

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Share of informal economy in formal GDP (%)	32,2	10,8	12,4	21,3	17,3	21,6	34,4	28,2	21,9	23,0
GDP annual growth rates (% over the previous year)	-9,1	-11,7	-7,3	-1,5	1,8	2,9	-9,4	-5,6	4,0	2,3

The main forms the non-accounted economy takes in Bulgaria are:

- incomes' concealment with the goal of avoidance of tax payments;
- avoidance of social contributions;
- non-compliance with the state standards and regulations on the production process (minimum wages, maximum working time, measures for labour protection)
- avoidance of a legal registration of the economic agents and avoidance of tax payments (custom duties, licenses and etc.);

One of the main methodologies used in Bulgaria for determining the size of the non-accounted economy is the labour supply-demand discrepancy and the direct surveying of declared non-contractual labour. Comparing the proportion of people hired without a contract to the total number of people employed in different sectors of the economy, it can be concluded that, for the most part, these employees are seasonal or temporary, given their concentration in agriculture and trade. When an individual is hired for a relatively long-term or even permanent job, it is almost impossible to hire him or her without a contract. No employment without contract is officially declared in the state-managed sector. Employers seek to hire people using other forms rather than labour contracts with the purpose of reducing the payments to the state budget, or to the National Social Security system, etc. In fact, they transfer the responsibility of paying to the individuals who are to be insured. A modification of the Labour Code allowed companies to hire people to perform a particular job using a non-labour (service provision) contract rather than a labour contract. Thus, until the beginning of 2000, the individuals had to make their own social security payments.

II.3.1.1. Literature review on informal labour in Bulgaria

There is not too much information concerning the informal activities and the non-accounted or the underground sector in Bulgaria. The social impact of the informal economy on the Bulgarian socio-economic system is explained in detail within the four specially dedicated chapters in Neef & Stanculescu (2002). Some economic-related issues will be discussed in the next Chapter of this paper.

In 2000, a consortium made of the Harvard University, the Agency for Economic Analysis and Forecasting and the Institute for Market Economics undertook a study on the shadow economy in Bulgaria. The results show that between 13% and 15% of the sampled companies were reporting for the 1997-99 period that they were hiring people without a contract during their first accounting year and as followed. This practice allows

firms to avoid the cost of pension and health care taxes on their officially contracted employees. There was a tendency for growth in the total number of those employed without contract over the 1997-99 period. In 1999, the total number of employed was found to have fallen by over 14%, while at the same time the number of employed without contract increased by 22%. This demonstrates a clear tendency for substitution in official employment towards informal employment in order to avoid legal contracting. The results of the research present that approximately 3% of employed people (ca. 80,000) are not legally registered. The agriculture and the trade sectors show the largest proportion of workers without labour contracts, while the service sector shows the smallest (0.5%).

Over 16% of the workers in agriculture had no labour contract during the first accounting year. In 1997 and 1998 their number decreased to 12.4%, but in 1999 those who were employed without any contract accounted for 13.8% of the total of those employed in agriculture. Among trade firms there was a continuously rising trend in the number of people employed without contracts - from 3.8% in 1997 to 5.4% in 1999. In the remaining three sectors, the proportion of people employed without a contract is very small, and even among industrial enterprises and service companies (with the exception of trade) it is as low as 0.5%. It should be pointed out that the number of individuals employed without contracts among companies active in industry diminished during the period 1997-1999 in contrast to companies active in almost all other sectors.

Another aspect of tax and insurance evasion is officially reporting salaries that are lower than that actually paid in order to reduce the burden of the various payroll taxes. Until the beginning of 1999, another way of achieving the same result was hiring people based on a non-labour type of contract, especially when the individuals who were to be hired had a labour contract with another employer and were, therefore, already insured. In the bigger cities (with the exception of Sofia) the underreporting of the salaries actually paid is much more common than it is in the other municipalities. The private firms, to a greater extent, are usually declaring smaller salaries than those actually paid in order to evade payments to state authorities. The surplus of actual over official salary varies by groups of firms (sector of activity). This difference is bigger for the construction sector and the industry sectors, where the actual salaries are higher than the declared ones by 59% and 52% respectively. The difference is the smallest in services (not including trade) and agricultural sectors where the spread between actual and official salaries is 37% and 35%, respectively. The findings show that companies under-declare around 34 -35% of their labour costs, transferring this income to the underground economy, consequently. The high level of avoidance is a consequence of the very high total tax burden associated to the officially reported wages. Both employers and workers have an interest in avoiding these payments.

II. 3.1.2. Changes in the employment and unemployment and differences between the rural and urban employment and unemployment

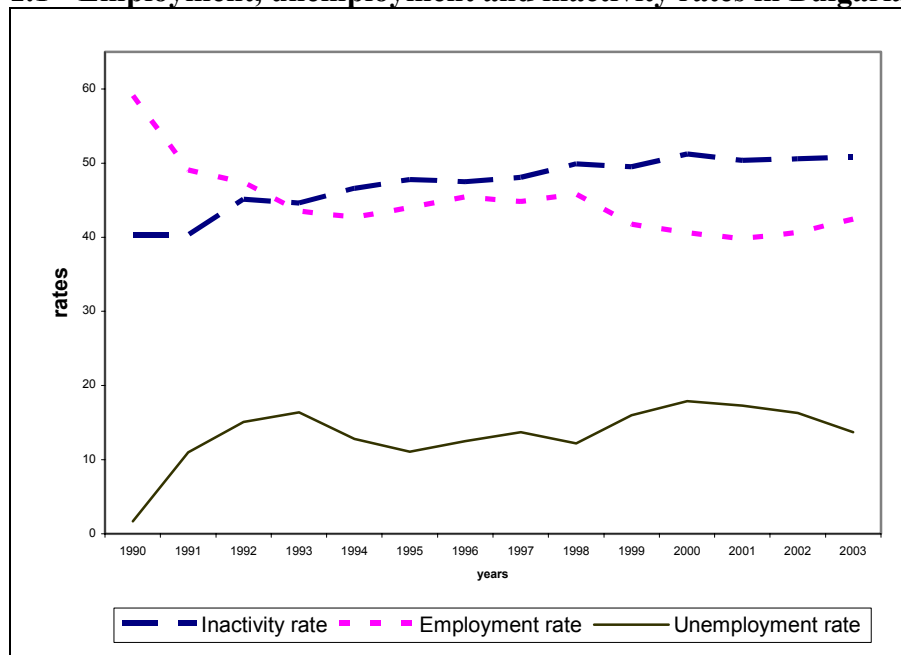
The inactivity rate had stable trend of growth during the period between 1990 and 2003. In contrary, the employment rate decreased in the period observed (see table 2.8 and figure 2.1). The unemployment rate increased between 1990 and 2000 when it reached its

peak at 17.9%. Since then, Bulgarian policy makers implemented some changes in the employment policy of the country¹ that led to a decrease in the unemployment rate in the following years. If we look on the growth rates for the employment, unemployment and inactivity rates, we can see that the speed of the changes for the employment and unemployment is much higher compared to the speed of growth for the inactivity rate, especially in the first years of the transition. Consequently, we can assume that these trends are indirect evidence for the growth of the shadow economy on the Bulgarian labour market and for the increase in the number of people working without a labour contract.

Table 2.8 - Employment, unemployment and inactivity rates in Bulgaria (1990-2003)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Inactivity rate (% of population)	40,3	40,3	45,1	44,6	46,6	47,8	47,5	48,1	49,9	49,5	51,2	50,4	50,6	50,8
Employment rate (% of population)	59,1	49,1	47,4	43,5	42,7	44,0	45,4	44,8	45,8	41,7	40,6	39,8	40,7	42,5
Unemployment rate (% of active pop.)	1,7	11,0	15,1	16,4	12,8	11,1	12,5	13,7	12,2	16,0	17,9	17,3	16,3	13,7
Inactivity rate (growth %)		0,0	11,9	-1,1	4,5	2,6	-0,6	1,3	3,7	-0,8	3,5	-1,7	0,4	0,5
Employment rate (growth %)		-16,9	-3,5	-8,2	-1,8	3,0	3,2	-1,3	2,2	-8,9	-2,8	-1,9	2,1	4,4
Unemployment rate (growth %)		547,1	37,3	8,6	-22,0	-13,3	12,6	9,6	-10,9	31,1	11,9	-3,4	-5,8	-16,0

Figure 2.1 - Employment, unemployment and inactivity rates in Bulgaria



¹ - This topic is discussed in detail in Deliverable D13 of the same Work-package of COMPRESS project.

Many people prefer to work without contract because in this way they can avoid the tax payments. The increased competition in the period of transition and pre-accession was also one of the consequences for the existence and the growth of the underground economy. The competitive pressure on the Bulgarian market and the lack of appropriate legislation led to sharp growth in the price level. However, this process provoked decrease in the real income of population and deterioration of the living standard. Due to this reason many people preferred to become part of the shadow economy and to work without labour contract or to declare lower wages in order to receive more money. Other reason for the growth in the underground economy on the labour market is the low level of pensions thus many pensioners choose to work after their retirement despite the legislative limitations. And as result the most important share of the employment pool in this age group is part of the shadow economy.

Table 2.9 presents information on the employment and unemployment in urban-rural division. As expected the unemployment rates in the rural areas are much higher than those in the urban areas. This is due to the closure of many enterprises in Bulgaria and to the slow land privatisation process, which left people living in the rural areas, who have lost their jobs, with very low chances to find new ones. The high unemployment rates in the rural areas and consequently the higher poverty rates were a premise for the development of hidden employment. As we have stated already, the main share of the people working without a labour contract were employed in the agriculture.

Table 2.9 - Changes in the urban and rural employment and unemployment rates in Bulgaria (1993-2003)

		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Unemployment rate	<i>urban</i>	19,5	18,0	14,6	12,9	13,6	13,2	14,2	15,4	18,1	16,7	12,9
	<i>rural</i>	26,3	26,3	21,5	17,9	14,5	17,0	20,1	21,2	24,7	21,3	16,3
Employment rate	<i>urban</i>	48,2	47,1	47,9	49,5	48,8	48,5	46,9	45,3	44,4	45,0	46,6
	<i>rural</i>	34,0	32,3	33,7	34,0	35,3	34,0	30,8	30,6	29,8	31,0	33,0

Figure 2.2 - Urban and rural unemployment

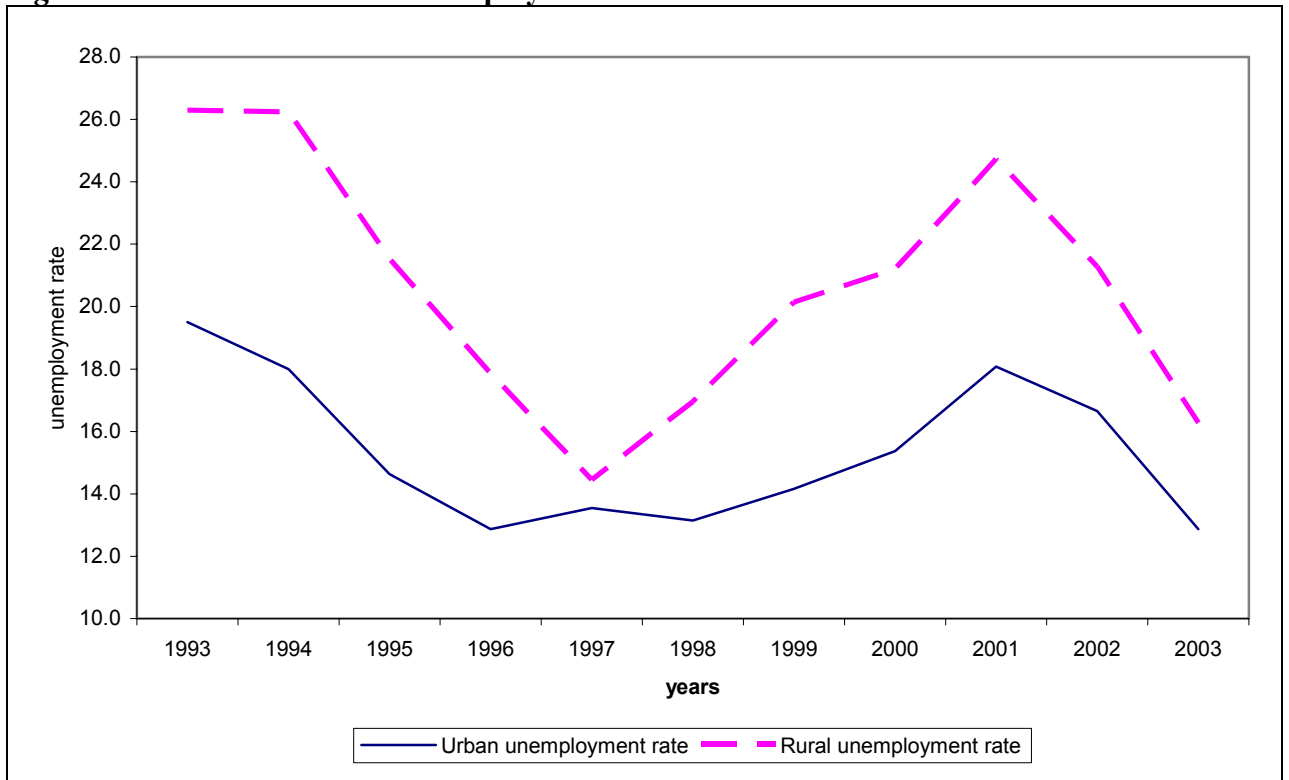


Figure 2.3 - Urban and rural employment



II.3.2. Hungary

II.3.2.1. Literature review on informal economy in Hungary

The literature on informal economy is well developed in Hungary. The series called “KTK/Tárki Studies on Hidden Economy in Hungary”² (<http://www.econ.core.hu/index.php?cmd=25&lang=en>) is a result of a joint research program launched in 1999 with Tárki, promoted by the Prime Minister’s Office, Ministry of Economy and the Hungarian CSO, titled “Investigating the Importance and Size of Hidden Economy in Hungary between 1992 and 2000” (Lackó (2000b), Sik (2000), Semjén-Szántó-Tóth (2001), and Semjén-Tóth (2004)). This research series is completed by some other studies of unofficial/hidden economy published partly by the Institute of Economics of HAS and Tárki (Semjén-Tóth I. J. (2002) , Tóth I. J.(1997-98), Sik-Tóth (1999), Sik (2002), and Sik-Tóth (2002) in Neef-Stanculescu (2002)). In these studies the data were originated from both enterprise surveys taken in 1996, 1998 and 2001 and household surveys made between 1995 and 1997. The enterprise surveys focused on the everyday practice of tax evasion and tax avoidance of the enterprises, and in the case of household consumption analysis the non-registered expenditure was measured as a part of the household expenditure. Basically, this second method was also used by HSCO (1998).

² - edited by János I. Tóth (Institute of Economics).

The most general, multilevel, and longest-in-time analysis has been done in Hungary by Lackó (1996, 1997, 1998, 2000a, 2000b, 2003) using the same method for measuring a certain part of the underground economy associated with the household consumption of electricity. This part of the shadow economy contains the so-called household self production (do-it-yourself activities), and other non-registered production and services as well. Using data for Hungary³ Lackó's papers also analyse the relationship between some characteristic features of these economies, i.e. the link between the size of corruption, the magnitude of the official private economy, the unemployment rate, the ratio of the long term unemployed, and the size of the underground economy. Some of the so-called "indirect", "physical input" or household electricity approaches that Lackó and other researchers are using need an assumption on the size of the shadow economy in a base year. Other methods use an external estimate of the unofficial economy in a "base" country for which a separate estimate of the shadow economy is known. But it is exactly the use of base years or of a reference country which is one of the weaknesses of these approaches. This approach is also criticised given that the estimated size of the unofficial economy is to a large content a historical phenomenon only partly determined by institutional factors. In spite of the fact that these traditional physical input methods are often criticised in several points, their results are well known in the literature, and widely used for further investigations (e.g. Köllő-Vincze (1999), Köllő (2001), Halpern et al. (2004), Scharle (2002), Christie-Holzner (2004)).

In 1997 HCSO undertook a survey ("Behaviours of Buying Services and Goods") on a sub-sample of the Household Budget Survey (HSCO (1998)). A large share of the citizens (29%) does not oppose, in fact approves the existence of the underground economy. Most respondents (nearly one fifth) declared that "the underground economy is good for people with little money". Referring to the purchase of services and sales without receipt, the interviewed households reported that they only received receipt of 44% of the total value of personal and business services. In 1997 one third of the households buying clothes bought clothing from irregular vendors in the street, or from people/shops not able to provide a receipt, and at least 11-12% of households' total net expenditures were spent in the underground economy.

If an average Hungarian citizen were asked now whether the underground economy in general is continuously growing in Hungary the answer would be positive and a definite yes. According to the subjective perception of people the underground economy is increasing in Hungary. But the empirical evidences show the opposite. Our hypothesis is the following: some unofficial activities can easily grow and some of them are really growing in some segments of the society, and new underground activities are continuously rising, but some dominant informal activities are getting less effective and have reduced their share in total economic output. During the last years the underground economy was increasing in absolute term only, but in relative terms, the weight of the underground economy was decreasing at the end of the 90s and has stabilised since in a range between 18-24%.

³ - and for some transition and developed countries, as presented in previous sub-section.

This declining trend of the share of the underground economy was shown in several recent studies belonging to the underground economy school. Tóth (1997-8), Sik-Tóth (1999) found this trend when analysing the household consumption structure, Semjén-Tóth (2002, 2004) when investigating the taxation behaviour of the firms, while Sik (1999a, 1999b, 2000) when describing the spatial distribution of ‘open-air’ informal labour market-places and the activities of informal foreign traders.

Tóth (1997-98) and Sik-Tóth (1999) analysed the consumption behaviour of households in two empirical surveys investigating the affinity (propensity) of households to underground economy in trade and services sectors in two consecutive years. The first and second survey covered 1000 households each, in 1995 and 1996 respectively. Taking the total consumption of households into consideration the share of unregistered expenses (the case in which the sellers do not report the transaction to the tax authority) was around 10-13 % in 1995 and 11-14 % in 1996. This result indicates the beginning of stabilisation in the dynamics of the weight of unregistered expenses. The share was almost the same in 1997 in the calculations of HCSO(1998). The research hypothesis was that the propensity to unregistered expenses of households was related to the perceived dynamics of income instead of the real and actual income position of the households. According to the econometric analysis associated to the household surveys (Tóth (1997-98)), neither the income, nor the social status of the head of the family revealed any significant correlation with the propensity to unregistered expenses. In the middle of 90s, the rich people were as likely to shop in the street markets as the less wealthy households. The propensity of households to unregistered expenditures was found to be closely related to the type of the settlement where the households were living and the type of the market place what was easily accessible. With the large shopping malls gaining ground among other types of market places and with their increasing share in total turnover the Hungarian households considerably reduced their purchases in underground economy markets.

The spread and development of three institutions of informal economy were investigated systematically between 1995 and 1999: the open-air market places called CMEA markets, the informal labour market places (organised supply of black labour), and the so called casual labour market places. In his study investigating the characteristics of these institutions, Sik (2000) concludes with a general overview of the basically unchanged structure, but continuously decreasing volume of the three institutions and makes a repeated analysis of regional aspects of the informal economy. It is shown that these phenomena are especially characteristic of households living in Budapest and in the large towns.

The enterprise surveys of Semjén-Tóth (2002, 2004) focus on the everyday practice of tax evasion and tax avoidance. These “techniques” include underreporting activities and revenues, exaggerating (over-reporting) costs, using outsourcing to small subcontractors in order to provide “tax-efficient” labour, tailor-made remuneration packages to take advantage of tax loopholes, etc. They are also dealing with some other aspects linked to fiscal discipline and tax compliance, such as tax delays, tax litigation, etc.

If we compare the 1996, 1998 and 2001 survey samples used by Semjén-Tóth (2002, 2004) by ownership types, there is a salient feature in the ownership structure year by year. Foreign ownership visibly gained ground during these years in the ownership structure of the Hungarian economy: the share of firms in foreign ownership within the samples increased significantly. In the same period, the share of domestic public (central or local government) owners and of domestic corporate owners decreased in the Hungarian ownership structure. Firms with majority foreign ownership play a major role in determining the development of the Hungarian economy. In the 2001 sampled companies owned by foreign parents accounted for 33 per cent of total net sales and 58 per cent of exports.

During the entire period of investigation (1996-2001) one could see a decrease in the share of companies with delays in tax payments, and other indicators also show some improvement in tax compliance. Delays in the payment of social security contributions are less common for companies with foreign owners than for the rest of the sample. The relevant incidence is 6.1 per cent for foreign owned firms as compared to 13.8% in the whole sample. Fiscal discipline in general, approximated by the punctuality of tax and social security contribution payments taken together, also seems to be better for foreign owned firms in 2001 than the average. At the same time smaller firms, companies with less than 100 employees, tend to perform worse than the big ones in this respect. In summary, according to the survey results there is a positive correlation between foreign ownership and financial discipline. Companies with at least a majority foreign stake perform significantly better in this respect than companies with “domestic” owners. There is also some correlation between company size and financial discipline: bigger firms tend to perform better in this respect than the smaller ones.

In order to discern the involvement or participation in the black economy the authors had to use some indirect questions and some rather sophisticated methods: they asked the opinion of company executives regarding the incidence of some phenomena in the economy what indicate participation in the black economy. They also asked some direct questions regarding the incidence of contracting out (the substitution of subcontractors' contracts for employment contracts), as this completely legal method of tax planning or tax avoidance may indicate some forms of tax evasion for the subcontractors. They also used a survey method specially designed for estimating the incidence of sensitive or “delicate” phenomena, method that allowed them to get an overall estimation on the incidence of tax evasion for their enterprise population. They asked company executives about their opinion on the incidence of unreported sales 1/ amongst their contractual business partners, 2/ amongst their domestic competitors 3/ in the Hungarian economy as a whole. Although answers to such questions regarding opinions are “soft indicators” even at their best, the changes in such soft indicators in time may carry valid information about the actual process. According to the perception of the enterprises the incidence of unreported sales diminished amongst their contractual partners and competitors as well, and it also decreases in the whole Hungarian economy. This decrease went parallel with the decrease of the negative influence of competitor firms' involvement in the black economy on the domestic competitiveness of the companies interviewed. Based on the empirical results the authors declared that not only the incidence of unreported sales diminished in the economy, but the impact of such sales on the market position of large

and medium-size firms seems to have diminished as well. According to the perception of the enterprises the incidence of unreported sales diminished amongst their contractual partners and competitors as well.

The survey results show substantial improvement in corporate opinions regarding tax policy and tax administration. Tax laws and rules are perceived less complicated than earlier, and the role of personal contacts in settling tax debates decreased. This result also indicates that some positive change in latent corruption in tax administration can also be considered likely. Enterprise satisfaction with the activity of the national tax administration (APEH) has improved considerably, and complicated tax rules and their frequent changes seem more detrimental to smaller firms only.

Soft “opinion-type” indicators as well as hard and indirect indicators of involvement in the underground economy show a significant decrease in the scope of unofficial economic activities for large and medium-size enterprises in Hungary over the 1996-2001 period. Summing up the results: the data from three different enterprise surveys support the hypothesis that the importance of unofficial economic activity of registered Hungarian medium and large enterprises radically diminished since 1996.

Do these “incidental” results mean that the share of underground economy in Hungary is continuously decreasing? We do not think so. What we can say only, that searching in the literature we can not find empirical evidence for drastic and general increase in the weight of the underground economy in Hungary, and we can find empirical evidences for decreasing share, rather than for increasing share.

II.3.2.2. Informal labour markets in Hungary

Little is known about future trends and future development of the weight of underground economy in Hungary. Thinking about the future tendencies in this concern we have to take into consideration the new and very important empirical and simulation results of some recent studies in the Hungarian literature.

Using county-level data, Lackó (2000b) shows that in the 90s the size of the underground economy in the labour market is positively correlated with both unemployment and registered self-employment in general. This empirical result implies that the widely used self-employment equations of the labour market literature may underestimate the actual impact of the traditional explanatory variables in small business activity. Further investigation is needed for deeper analysis of the link between development of underground economy in labour market and the basic labour market phenomena. Köllő (2001) made a very considerable attempt in this direction, investigating the patterns of non-employment in Hungary’s least developed regions. The paper analyses the determinants of non-employment (unemployment and inactive) in Hungary’s poorest regions where 50 per cent of the working age population was out of work at that time. The paper intensively speculates about the possible impact of the labour market reform in 1999 in this respect. In 1999 the Hungarian government introduced radical reforms including a further cut of unemployment insurance (UI) benefits and the assistance benefit for UI exhausters (UA). The maximum duration of UI was reduced from 12 to 9

months, and the UA was abolished. The reforms were based on the belief (proved to be misbelieve later!) that the generosity of unemployment benefits combined with the availability of informal jobs bear responsibility for the low level of search activity and job finding in Hungary. It is known well from the literature that this kind of austerity measures may have positive impact only on the depressed labour markets than there is a strong casual linkage between access of informal/hidden jobs plus benefits and low search intensity, low job finding probabilities, high rates of joblessness. In this investigation, however, the data support the hypothesis, that informal/hidden incomes are likely to play a role in the stabilisation of low employment levels in the Northern Plain only, but not in the North. In the Northern Plain region the presence of informal/hidden economy may decrease the employment level, but there is no significant evidence for the same phenomenon in the other region. As unemployment rises and wages fall the return from searching and working diminishes. And this is what potentially leads to the massive unemployment level in the depressed areas, and not the high propensity to take part in hidden labour market.

The research by Köllő (2001) was primarily based on discrete time duration analysis using LFS panel data from 1997-98. The investigated regions are characterised by low employment combined with continuously (North region) or just seasonally (Northern Plain region) high mobility of labour (shift between labour statuses). Low employment counties typically had high flows between employment and non-employment (except for only one county). The so-called proxies for the informal/hidden economy estimates based on electricity consumption data used by Lackó (2000b) proved to be partly useable in the model. The proxies contain estimates for 1995 suggesting that 19 to 24 per cent of the electric energy was used in the informal economy in the country side and 29 per cent in Budapest. The size of the informal/hidden economy (a latent variable) is assumed to be negatively affected by labour costs holding net wages constant, and also influenced by the per capita number of registered sole-proprietorships in each county. Lackó (2000b) also provides estimates for micro-regions. In her model household electricity consumption is regressed on household income levels, alternative sources of energy, and proxies of agricultural activities known to create informal/hidden job opportunities like the production of wine, brandy, and sugar. The county-level estimates of the informal economy are rather strongly correlated with the size of the tertiary sector. Since the tertiary sector is one of the major fields of informal/hidden employment, the finding of a strong positive correlation can be interpreted as a piece of supporting evidence.

The first finding that the proxy of the underground economy is strongly and negatively correlated with the probability of job-loss is very surprising and confusing. It means that regions with a high share of the informal economy have low turnover, that is, low mobility between employment and non-employment. A first step in understanding this contradiction is finding out what 'informal' or 'hidden' means in the LFS statistics and where we can find the informal/hidden activities in this statistics. First of all we have to make a distinction among employment in the formal economy, employment in the informal/hidden economy, and non-employment (respectively, unemployment in formal economy, unemployment in informal economy, inactive in formal economy, inactive in informal economy). When workers do not pay tax after any kind of working activities and tell the truth about their status of "being employed" = "ability to get money

somehow” they are signed as employed workers. However, one can not separate the formal and informal/hidden employment in the statistics. When workers do not report their informal job because of taxation, they will be observed in the non-employment (unemployment and inactive) stock, and we can not separate the informal/hidden status from the non-employment status. In the first case when workers report their informal/hidden jobs to the interviewers of the LFS we are in a very unpleasant situation in interpreting the correlation between informal employment and (informal+formal employment). In the second case when workers do not report their informal jobs, unregistered workers are observed in the non-employed stock, the employed stock is composed by formal sector workers only, so we expect zero correlation between the observed job-loss rates and the share of the informal economy! Therefore, the surprising finding of negative impact on job-loss of the informal economy should be interpreted as a kind of accidental correlation. Regions with a small share of the informal/hidden economy may have high job-loss rates because their economies are still in the stage of post-communist restructuring, and there are some undeveloped informal/hidden regions among others, and some of them may have a high share of seasonal activities. But, regions with high share of the informal economy may have low job-loss rates because their economies are well functioning from a market-oriented perspective! Their developed tertiary and small-business sectors may have helped them to survive the recession and develop a large non-agricultural underground economy. This apparent correlation between rates of job-loss and job finding can lead to biased estimates. Re-estimating the models by including the regional parameters of the respective job-loss equations the author gets positive but different coefficients for job-loss rates in the two regions. The data tell a different story about the Northern Plain county which appears as a typical case of an undeveloped, low-employment rural region with relatively high, but lower and seasonal mobility. Without the creation of steady, stable, and non-seasonal jobs in the near future this region may be locked in the status of the ‘poor rural periphery’.

What are the main lessons of the above-referred study? a) The paper draws attention to the huge importance of regional differences; b) The findings suggest that the extremely high non-employment rates of Hungary’s depressed regions can not be generally explained by workers’ low mobility. Workers in the North have one of the highest mobility in Hungary; c) One should be very careful in the process of search for informal/hidden activities in LFS. In the case of Hungary, where the workers do not report their informal/hidden job, they will be observed in the non-employment stock, and we have to know well the shift between unemployment and inactivity as well. Looking in more detail into the behaviour of informal/hidden activities in Hungary, one reaches the hypothesis that the highest share of informal/hidden jobs can be found in the inactive population, the second highest share belongs to employment, and the informal/hidden activity share of unemployment is rather low.

What do we know about the hidden activities of the employed workers? Is the share of the hidden activities among all economic activities increasing or decreasing in Hungary?

As mentioned above, using data on Hungarian self-employment between 1992 and 2001 and analysing hidden/unofficial activities in Hungary, Scharle (2002b) found some

interesting evidence that some of the innovation in small businesses took the form of tax evasion in hidden/unofficial economy. She also found that the allocation and the proportion of unproductive entrepreneurs is strongly influenced by the “institutional setup” of the society, i.e. taxation, social norms, accepted or tolerated tax evasion forms. These results will be introduced in a subsequent section.

Kertesi-Köllő (2003) and Halpern et al.(2004) emphasised in their studies the problem of depressed regions and the effect of minimum wage increasing, what proved to be another inefficient government decision. They also point to the strong connection between labour market processes and the possible development (increase) of the underground economy. Between December 2000 and January 2002 the Hungarian government unexpectedly increased the statutory minimum wage by 96 per cent in two steps. Kertesi-Köllő (2003) finds that increasing the minimum wage significantly reduced employment in the small enterprises sector and adversely influenced the job-loss and job finding probability for workers with low wages. These effects appear to be stronger in low-wage segments of the labour market and depressed regions. They also find that the minimum wage increase significantly increased labour costs in general. Aggregate employment did not remarkably fall in absolute term, but deviated from its path followed in preceding years. Small firms exposed to stronger shock lost more jobs: one per cent average wage increase implied by the minimum wage increase reduced their level of employment by 0.2 – 0.3 per cent, depending on region. For lack of adequate data Kertesi-Köllő (2003) could not study the impact on medium-sized firms, but it found no significant link between exposure to the minimum wage increase and subsequent employment change with large firms. Investigating the flows between employment and unemployment it was found that workers paid at the minimum wage after the hike – most of them paid below this level before – were more likely to become unemployed than before the hike. The findings suggest that low-wage workers found more difficult to keep their jobs and to find new jobs after the minimum wage increase.

The expected assumption of the government was that a large minimum wage increase was about to have negligible effect on labour demand and strong positive influence on job search incentives and on employment and that it would be “whitening” the hidden/unofficial labour market. This assumption proved to be absolutely mistaken. Halpern et al. (2004) conclude the same statement but draw attention again to the importance of regional effects and the possible reaction by companies in the future. The results of a simulation macro model built for studying the direct and indirect effects of minimum wage increase show that average the wages increase, while the employment and the consumption decrease in this model. The state budget is worse off than before as the change of its receipts is smaller than that of its expenditures. Profits and output of firms are lower at higher minimum wages, and higher minimum wages increases the payroll taxes when the tax evasion remains unchanged. In the case when companies react with higher tax evasion in order to restore their profit, than the effect of minimum wage increase on higher payroll tax is equalised by increasing the size of tax evasion phenomenon. It means that the expected “whitening” effect of the minimum wage increase can be hardly achieved.

II.3.3. Romania

II.3.3.1. Literature review on the size of the informal economy in Romania

Several studies can be found that attempt to estimate the size of the Romanian shadow economy during the past decade. Their approaches are briefly outlined below.

Direct approaches

All the direct estimations based on various surveys are somehow related to the data provided by the former National Commission for Statistics, currently the National Institute for Statistics (INS). The surveys include household and labour force surveys (AMIGO, AIG), enterprise annual surveys, national accounts and the population census. These calculations were done for the first time in 1994 (the first year to be reported was 1992) and have been published annually since then. They present two major advantages:

- a) they desegregate the results to the level of main economic branches, thus showing estimates of the share of industry, construction sector or various services in total informal and total underground economy;
- b) they offer separate figures for the size of the underground economy without the proportion of agrarian and household self-production and additional figures for the size of the informal economy with the share of agrarian and household self-production.

The methodology used by the Romanian INS (INS, 2001) is partially estimating the size of the non-accounted (not observable) economy and the size of the informal economy (according to INS own reports, these terms refer to different categories than the illegal or the underground economy).

The actual methodology (used by INS) for estimating the size of the non-accounted economy has been improved year by year, and maintains stability of the data sources since 1996, which allows for comparability of data and increases their credibility. It is not entirely a direct method, due to the fact that estimates the share of the non-accounted economy from the size of the labour force market non-equilibrium and the share of fiscal evasion in formal GDP. But in estimating these partial aspects that are not accounted the INS uses direct methods based on statistical surveys.

The first aspect considered is the discrepancy between the direct estimation of the labour force supply and the one for the labour force demand, according to the SCN 93 (System of National Accounts 1993). The method allows for calculating the non-registered labour force and, consequently, the value of non-declared output, which is produced using the respective “hidden” labour force. The estimation concerning the labour force supply is based on data from the household survey regarding labour force (AMIGO), which was firstly conducted in 1993, and is done on quarterly basis since 1996. Nonetheless, the survey has one major disadvantage, which is the fact that it doesn’t consider the activities performed by households, family associations or self-employed, thus leaving aside the informal sector. The disadvantage was induced by the need of consistency with the

method for estimating the labour force demand. The latter is based on the structural survey of enterprises (firms), ASA, and is performed annually. Finally, after estimating the discrepancy between supply and demand of labour force, the value of non-accounted economy is calculated using the official figures for gross wages and for all types of taxes (income, social contributions, etc.)

The second aspect envisages the estimation of fiscal fraud in the area of VAT collection. The VAT evasion is computed as the difference between the theoretical VAT and the effectively collected VAT. The theoretical VAT is associated with the intermediary consumption, the household final consumption, the public and private administration consumption and the gross fix capital formation, and is derived from official quotas of VAT per categories of products.

The results for the estimated shares of the underground (non-accounted, except for illegal) economy in total Romanian economy, for the period 1992-2000, and the estimated share of the informal economy in total, during the period 1995-2000 (for which data is available) are presented in Table 2.10:

TABLE 2.10 – Shares of the non-accounted economy in total Romanian GDP (%)

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000
Share of underground in total GDP	6.7	8.9	12.6	16.6	18.4	18.6	23.3	21.1	21.1
Share of informal in total GDP	n.a.	n.a.	n.a.	33.6	33.7	39.5	33.2	40.2	38.3

source: INS, 2001.

The National Institute for Statistics is estimating the size of the informal economy, as well. The data are extracted from the same AMIGO survey on labour force, considering the number of reported family associations and self-employed persons. The methodology takes into account the hypothesis that the income of the above-referred economic agents cannot be lower than the net average wage of people working in small firms, within the same industry. The method is also providing an estimate of the share of informal economy in specific sectors of the economy where this type of activity appears to be higher and common, such as: hotel and catering industry, construction sector, education sector, small services (hair-dressers, plumbers, auto-mechanics) etc.

The INS figures for the underground economy (excluding the agriculture and household sector) also present an estimation of each sector's contribution to it. In 2000 41% of the total underground economy took place in industry, 8.1% in construction and 50.9% in the service sector. There is a large probability of under-valuation due to, among other things, the downgrading of the declared income by the self-employed, family associations and farmers as well as the under-evaluation of the official wage-paid labour force. Estimations regarding the informal sector seem to coincide with other empirical calculations performed in recent years by various researchers. These results will be

presented in subsequent subchapters. As far as the household economy and the agricultural sector are concerned, the share of the underground vs. official economy was estimated at 22.4% of the informal sector in 2000.

Indirect approaches

One may count at least four different calculations, since 1995, based on various indirect methods that try to estimate the share of the shadow economy in Romania. Two of them are using the physical input methodology, and are not produced particularly for Romania [Johnson et al., 1997, improved in Friedman et al., 2000; Lacko, 1999], as they are providing data for all the transition economy. Results from Johnson et al. are provided in table 2.11 below:

TABLE 2.11 – The size of the Romanian informal economy in total GDP (%)

Author\Period	1989-1990	1990-1993	1994-1995
Johnson et al.	18.0	16.0	18.3
Lacko	20.9	29.0	31.3

The other two indirect methods deal specifically with the Romanian economy. The first one, which estimates the size of the underground economy in Romania [French et al. 1999], is based on the currency demand approach [originally introduced by Cagan, 1958], and uses econometric techniques to calculate the ratio of demand for money in circulation to total deposits within the Romanian economy, assuming constant velocity in both formal and informal economies. Beyond the generally low credibility of the hypotheses that such an approach would be valid in transition economies, French's empirical attempt ended up in poor statistical results following raw data processing, leaving the entire estimation under a shadow of doubt. The results of this paper, with quite an important impact on Romanian and international media (as the paper was requested by the Romanian Ministry of Finance), are reported in Table 2.12:

TABLE 2.12 – Share of underground economic activity in total economy, Romania 1993-98 (%)

Year	1993	1994	1995	1996	1997	1998
Share	9.0	12.0	15.0	16.0	20.0	33.0

source: French et al., 1999, paper for the Romanian Ministry of Finance.

French assumed that a very important role in the Romanian informal sector is played by the cross-border activities. He pointed out two main areas of informal revenues: the under-statement of the volume of foreign trade (related to custom administration's bribery) and the huge amount of non-registered trade with products that were brought inside Romania by individual traders (legally allowed) and used afterwards as inputs (non-accounted) for small business (retail sales). There are also signals for a large amount of non-registered foreign trade flows with petroleum products going on during the mid-decade years.

As a last comment, French et al. report that one third of the active population is engaged in underground activities, their estimation reaching a figure of 5.2 million people working without a completely legal status. I should detail the things a little bit, by saying that this number is including members of households engaged in self-consumption activities (which are partially taken into account by the national statistics), and people who usually avoid legal imports regulations or are using the small border trade exemptions. On the other hand, there are retired people (who are not counted within the active population) who are often involved in informal activities.

The second study is included, among other methodological details offered by the author, in the book dedicated to the first Romanian transition economy's macroeconomic model [Dobrescu 1998, 2000] and is based on a double indirect approach. The share of the accounted GDP in the total Romanian GDP is evaluated using a monetary method for the pre-transition period and a combination of the monetary approach with the energy consumption approach afterwards.

There are several reasons for choosing such a mixed approach. During the "communist" era, the entire price system was heavily controlled, reducing monetary volatility. Thus money velocity could have been considered almost constant in the Romanian economy before 1989. After 1990 this nominal stability was severely disrupted, thereby reducing the reliability of any monetary method. Consumption remains the most stable macro-variable within the transition economy, due to its intrinsic features, related mostly to the consumption of final products in the case of households, and to the need for survival in the case of firms acting in a changing declining economy. It seemed natural to use a consumption-based approach (in this case, energy consumption) in order to evaluate the share of the informal economy in relation to the economy as a whole.

The use of monetary method in evaluating the non-accounted economy (including informal) was based on the following relationship between the operational (v^*) and the accounting (v) money velocities:

$$V = v^* \beta s$$

where β coefficient measures the monetary distortion induced by arrears, as well as the distorting effect of "dollarisation":

$$\beta = (M2 + MD) / M2$$

In the above equations **MD** represents the monetary effect of the inter-enterprise arrears (N) and of the "dollarisation" effect (Z), both in M2 equivalent ($MD = N+Z$), while **s** is the share of accounted economy (GDP) in the total economy (GDP + non-accounted GDP). The operational money velocity v^* has a sluggish (relatively stable) component determined by the effective capital circulation within the economy (depending on investment, manufacturing and trade cycles, degree of fixed capital utilisation, payment instruments that are used, etc.). The most dynamic component of v^* is psychological and is influenced by the liquidity preference of economic agents. Concerning the monetary

distortion effect, the following hypotheses explain the choice of assumption that $\beta=1$ during the period 1985-1990:

- ◆ The “dollarisation” effect was quasi-null due to restrictions imposed by communist regime in the domestic use of foreign currencies before 1990;
- ◆ Periodical financial explicit or implicit regulations had counter-effects on the volume of arrears.

After 1990, the use of an energy-consumption indirect method for estimating the size of the non-accounted economy seems reasonable, as compared to other possible methods (the monetary method becomes totally inadequate, due to large changes to the price system and sudden variations of the money velocity). However, one may observe an increasing trend in the energy efficiency at a national level, with real output per unit of energy coming up with 30% during the first five years of transition. The evolution of energy-efficiency being calculated from official statistical data in an accurate manner, the figures can be used afterwards in estimating the share of non-accounted economy. A better estimation could be obtained if one uses separate data for two main sectors of the economy, which is industry and construction, on the one hand, and services and agriculture, on the other hand. The statistical data show that the ascending trend in the overall economy came mainly from the former sectors, while in services and agriculture the initially more efficient level of output per energy unit remained almost constant in real terms [Dobrescu, 1998]. Therefore, considering that a large part of the informal economy is concentrated within services and agriculture, it is not an unfeasible assumption to use a constant energy efficiency level throughout the entire period of estimation (initial transition period).

The main problem of the Dobrescu method is the choice of the starting point, that is the share of the underground economy s in 1985 (base year for the computation of the non-accounted economy). The author reports results (estimations of annual change of the share of accounted economy in total economy) for a range of initial 85’ shares between 75% and 95%, and one can see that starting 1991, the differences among these results are insignificant at a 5% error level. Considering a very probable 10% for 1985 (which will lead to a figure around 20% for 1990, close to the other estimates for the same year), the shares in the ‘90s, according to Dobrescu model’s evaluation, are presented in table 2.13:

TABLE 2.13 – Shares of the non-accounted economy in total Romanian GDP (%)

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Share	21.3	25.0	31.0	31.8	30.8	28.5	27.1	32.2	35.8	37.8	37.2

source: Dobrescu, 1998 and the 2000 version of the Dobrescu model.

The most recent study on the underground economy in Romania [Daianu, Albu et al., 2001] offers an one-shot approach to estimating its share in the year 2000, based on various methods. The labour market approach deals only with the wage-paid labour force, thus reducing the dimension of the phenomenon. According to the authors’ computations, the share of underground labour in revealed labour supply is 12.8%, but within their methodology the huge number of labour force working in the agricultural sector is not

considered. The fiscal approach estimates the share of the underground economy in total official GDP (excluding informal activities, such as self-consumption, which is not taxed) at 39.8%, based on the valuation of tax evasion (non-collected tax revenues).

Model approach

[Albu et al. 1998] used a global model based on the labour supply method, which includes also a generalisation of the Laffer curve. Three versions are taken into account, differentiated by various assumptions about the productive national potential or about the people's preferences regarding their use of their leisure time. The period of time covered by these estimations is 1989-1995, and the results for the most reliable version are presented in table 2.14:

TABLE 2.14 – Shares of the underground economy in Romania (%) – model approach

Version\ Year	1989	1990	1991	1992	1993	1994	1995
Version I	26.3	32.6	36.4	38.4	39.3	39.2	38.4
Version II	19.9	25.0	29.4	32.1	33.1	32.8	31.7
Version III	5.7	9.7	16.7	21.1	21.6	21.2	19.4

Source: Albu et al., 1998 (only the minimum threshold values are reported).

More than the figures, the qualitative aspects that can be drawn from these estimates and from estimates of the size of the labour force working in the informal economy (or in both economies) are important. The main conclusions are as follows:

- ◆ Regardless the method considered in estimating the size of the shadow economy, there is an obvious increasing trend, starting with the very first year of transition until 2000.
- ◆ During the short period of macroeconomic recovery (1994-1996), most of the estimations report a slowdown in this trend (or even a decreasing share, in the case of some of the approaches).
- ◆ The results of the various surveys (especially the direct methods) indicate a concentration of the informal economy in the following economic sectors: retail trade (commerce), transportation, construction, repair and maintenance activities (households, motor vehicles), agriculture, tourism, catering, health, and education [Ivan-Ungureanu 1997]. These findings are supported by the official data within the framework of national accounting, where there are large operating surpluses for these sectors. On the other hand, the results of the surveys that were specifically conducted [Neef et al. 1998, Stanculescu&Ilie 2001] do not support evidence of a large share of informal sector in the public services sector, except in public administration. They also point out increasing informal activity in sectors such as the textiles industry and both foreign and domestic retail sales. The differences between various studies' and

surveys' findings may come from the methodological issues⁴, as no direct question was used in the questionnaire in the case of non-accounted activities performed in the same branch in which household report their main official (formal) job (this is particularly important for health and education services). The discrepancies between wage-paid labour force and the total number of employment for the respective economic branches are also higher than any other one.

II.3.3.2. Correlation between economic growth and the informal economy

The extensive impact that the informal sector began to have within the overall economic framework in Romania transformed the issue from being a curiosity and a research topic into being a problem affecting the development of the social and economic system.

It is worth mentioning that the estimations of the size of the informal economy for Romania allow us to establish a clear negative correlation between the rates of growth of the formal GDP and the informal GDP during the decade of transition. In order to prove such a statement, one may go back to the data in table 2.10 and combine them with data on the rates of growth for the formal GDP, shown in table 2.15 (official figures provided by the National Institute for Statistics (NIS) and replicated by Eurostat):

TABLE 2.15 – The rate of growth of the formal real GDP in Romania, 1992-2000

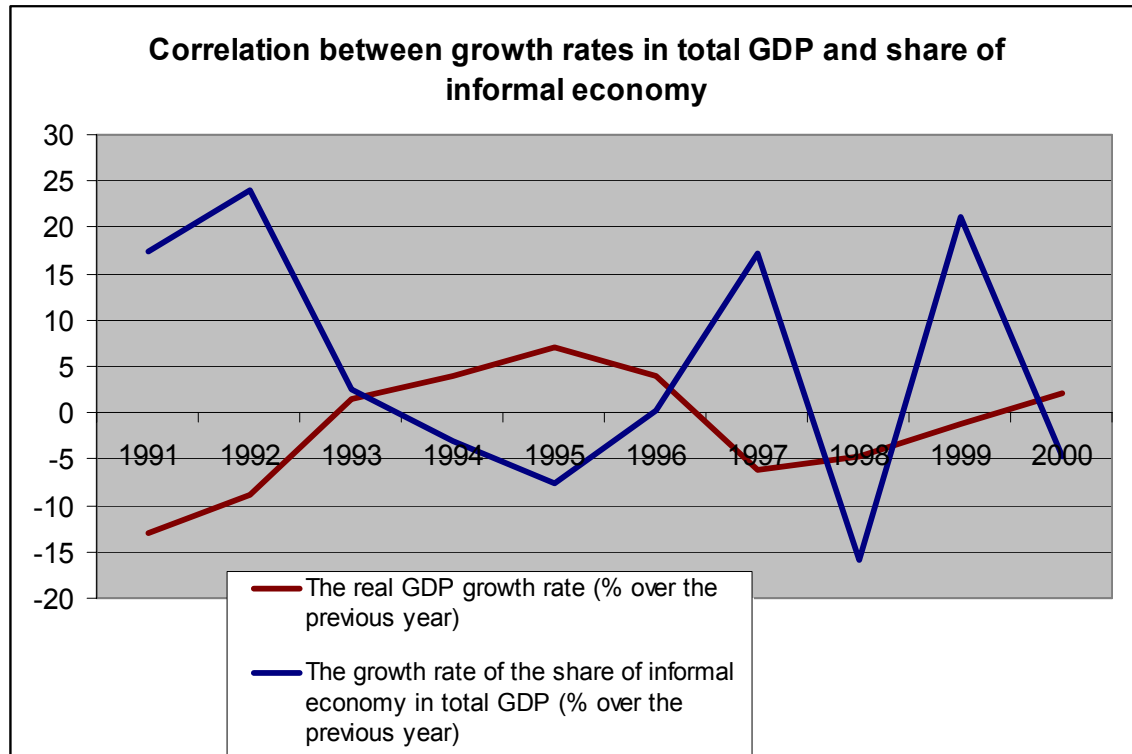
Year	1992	1993	1994	1995	1996	1997	1998	1999	2000
Formal real GDP growth rate(%)	-8.8	1.4	3.9	7.1	3.9	-6.1	-4.8	-1.2	2.1

source: Eurostat (2004)

The figures in Table 2.15 and 2.10 show that there is a possible delay of one year in transmitting signals of growth from the formal economy into the informal one, which means that within one year the informal economy adjusts itself to be a substitute for the formal environment. But this global result is hiding contradictory inter-relationships between the two types of economies, using various channels of transmission. Graph 2.1 shows the evolution of both real formal GDP growth rates and the growth rates of informal economy's share for comparison, during the last decade. Official estimates produced by INSSE start only in 1995, therefore we used the shares calculated on the basis of Dobrescu model for the period 1990-1994 (table 2.13). The reason for such a decision is twofold: the Dobrescu estimates are closer to the official ones among all other attempts presented (for 1995-2000) and there are available data for each year of the time horizon provided by this model. There are two years of possible breaks in the data series of shares of informal economy: one in year 1995, due to the change in sources of data, and 1998, when the methodology was slightly changed within the INSSE. Therefore, one should consider these two years carefully when analysing the issue dynamically.

⁴ - It is a methodological reason due to the way in which the questionnaire was initially designed in order to cover the all the issues involved and to be representative at a national-wide level (the importance was given to the willingness of subjects to answer correctly to a higher number of questions). Instead, the questionnaire was left open to the subjects to indicate a higher number of informal activities.

Graph 2.1



source: Dobrescu model estimates for 1990-1994, and official INSSE estimates for 1995-2000.

II.3.3.3. Informal labour markets in Romania

The labour market in Romania developed differently from most of those in the CEE countries. In the latter, the reduction of the industrial and agricultural sectors in favour of services was a central feature of the added value as well as of employment. In the Romanian case, however, the industrial sector reduced its total share in both the added value and in employment. Meanwhile, the agricultural sector's share of the added value consistently diminished throughout the period from 1994 to 2002, although the level of agricultural employment exhibited an increasing trend until 2001.

The decline of the Romanian economy, the reduction in employment, the diminishing standard of living especially in urban areas, and the general social instability resulting from inconsistent policies all induced the continuation of high employment in agriculture and of the many small farms. The Romanian population found itself more vulnerable and at increased risk after the first crisis at the beginning of the Nineties, which was characterised by a sudden burst in inflation and unemployment - phenomena unknown during previous decades. Both eroded the real wages and incomes as well as people's confidence in the country's future prospects for development. Left without employment, many families chose to move to the countryside, often in order to work their own inherited and re-distributed farms and/or to enter the informal labour market by performing activities that either posed no financial burden or for their own consumption. Consequently, the informal economy in Romania flourished during the Nineties. Individuals and households realised that the cost of living in the countryside was much

lower than in other areas and that opportunities to farm could offer additional resources that would ensure a more decent living standard. Thus, the rural-urban migration, typically considered a sign of modernising societies, was reversed in Romania.

The growth of informal economies in Romania during the 90s was stimulated by the following developments:

First, given unstable financial and fiscal regulation and frequent changes in legislation on taxation and income distribution, the transformation of the different economic sectors left just enough room for the development of informal activities, above all in agriculture, trade, small artisan industries, and some household as well as business services.

Second, unemployment added to decreases in real wages, contributed to worsening the living standard in Romania, and brought about greater discontent among the population. The former Socialist system had erected barriers to the mobility of labour force by offering in-kind benefits and/or cheap, subsidised housing that was connected to one's place of work. Labour mobility is also low since most Romanians still regard one job to last a lifetime. Rising unemployment combined with the lack of a mobile labour force in the formal economy motivated more and more people to move from official activities to informal ones. The number of small businesses that started up during the period from 1992 to 1996 accelerated at an impressive pace – with the number of self-employed persons amounting to more than 700,000 in 1996. However, this did not compensate for decreases in waged-employment and even led to greater immobility of the labour force during the 1990s. Only after 1998 did government officials begin to pay increasing attention to active labour policies.

Statistics on part-time labour offer us some hints on the massive existence of informal economic activities. The share of part-time workers in the Romanian labour force increased during the period from 1996 to 2001, from 13.8% of the total employment to 16.4%. 89% of all those employed part-time in 2001 lived in rural areas, being either self-employed or unpaid family workers who were usually in search of permanent employment. Consequently, part-time work in Romania is not a sign of modernisation and a flexible labour market, but rather results from unemployment pressures.

The direct effect of the population migration back into the rural areas can be seen in the trends in employment rates, according to age group, and in terms of the area of activity. In only five years time, from 1996 until 2001, the employment rate of the population in the active ages of 15 to 64 years decreased from a level close to 65% to a little over 62%. The only group that increased its share of employment within the total active population were those aged 64 years and older - from 8.2% in 1996 to 10% in 2001 (World Bank, 2003 – database). Of them, in 2001 95.5% performed their job activities in rural areas. It is obvious that those active in the agricultural sector aged 65 years and above only appear as being employed because of the system of reporting in the Annual Labour Force Survey (AMIGO).⁵

⁵ According to ILO standards, they should not be considered as employed since most of them in effect receive social security benefits for retirement.

In conclusion, one may say that the increase in the overall share of agrarian employment reflects the weak demand for labour on the market. This very high level of agricultural employment together with migration into rural areas arose out of persistence of subsistence agriculture in Romania and should also be correlated with the high rate of participation of the retirement-age population.

The share of the Romanian labour force working in informal activities is higher than in other European countries on account of recession, poverty, and the economic structure. The portion of the unregistered working force has been estimated at 658,000 individuals in industry and services alone (Dăianu e.a., 2001). In 1998 this represented 6% of the entire labour force. To this high percentage of informal employment in agriculture, one may also add those engaged in non-waged agricultural activities; this rose from 2,383,000 in 1990 to 4,286,000 in 2001 (Statistical Yearbook, 2001; CANSTAT 4/2001). Therefore, over 2 to 2.5 million of the people registered as working in agriculture may be informal, a trend on the rise.

III. Inter-relationships between informal and formal economy in transition countries under increasing competitive pressures

The interactions between the formal and informal economy are many and of different reasoning. The existence of informal economy has been proven to have negative effects on the overall economic and social development, due to the suboptimal allocation of resources and inefficient distribution of output, phenomena that were reported to go together with a strong presence of informality. On the other hand, it may generate positive impact on certain segments of the socio-economic system, as the informal sector often blossoms and develops as a substitute for the formal (official) institutional setting that had failed to provide the necessary environment for a correct and optimal functioning of market mechanisms.

The studies presented in the previous section of this COMPPRESS WP4 paper and focusing on three of the countries participating in this project, as well as other studies referring to the topic world-wide, all point to several general causes for the growth in size of informal economies in all countries, regardless of their level of economic development or their social-political system (Schneider and Enste, 2000). They also report on the feedback evidence within the formal-informal system, as factors from the official side of the economy are inducing expansion of and shocks to the informal economy, while the developments within the underground and non-accounted economy are changing social and economic behavioural patterns of a nation.

Informal economy is distinctly divided between the household type of activity and the companies' usual underground and non-registered activity, particularly in transition countries, including Bulgaria, Romania and Hungary. Consequently, the drivers for the increased share of informal economy are different from one division to the other. As we are mainly interested in the economic inter-relationship established between formal and informal sectors, in the following we concentrate more on the economic drivers of informality within the non-household economy. A specific interest will be given to those socio-economic categories that may be affected by the increasing competitive pressures

within the investigated economies, following their opening up and their transition towards well-functioning market mechanisms.

Although sometimes experts tend to present the formal and informal economies as two opposite sides of the same coin (with certain intersections), they actually compete on the same production factors and resources that are available in the global socio-economic system. When the official economy were able to ensure the free-market functioning of the markets for land, other natural resources and different types of capital, including the undistorted access to these resources, then the share of informal economy was proven to have decreased naturally, especially its underground part. This is a normal outcome, as the reasons for its initial development have vanished or diminished their importance. Not the same thing is valid for the human capital resource, which obviously includes labour, for which markets will never be perfectly competitive, nor all activities always officially accounted, thus leaving room for informal activities.

In what follows, the paper concentrates (the first subsection) in analysing some features and providing some conclusions in the area of economic variables interacting with the informal sector, based on the recent experience of the transition processes in Bulgaria, Hungary and Romania (in more detail, given the availability of data and analyses). In a second subsection, the focus will be on the labour markets development in these countries, and on the reciprocal impacts between labour, incomes and market-related variables within their economies.

III.1. Bilateral influences between the formal and the informal economy, in the road to free market

As it was already pointed out, empirical studies referring to underground and informal economy in Romania, Bulgaria and Hungary (Frey & Schneider, 2000; Daianu et al., 2001; Chavdarova and Ciupagea in Neef & Stanculescu, 2002) point out at two fundamental economic causes of the growth in the share of underground activities: intensity of regulations and tax burden.

- a) Avoidance of regulations – such as complying with licensing, legal standards or strict administrative procedures – is also related to the cultural and psycho-social heritage of the population, which constitute the non-economic drivers of underground activity.
- b) The tax burden and the social welfare safety net primarily affect the redistribution of income in society and influence the proportion of labour time to leisure time. The distinction between tax evasion and tax avoidance was difficult to be made within the Romanian fiscal system and economy, due to the complexity and instability of the fiscal system (during the first decade of transition).

The instability was generated by the introduction of new taxes (dividends, financial assets) and the swap between different types of taxes (wages vs. income, or sales vs. VAT), as well as by the introduction of a whole system of social welfare contributions. The fiscal system shows a strong pattern of hysteresis: it is easy to reduce a tax rate or to give an exemption to a certain group of population or interest group, but it is far more

difficult to bring the rate back to its previous level or to an even higher one, as well as to cancel the exemption once given. The usual consequence of such attempts would be a push given to companies and employees to perform underground activities.

The factors proved to have influenced the existence of the shadow economy in Bulgaria can be divided in two main groups. The first group includes:

- the weakness of the financial and tax administration to make efficient control on the tax duties of the economic agents;
- the not enough developed market relationships which force the economic agents to look for informal (in most cases illegal) income sources
- the lack of long-term state policy towards the tax rates and the tax-payers.

The second group of factors includes a system of informal economic relationships. They are developed in result and thanks to the imperfections of the existing legislation system. Here is included economic activity made on the basis of the informal personal relations. The greatest danger is the fact that this might lead to increase in the corruption. As result of this some parts of the business sector receive favourable conditions for their activity in the area of the taxation, the distribution of the capitals and the access to some resources. This process leads to loss of the state control on the economic processes in the country.

In the following subsection, we will review some of the main economic variables that have been mentioned often by researchers and experts to be inter-related to the informal sector's evolution.

III.1.1. Economic variables of inter-relationship

Firstly, we will look at few general factors, which may induce increasing size and share of the informal economy, without showing a strong correlation with those economic variables in the business sector that are usually affected by competition and free-market mechanisms.

Inflation was the most important factor leading to the proportional growth in the informal economy in transition countries, during the 90s. Romania and - during the first seven-eight years - Bulgaria and Hungary as well, were not able to reduce inflation to a level below 10% annual figure. On the other hand, inflation volatility was extremely high during the 1990s, The channels through which inflation affects the normal development of the formal economy are diverse and numerous. Two of them are presented below, and we will make references to other impacts of inflation in other places if necessary.

- a) Inflation deteriorates the budget balance, increasing real costs (expenditures) and reducing the real revenues, especially when fiscal discipline and administrative capacity for the control of and gathering the budget revenues are low.
- b) Inflation allows higher price distortions within the system and allows for deliberate discriminatory administrative decisions. The government allows delayed payments

for the big indebted state-owned enterprises or public monopolies (public utilities), which reduces their real tax burden.

The higher the unemployment rate is, the stronger the incentive to engage in informal activity. The initial explosion in unemployment and its permanence within the society make the issue an important one. Those people who remain unemployed over a long period of time are likely to turn to the informal sector in order to escape from low income sooner or later. In estimating the impact of unemployment on the proportional size of the informal sector, we either can analyse the overall unemployment rate or refer only to long-term unemployment. Unfortunately, the data about exits from and entrances to the labour market in Bulgaria, Hungary and Romania by each sector, separately, is scarce if not existent, which impedes a potential empirical analysis.

Higher social transfers and smaller real wages increase the incentive to work in the informal sector. In transition economy, the early years of transition brought a very “soft” unemployment benefit system, with long periods of payments. The relatively high level of unemployment benefits compared to the minimum wage (higher than 100% during 1997-1999 in Romania), and the lack of active employment policies, induced sluggish behaviour on the official labour market. Unemployed people had time to approach the underground economy, especially in sectors like agriculture or trade. A similar development can be observed in the special case of workers who became unemployed following restructuring and closure of enterprises. They received lump-sum payments equivalent to several months’ wages, leading primarily to a disappearance of incentive to search for a new job. The proportional decrease and the very low actual level of the average wage were also factors for people to move towards the informal market. Although the income in the informal sector is well below the official net wage, when added to unemployment or pension payment, it ensures an income that often enables people to step over the standard poverty line. Especially in times of economic decline, when few new jobs are generated, a main driving force for informal activity would be related to the gap between net wage and total labour cost. Unfortunately, data for all the years considered is not available.

In the context of a generalised long-term decline, **the welfare-state effect** leads to a further deterioration in real wages, both in gross and in net terms. The total number of official wage-paid workers decreased tremendously in the transition years, reducing the wage taxation base and driving authorities to enforce higher taxes on total labour costs. Faced with higher real labour costs, employers felt the incentive to at least partially enter the informal sector (some of their employees work informally or some of the wages paid to their employees are not officially recorded). The most affected sectors in terms of real net wage decrease in Romania, as an example, were education, health and social assistance, hotels and catering, and construction, particularly in recent years.

Several other factors influence the size and share of the informal sector in the total GDP. Some are difficult to quantify and therefore cannot be introduced in a quantitative analysis, but that are mentioned quite often in opinion surveys.

Informal activity increases when the bureaucracy increases. The bureaucracy is related to corruption, rent seeking and the number of special requirements, exemptions and facilities that affect the labour market and the economy at the micro level, with a negative outcome on the business environment. In Romania, for example, regulation was a normal prolongation of the former command economy. The central administration used complicated mechanisms of regulation in various markets, attempting to seek additional rents in order to compensate for the loss of official power and the reduction in their real revenue.

Faced with increasing bureaucratic obstacles and growing corruption, more and more SMEs increased their informal activity. Bureaucracy is perceived as being a major cause of the growth of the informal sector. Daianu et al (2001) show that the public is very concerned with corruption, administrative barriers and bureaucracy. On the other hand, empirical evidence demonstrates that the “most important barriers to business in Romania are more economic rather than institutional”. These are, by order of ranking: taxes and regulations, inflation, unsafe financial system, policy instability, exchange rate depreciation impact, anti-competition practices, corruption, the judiciary system, economic crime, and poor physical infrastructure.

The deterioration in the quality of public goods and services increases the size of the shadow economy. This is one of the vicious circles of the economy, because a lower availability of public services and goods provokes an ever-increasing informal activity. The decline of the economy, together with the birth of a weakly structured system during transition, induces a chronic (structural) budget deficit, resulting in the reduction in size and quality of the public sector. Public goods providers, such as those who are active in education and health sectors, decline in quality due to a far below average decrease in their real wages. Because of the presence of strong unions and a highly qualified labour force, it was not the number of employees in this sector, but their wages that were reduced. The size of the informal market in these sectors increases due to an explosion in the number of unofficial teaching hours and in the unofficial fees for healthcare. Households want to maintain the same level of education offered or the same quality of health services.

Secondly, we will focus on those factors that may be impacted by the increased competition within the economic system:

Investments (in physical capital) are a main driving force of the formal economy. Usually, companies needing or willing to invest in fixed assets will try to operate on the formal markets in order to take advantage of the supply and the information channels, as well as of the possible tax exemptions or credits. It is much harder to take investment decisions in an informal activity due to restricted access to resources, especially in machinery and equipment. Thus the investment rate is expected to be an important factor for the development of the informal economy. The higher the share of investment in machinery and equipment is in the GDP, the lower the share of the informal sector expected.

The investment rate is also dependent on the **savings rate**. When the domestic savings rate is low, the capacity of the economy to grow in a sustainable way diminishes and real income is affected in the long run. There are three main reasons for low savings rates, and therefore for low investment rates.

First, in transition economies, the higher the instability of the financial and banking sector, the more people move into the informal sector. In Romania, as it was pointed out in several interviews and by French et al. (1999), the lack of instruments and infrastructure needed for non-cash transactions increases the probability of engaging in informal cash transactions. A weak financial and banking system impedes the savings process, thus reducing the savings rate.

Second, long periods of recession (such as the two periods of three years in a row from 1990-1992 and 1997-1999 in the case of Romania) decreased people's real income and increased the poverty rate extremely. Consequently, more and more people were forced to spend their savings. Furthermore, in the period 1998-1999, large companies in Romania experienced a negative profit rate, reducing their reserves as well.

Third, inflation destroys the savings capacity of the country, as every economic agent tends to switch from savings to consumption. Inflation was a main factor leading to the reduction of households' real financial assets during the 1990s. Whereas a very few were able to protect their assets by exchanging their reserves to foreign currency, most people experienced a decrease in their purchasing power over the years and tried to get by with in kind (informal) type of incomes.

Inflation is also directly the main disincentive for new investments because of the increased risk, especially regarding the purchase of machinery and equipment. The blurred context of the formal economy drove many firms to focus their investments in sectors in which they might be able to protect their assets and their businesses (e.g. infrastructure, real estate, trade, hotels, catering). These are traditionally more open to informal activities. This did not allow a fast expansion or recovery of the market economy.

The higher the share of the non-wage-paid labour force is in total employment, the higher the incentive to work in the informal sector. Labour will be treated in more detail in the next sub-section, as the human capital is the main shared resource by both formal and informal economic systems. As an example, the transition reforms in Romania brought another particular problem: since 1990 the wage-paid labour force has declined in number, while the overall active labour force remained relatively stable, with a slight decrease in numbers. The reason for the growth in the non-wage-paid labour force stems from the increasing number of private businesses, which are often made up of self-employed people or small firms that pay their owners through the profit returns system. This development is fuelled by the taxation (fiscal) system as well, as taxes on corporate profits were lower than on income from wages in recent years⁶. A more flexible working

⁶ At present, the income tax for wage earnings reaches the maximum level (40%) quite rapidly. These taxes are joined by the social welfare contributions (which equal another 40% of the gross wage). On the other hand, paying people from dividends would imply tax payments of 25% on the gross profit and an addition of 5% tax on dividends.

schedule also contributes to this development, which allows people to take on a second job (formal or informal). These are the reasons for introducing the share of non-wage-paid labour force in total employment as a factor in the equation tested.

There is a direct link between informal activity and non-wage-paid labour in the agricultural sector, a link that is connected to general household activity. In Romania, the share of employment in agriculture is extremely high, around 40% of total employment, of which 85% are non-wage-paid persons working their own small farms. Almost all of their activity is informal, as only a part is registered. Most do not have to pay taxes and a large share of their production remains with the household as self-consumption.

The size of the informal economy grows with the increase in the tax burden and in the level of social welfare contributions. The tax burden and the social welfare safety net primarily affect the redistribution of income in society and influence the proportion of labour time to leisure time. “The bigger the difference between the total labour cost in the official economy and after-tax earnings, the greater the incentive to avoid it and to work in the shadow economy” (Schneider/Enste 2000).

In transition economies, the rise in tax-burdens led to the increased distortions in the distribution of income. During the first years of the past decade, the transition governments:

- switched to different tax systems (from turnover taxes to VAT, from taxes on wages to income taxes),
- introduced new taxes (corporate-profit taxes, taxes on dividends, taxes on financial incomes, etc.),
- introduced a whole system of social welfare contribution (pension, unemployment, health insurance funds, etc.).

All the negative factors that increase the tax burden and distort the level of redistribution and taxation base can be found in Romania during the 1990s (for figures, see table 3.1):

- ◆ A high number of new taxes were introduced over the years, as the economy declined, unemployment grew, the labour force and especially the wage-paid force declined, and the number of retired people grew.

Table 3.1 – Level of effective tax rates in Romania in percent of the GDP (%)

Tax component \ Year	1990	1991	1992	1993	1994	1995
Tax on profit	7.1	5.1	5.3	3.8	3.8	3.9
Tax on wages/income	6.8	7.6	7.6	6.6	6.5	6.4
Turnover tax, excises and VAT	11.8	8.3	6.9	3.7	3.0	4.6
Custom duties	0.2	1.1	1.3	1.3	1.1	1.4
Social contribution taxes	7.9	10.0	10.7	10.0	8.6	8.0
Memo:						
Direct taxes	14.8	13.7	14.3	11.7	11.6	11.5
Indirect taxes	12.8	9.5	8.5	9.7	8.1	9.3
Year	1996	1997	1998	1999	2000	2001
Tax on profit	3.3	4.3	3.0	3.1	2.5	1.9
Tax on wages/income	6.1	5.5	4.0	3.2	3.4	3.2
Turnover tax, excises and VAT	4.8	3.8	5.4	7.1	6.6	6.7
Custom duties	1.5	1.3	1.5	1.4	1.1	0.8
Social contribution taxes	7.5	7.0	8.9	10.7	10.8	10.8
Memo:						
Direct taxes	10.4	10.5	8.0	7.9	7.2	6.3
Indirect taxes	8.9	9.0	10.8	11.6	11.4	11.2

source: INS, Ministry of Finance.

◆ Especially near the election years of 1992, 1996 and 2000, the taxation base was reduced in an attempt to attract the population to the political parties in power. The fiscal system shows a strong pattern of hysteresis: it is easy to reduce a tax rate or to give an exemption to a certain group of population or interest group, but it is far more difficult to return the rate to its previous level or to an even higher one or to cancel the exemption once given. Following the election years, tax rates generally increased as an attempt to compensate for the loss in the real budget revenues. These increases generally took the form of indirect taxes, which contributed to social discontent and upheaval.

◆ The fiscal system was non-transparent: many exemptions were granted throughout the transition period to interest groups related (unofficially) to the central and local administration staff.

Finally, the mismanagement of the fiscal system led to disincentives within the Romanian formal economy, which led the economic agents to switch their activity to the informal sector:

- The labour cost to net wage ratio increased to 2.3-2.4 at the end of 1999, based on a system enforcing a progressive wage taxation rate.
- Unemployment benefits were linked to net wages thus allowing for larger unemployment benefits for those persons formally employed in high-wage sector in comparison to those working for minimum wages in other sectors. In 1997 the

average unemployment benefit in the first 9 months of unemployment increased to 135% of the minimum wage, while the long-term unemployment social aid was about half of the minimum wage (Stanculescu/Ilie 2001).

- Pensions were unevenly distributed according to the number of years of retirement, as the process of partial adjustment to inflation was not well co-ordinated.
- There were too many exemptions for every type of tax.

Concluding, the *informal economy seems to present properties of a system with hysteresis*. Once one entered the system, the perceived risk is reduced, while the gain is obvious and immediate for him. The decision of switching from formal to informal is taken on a marginal income basis. In order to switch back, one may need a large income gap to be suddenly filled, or a legal action to be taken against him.

III.1.1.1. An econometric assessment of impact factors on the informal economy in Romania

The data available after 13-14 years of transition in Romania does not allow for accurate quantitative analysis, as the length of the time is not enough to provide reliable statistical (econometric) results. However, the available data does help to test some theoretical assumptions about trends and about the importance of factors influencing changes in the size of the informal economy, some of them mentioned in the previous section.

The relationship that was tested in the case of the Romanian economy (Ciupagea in Neef & Stanculescu, 2002) is the following:

$$\text{IEsh} = f(\text{RGDPI}, \text{UR}, \text{NWI}, \text{INVR}, \text{NWPLFsh}, \text{TXRS})$$

where IEsh stands for the share of the informal economy in the overall GDP, the one that includes both formal and informal sectors. The RGDPI is the level of the real GDP (the one reported by the National Statistical Institute), considering as a base year 1990⁷. UR is the officially registered unemployed rate (number of registered unemployed in total labour force, according to the ILO⁸ classification) while INVR stands for the gross investment share in the GDP (or, alternatively, one could use the share of investment in machinery and equipment in GDP). The NWPLFsh is the share of wage-paid labour in the total labour force and TXRS is the share in GDP of the income collected from relevant taxes. Finally, the NWI is the index of the (average) real net wage received by wage-paid employees in the formal economy, again with the base year 1990 level considered to be 1.

In order to confirm their statistically inconsistent, but economically viable results⁹, the author performed another econometric regression, using growth rates instead of shares

⁷ - The volume index of GDP is considered to be 1 in 1990.

⁸ - ILO is the International Labour Organisation.

⁹ For the equation in shares-levels, the econometric results were poor, as despite an R square of 0.89, DW was uncertain and Student t-tests were quite low.

and index variables. The overall results were much more reliable and they suggest that there are four variables that strongly influence the informal economy's growth rates:

- a) the growth rate for the formal GDP – GDPR (a negative sign, as expected);
- b) the growth rate for the share of the social burden tax rate in the GDP – SBRR (with a negative sign);
- c) the long-term unemployment rate – LTUR (with a positive sign, as expected);
- d) the real net wage growth rate – NWR (with a negative sign).

The negative influence of the real wage growth rate, as compared to the positive influence of its level on the size of the informal economy, makes an interesting case. It suggests that people are interested not in their historical real wage level, but in the momentary variation of this wage when deciding whether or not to enter informal activities. At the same time, the general level of the real wage in one sector is a signal for business opportunities within that particular sector (this may explain the positive sign).

These results were extended with a sensitivity analysis for the steady-state equation, since all the variables can be standardised. Normalising the time series (to their average level over the period of time considered), we obtain the share of the impact of each determining factor on the informal economy's size. The conclusions after computing sensitivities were showing that the social burden tax rate in the GDP, the share of non wage-paid labour force in the total labour force and the GDP index account each for around 30% of the total impact on the share of informal economy among all the factors taken into account. The machinery and equipment investment rate was found to be almost insignificant in its impact. There has been found a significant role of the long-term unemployment rate (over 6%) and of the real net wage index (below 4%)¹⁰.

Other factors of influence were not included in the equation due to various reasons:

- The increase in income inequality (income gaps) is certainly a factor inducing uncertainty among population (households), but it is not clear whether it is a driving force for people to enter the informal market or not. There is no available empirical evidence on the fact whether more informal activity enhances the income gaps and increases the Gini coefficient or not. In any case, there are no series of the Gini coefficients regarding the entire economic system and for each individual sector during the entire time horizon. Consequently, we did not include this indicator in the set of explanatory factors.
- The high variability of the fiscal system and the increasing gap between the level of official tax rates and the effective tax revenue shares in the GDP is another factor that may influence the growth of the informal economy. We didn't include the gap in tax rates in the set of indicators because the changes in official tax rates were

¹⁰ If data on exits and entries on the labour markets existed, the influence of unemployment or long-term unemployment would prove better statistical results and a more credible behavioural equation.

unevenly distributed over time. Most of the changes happened after 2000, and it is too early to assess their impact on the economy today.

- The institutional structure and the administration inference in the economy are very important as well, but they are difficult to quantify and therefore left aside. Nevertheless, future studies may consider this aspect.
- The volatility of the inflation rate, combined with its actual high levels, could be also strong factors of impact for the share of informal economy. The main problem here is the fact that inflation is at the core of the macro-stance of the economy, determining other variables that have been already considered. The results of the regression could then be affected by massive auto-correlation.

Concluding, the same drivers of informality which are mentioned by various empirical sources in relation to the informal activity, whether in Romania or elsewhere, are to be found among the main factors of influence as they were pointed out by the econometrics based on simple quantitative models. The group of drivers includes the growth rate of the economic output, the income tax rate, the unemployment rate, the real wage index and the size of non-wage paid labour force.

In addition, we found in the case of the size of the Romanian informal sector interesting causality coming from other economic categories, which are seldom mentioned within the usual empirical literature: the long term unemployment, the low level of investment in machinery and equipment and the particularly high burden of social contributions in Romania.

The level of taxation (including all direct taxes, such as income or wage taxes, profit tax, and more than all others, the social security tax) and the low level of investment (in order to have access to new machinery and equipment, the companies are forced to play in the formal sector) may be considered drivers for informalisation within enterprises. With reference to the active population, one could say that long-term unemployment and the inequalities in social transfers are an incentive to complementing poor transfers by informal activities.

III.1.2. Impact on informal activities of emerging market economy structures in Bulgaria

After the changes in 1989, the Bulgarian economy has been re-structured. Many enterprises were closed or privatized and later have been established new companies most of them private and/or under foreign ownership. Because of the competitive pressure paving its way into the market many of them stepped in the underground economy aiming at reducing their expenditures. Thus the existence and the growth of the underground economy in Bulgaria during the years of transition have negative impact on the whole economy of the country. Because of the low production costs, which characterize the production process of the informal sector, it could be assumed that the investment in new technologies in this branch of the economy is lowly developed and in this way has a negative impact on the level of technology for the country. On the other

hand, the inherited low quality of the technical equipment used in the production process was a premise for reductions in the labour productivity.

The informal economy led to increases in the tax duties of the economic agents operating on the formal market. This means that all the services and social payments made by the government were financed only by the official sector's tax-payments, which caused the increase of the tax-burden, as the government was unable to finance its expenditures. The result of this process is that the underground sector continued to grow because the higher tax-level forced many people and firms to switch to the informal sector.

The low level of budget incomes led to ineffective state policy in all its dimensions, including ineffective macro policy. This had impact on the education system, health system, defense, social assistance and the functioning of the state institutions. The result was a sharp growth of the poverty and deterioration of the living standard of the population in Bulgaria. The increasing share of the informal economy affected the distribution of the resources and thus was an obstacle in the normal functioning of the market.

The tax burden was recognised as the most significant barrier by all types of companies. Administrative requirements and bureaucratic customs procedures, combined with numerous documents that must be attached to the export and import transactions, create the motivation for firms to operate in the shadow economy, thus saving time and money. The ineffective functioning of the tax authorities and unpredictable legislation are factors, which can further increase the cost of reporting tax and insurance payments. These expenses are both direct (hiring more people, creating influence by giving bribes, etc.) and indirect (opportunity costs of the time which, though both are important, is spent to create contacts). When there is tax evasion and tax avoidance of indirect taxes (VAT, duties, excises), as well as cases of underreporting personal income and payroll tax earnings, the undeclared amount is equivalent to the underground economy size. With the purchase of documents certifying expenses in order to evade taxes on profit, there is only a transfer of the value added tax from one firm to another without influencing the value of GDP.

Underground activity for tax avoidance or evasion was estimated in Bulgaria at 33% of GDP. This result is probably an overestimate as it is possible to avoid excise taxes by declaring certain sales as non-excise goods. In this case, the effect on GDP is the saved excise tax, from which we deduct the increase in gross consumption due to the lowered price that results. The latter depends on the elasticity of demand of the respective good and is impossible to evaluate based on currently available information. On the other hand, the total value of the underground economy should not be reduced only to the value represented by tax evasion. It also includes omissions of the statistical institutions when they give an account of the total value added tax and of some illegal activities such as arms, drug and people traffic, unlicensed software, unregulated use of copyrights, etc.

The considerable size of the underground economy resulting from the tax burden is rather evenly distributed across sectors. One aspect of the informal economy is the underreporting of a part of the earned incomes of economic agents. A major reason for

this is the evasion from payments due to the state budget, the National Social Security Institute, the Health Insurance Fund, etc., either by the individuals themselves or by employers.

Administrative and relational barriers for the business and foreign investment

Most generally, the concealing of taxes and social contributions is a reaction against the tax and administrative burden and a way to avoid the obstacles for the business. The tax rates are high compared to the low quality of the services, which are granted to the taxpayers by the state. The tax system is pretty complicated and moreover there is a trend on further complication in the last years.

Other obstacle for the business in Bulgaria is the delay in the reimbursement of the VAT, which have to be reimbursed up to 45 days but this period is very often prolonged and so the operative funds of the firm are frozen for a long time.

Despite the direct losses, the correct taxpayers blame to a much greater degree the indirect losses they face due to the disloyal competition. The inability of the tax administration to implement the law equally to all participants on the market gives competitive advantages to those not following the regulations and in this way they can easily push out of the market the conscientious taxpayers.

There are also other administrative barriers (like registrations, license regimes and price regulations) that constitute main factors of the development of informal economy. Irrespective of the genesis and the goal of the administrative regulations, the common factors are the high prices faced by the entrepreneurs and the fact that in many cases they make the business dependant only on the decision of one person in the administration. Most of the Bulgarian firms depend on licenses for fulfillment of their activity and most of these licenses are temporary and have to be renewed. Separately, the companies have considerable costs for certifying and ensuring their equipment, goods and services.

There are many macroeconomic and social variables, valid in the case of all transition economies, that may be referred to as drivers of informality, such as: rate of growth of the overall economy and of each sector's output separately, income distribution, level of income for various groups of population, differences in regional or sector's labour force, taxation system, tax facilities or discrimination, share of household economy (including self-consumption), etc.

At the sectorial level, the share of the informal economy seems also to be a function of the following factors: output growth rate, the share of wage-paid labour force in total labour force, the level of fiscal burden (considering different tax components), the different mobility of the labour force in various sectors. There are certain economic branches which might be considered "more suitable" to encapsulate informal activities, such as: **agriculture, trade, hotels and catering, constructions, transportation, real estate, other market services (plumbing, mechanical repair) and some public services: health, education, etc.** This statement is backed – in the case of the three

countries referred to within this paper - by the findings of several studies and analyses developed in recent years [Daianu et al, 2001, Duchene et al, 1998; Schneider & Enste, 2000; Neef & Stanculescu, 2002].

III.2. The impact on labour market, from a formal-informal perspective

The transition reforms brought another particular problem, as already stated in previous sections: since 1990 the wage-paid labour force has declined in number until the late 90s or early 2000s, while the overall active labour force remained relatively stable or decreased, in all European transition countries. The reason for the growth in the non-wage-paid labour force stems from the increasing number of private businesses, which are often made up of self-employed people or small firms that pay their owners through the profit returns system. This development was fuelled by the taxation system as well, as taxes on corporate profits were lower than on income from wages in recent years.

There is a direct link between informal activity and non-wage-paid labour which has been referred to in literature (referred above). In the following subsections, further detail is given on this topic in relation to the transition process that was going on (and still continues) in Bulgaria, Hungary and Romania. Most of this information could be more useful although to the papers that are scheduled for delivery in Work-package WP3 of this COMPPRESS project.

III.2.1. A comparative assessment of the self-employment issue in Hungary and Romania

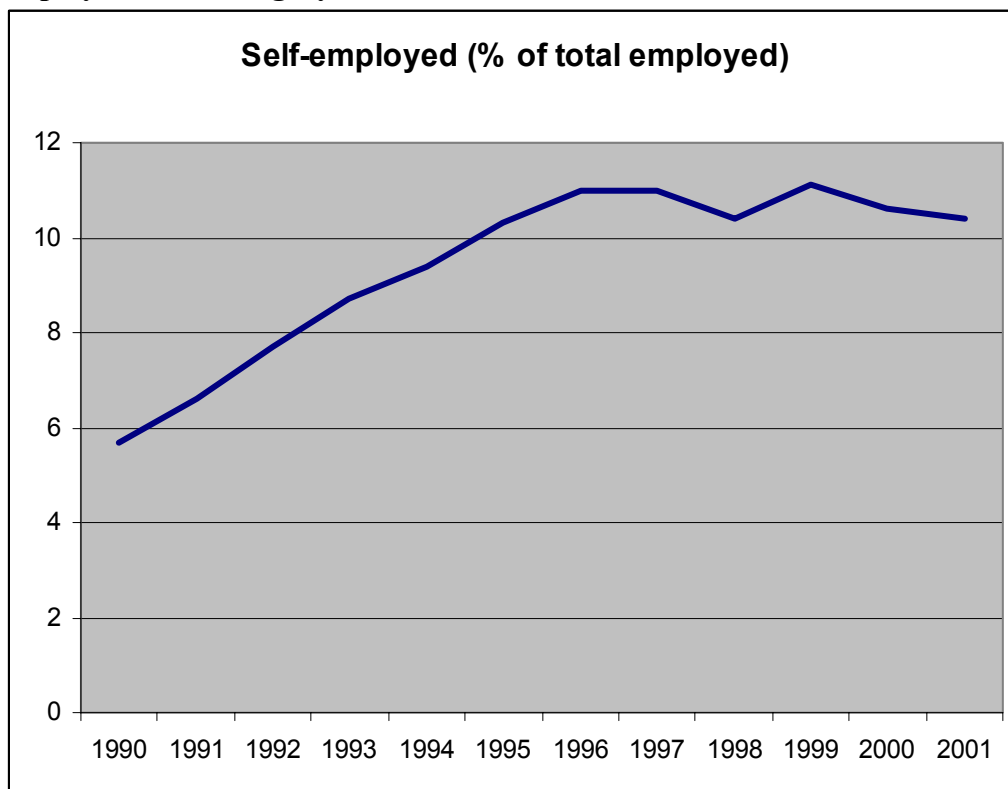
When we are thinking about the judgement of self-employment very different statements occur to us: “Self-employment is the black sheep.”, “Self-employment is the engine.”, or “Self-employment is the temporary second best.” and “Self-employment is the brake.” Which one is true for Romania, and which one is true for Hungary? Köllő (2001) and Köllő-Vincze (1999) made an attempt for a better understanding of the differences and similarities between the labour market stances in Hungary and in Romania.

The considerable rise in the number of entrepreneurs in transition countries is often interpreted as a response to the economic recession: many people started a business and became self-employed temporary and non-voluntary, because it was difficult to find a job in the new market. As a consequence, many self-employed may be only ‘disguised unemployed’, and many of them may try to return to dependent employment status when the “things are getting better”. But the evidence suggests that the development of self-employment and unemployment were guided by very different forces in Hungary. Based on model estimation for 1995 by Köllő-Vincze (1999), the development of self-employment in Hungary was found to be basically a “pull” phenomenon rather than a “push” of low labour demand in the enterprise sector. Like in Romania in its early stages of transition, agriculture absorbed a huge proportion of the potential unemployed following the unique land reform and, also, a unique tax reform, and the introduction of a restrictive UI system. The Romanian data suggest larger net flows into self-employment

in regions in deeper recession, but there was no empirical evidence for net flows from self-employment back to paid employment, even in the few Romanian regions where labour demand was rising in the period (1993-1996) investigated by Köllő-Vincze (1999). However, since 2001, the employment creation process started to be manifest within the restructured Romanian economy, as well, making of the empirically-perceived difference a matter of time lag.

The data suggest that (Fazekas-Koltay (2003), pp. 151-152., and Figure 3.1) in the first half of 90s the share of self-employment was relatively high in Hungary comparing to other transition countries. By 1995 self-employment's share in total employment rose to 10.6 % (11.5 % in Bulgaria, respectively 38.3 % in Romania, where agriculture is dominated by family farms). The expansion of the small business sector was very fast, the ratio of self-employment and assisting family members increasing continuously until 1997, it stopped shortly in 1997-98, and it has stabilised at a level about 10-11% ever since.

Figure 3.1 – The evolution (1990-2001) of the share of self-employment in total employment in Hungary



On the opposite side, Romania had and still has by far the highest self-employment rate within the CEE region. Land re-privatisation and the concomitant net flow into agriculture – unparalleled within the CEE region – created the huge growth of self-employment. Unlike in Hungary where many former agricultural co-operatives survived and agricultural employment fell substantially, the Romanian co-operative sector was eliminated. So, unlike in Hungary, the unemployment, agricultural self-employment, and

total self-employment rates were positively correlated in Romania, inducing negative shocks to the paid employment pool. The flow of labour force into self-employment was much more intense in Romania. Unlike in Hungary, high levels of self-employment and unemployment evolved simultaneously in less developed regions which were hit deeply by the transition shock as well (Annex 1 – Figure 1).

The agricultural sector deserves a special analysis in the case of Romania, given its size and specific features, regardless the specific topic of interest. The earlier studies on informal rural activity (Neef in Duchene et al, 1998) show that one third of those subjects informally active in farming had also a formal job in the same field. Farming seems to be capital-intensive, which represents a major constraint in the case of poor households in the country side, thus inducing a time-intensive activity for the majority of rural population. Several conclusions and comments may be added at this stage:

a) The growth in share of informal economy generated by a reduction in the formal income or output is higher in agriculture than in other sectors (high income elasticity of informal share). This aspect may be seen on his reversed positive side, once the economy enters a path of sustainable growth, generating more jobs in the formal sector, outside the agricultural system. Actually, the recent years proved this statement, as since 2002 the share of informal activity in agriculture diminished together with the share of agricultural labour force and of the value added. The reduction in the total labour force in Romania has been primarily a demographic process (negative growth of active population, emigration and ageing of population), but it has been reflected almost entirely on the population acting in agriculture, while in the rest of the economy the recovery was able to increase the labour demand.

b) Many agriculture-related services, including the peasant market activity should be clarified as being non-agricultural rural activity in Romania, as it is in other countries. There is a large part of this activity that is registered and included by the National Commission for Statistics in the estimates of the GDP in agriculture. One main issue is also related to the huge number of people registered as labour force in agriculture, out of which a large share is active not in farming, but in services related to agricultural production, such as distribution, transport, packaging, primary processing. Once such division being made, the importance of agriculture would diminish in favour of the services sector, both in formal and informal sectors of the Romanian economy.

Using survey data from six Central and East European countries Earle-Sakova (1998) analyses employer status, self-employment, dependent-status employment, and unemployment treated as four distinct statuses. The study shows clear differences in the selection of the self-employed versus the unemployed status, and suggests that the typical self-employed would face a relatively low risk of unemployment depending on the educational level, age and other household assets characteristics. In an other Hungarian research not the risk, but the ‘fear-of-job loss’ variable was studied in Hungary, and the link between ‘entrepreneurial inclination’ and the ‘fear-of-job loss’ variable proved insignificant e.g. in Bulgaria and Hungary, but positive and significant in Poland depending on human capital characteristics and parental background.

In Romania, self-employment indeed played a “reservoir” role in the absorption of the redundant labour force and a major part of the people declaring themselves as active and self-employed in agriculture was actually in a status of ‘disguised unemployment’.

Little is known on the underground activities of self-employment in Hungary in the 2000s. But we know from the transition literature, that in some countries the increase of self-employment contributed very little to growth in employment and to growth of the official GDP (Scharle (2002b)). This is understandable if new small business owners rest only on self-employment to avoid unemployment. We saw above, that in case of Hungary this argument is not working. Did they contribute to the growth of the underground economy and are they really the “black sheep”? Or, did they contribute to the growth of the official economy by eliminating and mitigating the losses coming from inefficiency? There are signs that some of the innovation in small businesses were realised in the form of tax evasion, and that the changing tax regimes had an important influence on the allocation of entrepreneurial talent between socially productive and unproductive activities.

Scharle (2002b) has no formal test, only some suggestive evidence that changes in tax regulations and the self-employment rate are going together in Hungary. Using data on Hungarian self-employment between 1992-2001, summarising basic statistical evidence and relevant findings in the literature of tax evasion, and making a simple empirical analysis of the effect of changes in tax rules on the self-employment rate, this argument seems to be relevant. Does it mean that changes in self-employment rate and changes in the weight of the underground economy in total are also going together?

The growth of self-employment in the Hungarian small and medium enterprise (SME) sector was very similar to that in other CEE countries from a timescale perspective. Scharle (2001) estimates a crude measure for the impact of self-employment on growth suggesting, that in three out of five well performing transition countries self-employment did not contribute to GDP growth between 1995 and 1999, namely Czech Republic, Hungary and Poland, while Estonia and Slovenia are closer to the OECD group. No uniform pattern for the role of self-employment growth even among the Visegrad countries. In Poland the growth of small businesses may have helped in Polish recovery, but in case of Hungary the same is in question. Measurement of the link between GDP and self-employment growth need long time series, but analysing a small sample (at one county level), male self-employment has a weakly significant negative effect, while female self-employment has a weakly significant positive effect on GDP growth.

According to Scharle (2002b) changes in the self-employment rate can be explained by the changes in institutional factors, and these factors determine the optimal amount of tax evasion. The minimum wage push probably increased the intensity of tax evasion, but we have already had some evidence that the uniform changes in tax system (EVA) in 2002 also had a considerable downward push effect on tax evasion thus ending up in a “whitening” effect. Analysing the effect of changes in tax regime and in social security contribution on self-employment, Scharle (2002b) also shows that the increases in the average tax rate were accompanied by increases in the self-employment rate in almost all years up to 1996. The drop in the average tax rate in 1994 left the self-employment rate

unchanged. Tax rates and self-employment were declining in line in 1997 and 1998, but after 1999 the self-employment slowed down. An increase in the compulsory minimum social security contribution is going together with a decrease in the male self-employment rate in most of the observation years and vice versa.

III.2.2. Underground economy in Hungary on household level: Calculations based on the Hungarian Household Rotation Panel

In this section “underground economy” is defined as the economic activities of households that are hidden from public authorities to avoid taxation. As it was already pointed out in previous sections, the rising tax burden and state regulation are the main driving forces of this kind of activities. During the investigated period, at the end of 90s and at the beginning of 2000, neither the intensity of tax burden nor the number of rules of state regulation was significantly increased in Hungary. Our hypothesis is that the intensity and forms of the underground economic activities are basically unchanged in this period. In the followings we try to find evidence for this hypothesis.

Most of the empirical attempts made to estimate the size of the underground economy activities rely on macroeconomic relationships thought to contain information about such activities. Studies using microeconomic or household data for the estimation of the underground economy include direct methods employing tax audits and data collected from surveys, or the ‘expenditure-based’ method proposed by Pissarides & Weber (1989) where an Engel curve (demand for food) estimated from individual household data is used for calculation of the under-reporting income by households with a self-employed head. These kinds of approaches are not useable in the case of Hungary or many other transition countries. Like many other researchers, we are also sceptics concerning the measurement of the underground economy based on our panel, because this panel, like other household surveys is not the most ideal sample for measuring this kind of activities.

First, we have to mention the discrepancy between the data in the National Accounts and the household surveys (Tárki panel and the Rotation panel). The differences are truly significant not only in terms of tendencies but also in absolute values as the National Accounts reflect income values that are more than two times the Rotation Panel data incomes, and almost two times in consumption. The largest discrepancy is seen in property incomes. Bank interest and dividends increased dynamically in the 90s, and only stopped increasing at the end of the decade. The household surveys do not care much about savings, and even interest and dividends are only counted if the household collects them in cash. Moreover, according to the National Accounts methodology, entrepreneurs’ incomes are taken into account using Tax Office data and expert estimates, unlike in the Rotation panel the entrepreneurs’ income is one of the lowest among the different income groups.

Both the HBS sample and the Rotation Panel have some unfavourable features: young adults - considerable proportion of them is supposed to be involved in hidden activities - are significantly underrepresented; unemployed people and pensioners are over-represented; active earners and especially entrepreneurs supposed to have high intention to take part in underground economy are significantly underrepresented; Budapest is

considerably underrepresented, and larger cities to a lesser extent; higher education graduates are underrepresented. But the basic sampling problem of the HBS and the panel is that the “rich” systematically refuse to join the survey. People with the highest income and expenditure fall out of the scope of the survey and the panel at higher than average rate.

Another problem is that the small ‘family based’ partnerships, including those founded mainly for tax evasion purposes, have incomes and expenditures reported that are inconsistently separated from household incomes and expenditures. It often happens that the respondents are not sufficiently consistent in separating the two incomes and expenditures and they indicate goods purchased from the partnership’s funds but used for family purposes as a household expense, but fail to take account of the related income. Sometimes we can see huge household expenditure on durable goods in the expenditure file of the family, and we can not see the income sources of these purchases, and furthermore we know nothing about the (official versus unofficial) origin of these income sources. Income from self-employment may not be spent in the same way as income from other sources. Households with income from self-employment may decide to use their steady wage income on regular non-luxury goods and then use the self-employment income to buy luxuries. But in most of the cases these two types of incomes and expenditures are mixed and hardly separable, although none of them is unofficial.

The existence of underground activities is absolutely recognisable in case of entrepreneurs. In their case there is a measurable discrepancy, a considerable distance between households’ income and expenditure positions. Entrepreneurs in the first income decile are in the first six expenditure deciles in the panel, and we can find a bigger discrepancy/bigger distance between income and expenditure positions of the entrepreneur households in the original total sample of HBS. Half of the entrepreneurs not in the panel, but belonging to the first income decile in the original HBS sample are members of the highest four expenditure deciles.

In spite of the fact that people with high intention to take part in hidden activities are mostly missing in the panel, we can make an attempt to show out the existence of under-reporting income of the average household in the panel. Expenditure of basic goods, particularly the expenditure on food and household goods are to be reported more accurately by all households than their income. Motoring and telephone services, which are considered to be business expenses for the self-employed are not reported correctly, but food and housing maintenance and accessories do not fall in the business expenses category. Households may use self-employment or extra income to make irregular purchases of expensive holidays, luxury cars, top computer models and telephone rentals. In these cases households with self-employment income will tend to have a lower share of necessities than luxuries in their total expenditures. On the contrary, households with a higher portion of self-employment income tend to use their home as workplace, thereby spending more on necessities (food at home and fuel for heating) rather than potentially luxury goods like eating out, transport, clothing, etc. In summary, both the total expenditure and the expenditure of food and housing necessities may cover some non-reported or under-reported income sources. It means that the total expenditure positions of households with high intention to take part in hidden activities are probably higher

than their total income positions. Consequently, there might be a certain difference between the level of total expenditure inequality and the level of total income inequality of the panel, and according to our hypothesis this difference might be constant in time during the period of investigation.

The previous analyses carried out with the Rotation Panel indicate that the situation changed substantially in the second half of the 90s (see table 3.2 and 3.3). In 1996-8 the income inequalities of the Hungarian households stabilised rather than further rising. This stabilisation of inequality took place in spite of a major and universal shrinking of real incomes and real expenditures. During this period expenditure inequalities were greater than income inequalities for every inequality measure. The investigation of the trends of income and expenditure inequalities reflects that the impact of the 1995 stabilisation shock came to an end in 1997 as concerns the households' income and expenditure. The behaviour of inequalities make the fact likely that there are persistent differences in income and expenditure positions of the households, which may mean that household choose to under-report or not to declare a certain part of their total household income.

Table 3.2 - Income inequalities based on the Hungarian Household Rotation Panel, 1993-1998

	1993	1994	1995	1996	1997	1998
<i>P90/P10 per capita</i>	2,58	2,66	2,83	2,94	2,86	2,94
P90/P10	2,44	2,54	2,60	2,63	2,60	2,67
P90/P50	1,63	1,61	1,62	1,63	1,63	1,64
P50/P10	1,49	1,58	1,61	1,62	1,60	1,62
P75/P25	1,61	1,63	1,61	1,64	1,58	1,60
Gini per capita	0,234	0,218	0,238	0,247	0,229	0,242
Gini	0,222	0,208	0,225	0,227	0,211	0,223
GE(-1)	0,087	0,076	0,089	0,091	0,076	0,090
GE(2)	0,115	0,086	0,116	0,109	0,083	0,101
Gini on earnings*	0,371	0,376	0,391	0,394	0,400	0,409

*Gini coefficient of those households that receive income from earnings, only taking account of this type of income. Earnings in the broad sense include income from an enterprise, but exclude the net yield of agricultural activities.

Note: Unless otherwise ('per capita') indicated, we have used indices computed on the basis of equalised income or expenditure.

Table 3.3 - Expenditure inequalities based on the Hungarian Household Rotation Panel, 1993-1998

	1993	1994	1995	1996	1997	1998
<i>P90/P10 per capita</i>	3,11	3,13	3,11	3,36	3,23	3,18
P90/P10	2,89	2,92	2,93	3,01	2,90	2,90
Gini per capita	0,261	0,258	0,261	0,283	0,269	0,268
Gini	0,247	0,245	0,249	0,266	0,251	0,247
GE(-1)	0,105	0,105	0,110	0,122	0,110	0,107
GE(2)	0,135	0,129	0,129	0,170	0,132	0,124

Note: Unless otherwise ('per capita') indicated, we have used indices computed on the basis of equalised income or expenditure.

The stabilisation of inequalities was coupled to a phenomenon of decreasing mobility. Immobility was particularly strong at the ends of the income and expenditure scales. The poor had less chance to improve their positions, and even the commencement of economic growth of the second half of the 90s failed to increase their mobility. The richest families were able to make their top positions stable. The main question of our analysis was that whether a further growth could increase the upward mobility of the poor, and how the inequality trends would change between 1998 and 2001? Table 3.4 and 3.5 contain the inequality measures based on the total income distribution of three different samples: the total sample, the panel 1998-2000 and the panel 1999-2001. Instead of GE(-1) now we use GE(-2) what is more sensitive to the changes at the bottom of the income distribution.

Table 3.4 - Income inequalities based on the Hungarian Household Rotation Panel, 1998-2001 (Inequality measures based on the total income distribution of the various samples)

	1998	1999	2000	2001
<i>Gini per capita</i>				
Total sample	0,245	0,242	0,249	0,254
Conf. Interval	0,237-0,255	0,234-0,250	0,239-0,259	0,244-0,264
Panel 1998-2000	0,242	0,242	0,241	
Conf. Interval	0,228-0,257	0,227-0,259	0,228-0,257	
Panel 1999-2001		0,236	0,245	0,252
Conf. Interval		0,224-0,250	0,228-0,263	0,232-0,272
<i>Gini</i>				
Total sample	0,228	0,226	0,233	0,239
Conf. Interval	0,220-0,238	0,218-0,233	0,223-0,243	0,228-0,252
Panel 1998-2000	0,220	0,225	0,222	
Conf. Interval	0,207-0,233	0,211-0,241	0,210-0,237	
Panel 1999-2001		0,217	0,227	0,237
Conf. Interval		0,205-0,230	0,210-0,244	0,216-0,260
<i>Gini on earnings*</i>				
Total sample	0,416	0,398	0,404	0,403
Panel 1998-2000	0,388	0,384	0,386	
Panel 1999-2001		0,376	0,379	0,370
<i>GE(-2)</i>				
Total sample	0,104	0,106	0,112	0,117
Panel 1998-2000	0,103	0,109	0,103	
Panel 1999-2001		0,090	0,108	0,113
<i>GE(2)</i>				
Total sample	0,122	0,113	0,121	0,133
Panel 1998-2000	0,091	0,099	0,096	
Panel 1999-2001		0,084	0,106	0,134

source: own calculations

* Gini coefficient of those households that receive income from earnings, only taking account of this type of income. Earnings in the broad sense includes income from an enterprise, but excludes the net yield of agricultural activities.

Some income inequality indices show a slight increase in inequality between 1999 and 2001, but the detailed comparison of them suggests that the income inequality grew at the ends of the income scale only, that is, only the inequality of the poorest and the inequality of the richest were increased.

With relatively low and decreasing mobility measures we cannot expect a decrease in expenditure inequalities because the existing relationship between inequality and mobility fastens the income and expenditure positions of the households. The expenditure positions of the household could be significantly increased only if the number of underground activities and/or the intensity of tax evasion were increased (see table 3.5).

Table 3.5 - Expenditure inequalities based on the Hungarian Household Rotation Panel, 1998-2001 (Expenditure measures based on the total expenditure distribution of the various samples)

	1998	1999	2000	2001
<i>Gini per capita</i>				
Total sample	0,276	0,274	0,292	0,283
Conf. Interval	0,269-0,286	0,266-0,282	0,283-0,302	0,274-0,295
Panel 1998-2000	0,280	0,274	0,276	
Conf. Interval	0,262-0,301	0,256-0,292	0,260-0,296	
Panel 1999-2001		0,278	0,292	0,269
Conf. Interval		0,262-0,295	0,269-0,317	0,252-0,290
<i>Gini</i>				
Total sample	0,260	0,255	0,275	0,269
Conf. Interval	0,251-0,269	0,247-0,263	0,266-0,285	0,259-0,280
Panel 1998-2000	0,259	0,253	0,260	
Conf. Interval	0,243-0,278	0,237-0,270	0,242-0,281	
Panel 1999-2001		0,257	0,269	0,250
Conf. Interval		0,242-0,274	0,247-0,293	0,232-0,272
<i>GE(-2)</i>				
Total sample	0,140	0,134	0,161	0,152
Panel 1998-2000	0,145	0,136	0,159	
Panel 1999-2001		0,138	0,158	0,126
<i>GE(2)</i>				
Total sample	0,166	0,147	0,201	0,178
Panel 1998-2000	0,140	0,146	0,153	
Panel 1999-2001		0,146	0,213	0,148

source: own calculation

In 1998-2001 the computed expenditure inequalities were systematically bigger than the computed income inequalities. The expenditure inequality measures of the samples show higher variability than the income ones. We might think that this phenomenon is due to the huge changes in expenditure, and the huge changes in expenditure may be due to the increase of unofficial income sources coming from underground activities. But one has to keep in mind that this result may simply come from the use of a certain methodology of expenditure calculation within the survey: one twelfth of households participating in the survey maintain a household accounts record for one month each, and the final database will have the 12-fold of the values obtained from the monthly records of the expenditures. In order to avoid this source of bias and aiming at eliminating the unique, extravagantly huge and irrelevant values of expenditure we also analysed the inequality measures of the total expenditure less expenditure on household durable goods (see table 3.6).

Table 3.6 - Expenditure (except durable goods) inequalities based on the Hungarian Household Rotation Panel, 1998-2001 (Expenditure measures based on the total expenditure distribution of the various samples)

	1998	1999	2000	2001
<i>Gini per capita</i>				
Total sample	0,255	0,254	0,265	0,256
Panel 1998-2000	0,254	0,248	0,256	
Panel 1999-2001		0,250	0,254	0,247
<i>Gini index</i>				
Total sample	0,235	0,232	0,243	0,237
Panel 1998-2000	0,231	0,225	0,233	
Panel 1999-2001		0,227	0,229	0,222
<i>GE(-2)</i>				
Total sample	0,117	0,112	0,128	0,120
Panel 1998-2000	0,117	0,111	0,130	
Panel 1999-2001		0,108	0,115	0,100
<i>GE(2)</i>				
Total sample	0,109	0,103	0,124	0,106
Panel 1998-2000	0,095	0,097	0,102	
Panel 1999-2001		0,101	0,109	0,099

source: own calculations

In the case of the “narrow” expenditure (total expenditure except durable goods) of the households, the expenditure inequalities are not always greater than income inequalities: the Gini index and the GE(-2) of the narrowed expenditure have higher values than the respective measures of income inequality have, but in case of GE(2) the situation is the opposite. As we mentioned above the GE(2) measure is sensitive to the higher values of the variables. Calculating the inequality measures of the total expenditure after subtracting the expenditure on durable goods with high value only, the inequality measures of this narrow expenditure exceed the respective measures of income inequality. This phenomenon may mean that a certain part of the total expenditure is continuously covered by non-reported/unofficial income, that is, a certain part of the total income is not reported in the survey, and this unofficial share of income appears in the reported expenditure. Comparing the stabilised level of inequality measures of total income and expenditure we can say that the share of this unofficial income in the total income is unchanged in the period under investigation.

III.2.3. Dynamics of households’ consumption in Bulgaria

To analyze the dynamics of households’ consumption we use the households’ total expenditure, including the self-consumption. In order to allow comparisons between households with different size and composition, we equalize the households’ total expenditure using the OECD equivalence scale. Accordingly to this scale the first adult is assigned weight of 1, for each other adult 0.7 and for each child below the age of 15 - 0.5. The households’ total expenditure is divided by the number of the equivalent adults, which gives the total equivalent expenditure. Then the households are ranked from the lowest to highest, according to their total equivalent expenditure and are grouped in five

(quintiles) and ten groups (deciles). In order to investigate the impact of the shadow economy on the households' consumption we compare the distribution of the households with income from employment, from self-employment and of households with unemployed member.

Tables 3.7, 3.8 and 3.9 show the dynamics of distribution of households with income from employment, household with income from self-employment and households with an unemployed member by expenditure quintiles. For the households with income from employment and self-employment the share of the expenditures for the first two quintiles is declining between 1992 and 2002. At the same time the share of the last quintile is increasing. By the households with unemployed member the distribution of the expenditures by quintiles does not change during the period. It is interesting that the rate of the bottom 20% to the top 20% for households with income from employment and for households with income from self-employment is decreasing. This shows drop in the expenditures inequality for those two groups. This rate for the households with unemployed member has slight increase – from 0.243809 in 1992 to 0.26025 in 2002, consequently the expenditure inequality has increased.

In tables 3.10, 3.11 and 3.12 is given the dynamics of the households with income from employment, of households with income from self-employment and if households with unemployed member by expenditures deciles.

III.2.4. Income developments in Romania, during 1990-2001

The marked reforms aimed at restructuring the economy imposed by the government after the 1996 elections - considered necessary by many economists - culminated in a three-year period from 1997 to 1999 that can be considered to have been the worst period of the 90s in terms of social effects. The income of the overall population decreased severely: the minimum wage fell to 25% of its constant price equivalent in 1989, while the average real net wage fell to about 60% of its 1989 value. During these years, the large share of the total labour force in the private sector worked primarily in the agricultural sector. Due to lack of economic efficiency there has been no recovery in the demand for labour. Consequently until 2000, the general standard of living of the Romanian population deteriorated and large imbalances cropped up in the performances of various groups of economic actors. The reduction in real government expenditures in equipment and human capital led to further social pressures.

Table 3.7 - Distribution of the expenditures of households with income from employment across expenditure quintiles

Quintiles	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	10,35	10,15	10,09	9,42	9,70	7,31	9,16	9,33	9,36	9,36	9,36
2	14,39	14,21	14,28	13,84	13,92	10,53	13,73	13,89	13,84	13,92	13,92
3	18,07	17,88	17,97	17,76	17,75	13,20	17,58	17,87	17,69	17,73	17,73
4	22,62	22,76	22,71	22,78	22,67	17,20	22,69	22,94	22,66	22,70	22,70
5	34,58	35,00	34,96	36,19	35,96	51,76	36,85	35,98	36,45	36,29	36,29
Bottom 20%/top 20%	0,299327	0,290054	0,288649	0,260381	0,269839	0,141201	0,248556	0,259237	0,256682	0,257902	0,257902

Table 3.8 - Distribution of the expenditures of households with income from self-employment across expenditure quintiles

Quintiles	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	10,47	10,24	10,22	9,52	9,80	7,44	9,23	9,48	9,51	9,50	9,73
2	14,34	14,11	14,25	13,76	13,93	10,63	13,66	13,89	13,92	14,03	13,90
3	18,06	17,72	17,84	17,62	17,67	13,33	17,54	17,76	17,70	17,76	17,62
4	22,57	22,54	22,63	22,75	22,70	17,42	22,60	22,80	22,59	22,63	22,46
5	34,56	35,39	35,06	36,35	35,90	51,19	36,97	36,06	36,28	36,08	36,29
Bottom 20%/top 20%	0,30294	0,289397	0,291405	0,261985	0,272957	0,145253	0,249801	0,262967	0,262195	0,263409	0,268194

Table 3.9 - Distribution of the expenditures of households with unemployed member across expenditure quintiles

Quintiles	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	8,66	9,93	9,48	8,92	9,18	2,58	8,76	8,68	8,56	8,46	9,35
2	13,78	15,54	14,50	13,63	12,98	3,94	14,51	13,21	13,63	13,31	13,82
3	18,35	18,48	18,54	18,08	16,36	5,08	18,76	17,39	17,67	18,04	17,57
4	23,67	23,29	24,24	22,77	21,77	6,72	24,15	23,29	23,05	23,20	23,32
5	35,53	32,76	33,23	36,61	39,71	81,68	33,81	37,43	37,08	36,99	35,93
Bottom 20%/top 20%	0,243809	0,303151	0,28521	0,24359	0,231304	0,031545	0,259191	0,231981	0,230792	0,22862	0,26029

Table 3.10 - Distribution of the expenditures of households with income from employment across expenditures deciles

Deciles	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	4,50	4,40	4,29	3,96	4,14	3,08	3,85	3,91	3,90	3,87	4,09
2	5,85	5,75	5,80	5,46	5,57	4,23	5,31	5,42	5,46	5,49	5,51
3	6,74	6,68	6,70	6,45	6,51	4,94	6,40	6,47	6,46	6,51	6,46
4	7,65	7,53	7,58	7,39	7,41	5,59	7,33	7,42	7,38	7,41	7,36
5	8,57	8,44	8,48	8,36	8,34	6,22	8,27	8,37	8,33	8,37	8,30
6	9,49	9,44	9,48	9,40	9,41	6,98	9,31	9,50	9,36	9,36	9,28
7	10,55	10,64	10,62	10,61	10,59	7,99	10,53	10,66	10,57	10,59	10,49
8	12,07	12,12	12,09	12,17	12,08	9,21	12,16	12,28	12,09	12,11	12,10
9	14,20	14,19	14,11	14,33	14,25	11,02	14,44	14,67	14,31	14,44	14,42
10	20,37	20,81	20,84	21,87	21,71	40,74	22,41	21,31	22,14	21,85	21,99

Table 3.11 - Distribution of the expenditures of households with income from self-employment across expenditure deciles

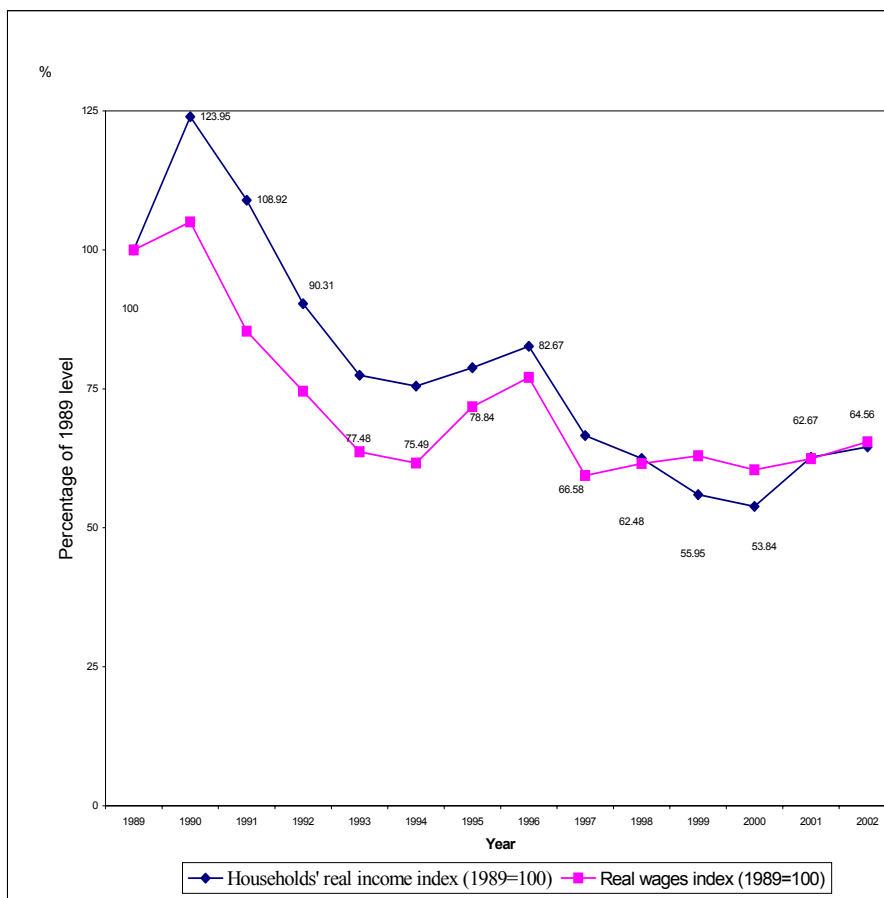
Deciles	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	4,57	4,44	4,37	4,03	4,20	3,15	3,93	4,01	3,97	3,93	4,17
2	5,90	5,80	5,85	5,49	5,60	4,28	5,31	5,48	5,54	5,57	5,57
3	6,77	6,67	6,71	6,43	6,53	4,99	6,38	6,49	6,51	6,57	6,51
4	7,57	7,44	7,54	7,33	7,39	5,64	7,27	7,40	7,41	7,46	7,39
5	8,53	8,36	8,44	8,28	8,30	6,28	8,26	8,34	8,36	8,38	8,33
6	9,53	9,36	9,40	9,34	9,37	7,05	9,28	9,42	9,34	9,38	9,29
7	10,53	10,47	10,58	10,58	10,56	8,04	10,50	10,62	10,53	10,55	10,42
8	12,04	12,07	12,06	12,17	12,14	9,38	12,10	12,17	12,06	12,08	12,04
9	14,18	14,26	14,10	14,43	14,28	11,22	14,55	14,66	14,27	14,38	14,31
10	20,38	21,13	20,96	21,92	21,62	39,96	22,42	21,41	22,01	21,70	21,98

Table 3.12 - Distribution of the expenditures of households with unemployed member across expenditure deciles

Deciles	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	3,79	4,08	3,87	3,74	3,91	1,00	3,68	3,56	3,46	3,43	3,82
2	4,88	5,86	5,61	5,17	5,27	1,57	5,09	5,13	5,10	5,02	5,53
3	6,30	7,32	6,87	6,29	6,09	1,82	6,57	6,15	6,30	6,21	6,42
4	7,48	8,22	7,63	7,34	6,89	2,12	7,94	7,05	7,34	7,11	7,40
5	8,78	8,87	8,63	8,41	7,64	2,39	8,76	8,09	8,33	8,45	8,30
6	9,57	9,61	9,91	9,67	8,73	2,69	10,00	9,29	9,35	9,59	9,27
7	10,87	10,87	11,38	10,73	10,13	3,10	11,50	10,77	10,67	10,78	10,71
8	12,80	12,42	12,86	12,04	11,64	3,62	12,65	12,52	12,39	12,41	12,61
9	15,28	14,37	14,87	14,68	14,65	4,29	13,66	15,56	14,92	15,10	15,86
10	20,25	18,39	18,36	21,93	25,05	77,40	20,15	21,87	22,16	21,89	20,08

The evolution of the real wages shows a huge decline in purchasing power that began in 1989 and lasted until 2001 (Figure 3.x). Further, data on regional incomes confirms an increase in the income gaps between regions. The uneven development of the different economic sectors and the high inflation rates led to greater differences in the nominal wages between the sectors. This enlarged income gaps that induced social discontent and rioting, which subsequently motivated Romanian policymakers to accept tax income policies and/or to prolong subsidising inefficient state-owned firms. The ratio between the highest and the lowest average net wage among different economic sectors increased steadily from 1.77 in 1990 to 4.17 in 1998.

Figure 3.13 – The evolution of household income and of average wage in Romania (real terms, index 1989 = 100)



On average, household income in real values decreased during the 1990s. An increase of almost a fourth in 1990 came about because of the imposition of several social policy measures and was later followed by decreases that lasted until 1994 (with a declining inflation rate during the first year). Another downward cycle came to an end in 2000, finishing with a low of around 50% of the 1989 level. The effects of the economic recovery that started in 2000 succeeded to bring back the real income of household to its pre-transition level only by 2004.

A general trend that can be observed is a decrease in the waged-income until 2000 together with a simultaneous increase in pension benefits. Income generated through one's own activities shows a specific pattern with high values during the second wave of impoverishment.

Reflecting the decline in waged-related income, the lowest contribution of wage-earnings to the total household budget can be found in 2000; after the economic upturn in Romania, its share increased. Accordingly, income from social welfare assistance – though it decreased per capita - reached a peak in 2000 and has decreased ever since. Pensions have been the main component of the social transfers, and people have become increasingly dependent upon them. In 1989, they made up half of all social benefits and more than 80% after 2000. This means that pensioners enjoyed a relatively stable economic situation, whereas social welfare measures for younger families in need and the unemployed in particular have become weaker and weaker.

This development suggests that beginning in the early 90s increasingly larger groups of the population had to find additional resources to ensure their livelihood. This is reflected even in the official data. The level of self-production doubled in the early 90s and remained at this level until recent times (2000-2001, after then it started to decline). Income from self-employment, both in agricultural and non-agricultural activities, also increased during the crisis years of 1997-1999. For the most part, both types of income are associated with the expansion of informal activities.

III. 3. Conclusions

From the findings of the authors presented above and from the summaries of the results of the studies overviewed within the related literature on informal economy in the three countries under investigation, we may conclude on several interactions that are taking place between variables that are specific to the development of informal activities and the variables characterising the emerging market structures within these transition economies.

7. The differences between the share of informal sector and the share of the underground sector in the overall national output vary from one country to another within the sample of three referenced countries. The informal economy has a larger share than the underground sector in Romania, while in the case of the other two transition countries (Bulgaria and Hungary) there is a much narrow gap documented in various studies.
 - The reason lies in the different sectoral structures of the value added and of the labour force that are characteristic to the above referred economies. In Romania, the share of agriculture is higher both in GDP and in employment, and given the observed correlation between the size of rural and agrarian sector and the size of the informal economy, one would expect to see a wider presence of informal activities within the socio-economic system.

In the three transition countries under investigation (Bulgaria, Hungary and Romania), the **informal activities** became more numerous in rural areas and increased in size due to the overall economic decline registered during the 90s. This is particularly true for Romania, but was evidenced in Bulgaria and Hungary, as well, in the beginning of transition. The informal stance in agriculture sector is more related to the increase in poverty in rural areas and to the general social and economic evolution of the country in transition. The moment economy has had recovered, the informal economy's share started to come down, together with the overall share of agriculture in the economy (in terms of value added, as well as in terms of employment). As the rural household segment of the society is sometimes de-coupled from the developments taking place within the official economy, other factors, such as tax structure, or institutional weakness, are not so important in the countryside. Consequently, the competitive pressures that emerged during the restructuring process and following the establishment of a functioning market economy have little impact on the behaviour of households participating in rural areas and are less important in influencing the formal-informal balance.

From a completely different perspective, **the underground activity** is present in all countries of the world, its size varying from being insignificant to being very important in the functioning of various economic branches. Empirical work indicates that the share of underground activities is consistently higher in trade, hotels and catering, transportation services, real estate and small manufacturing than in the rest of economic sectors. Usually, surveys and direct sampling analyses also indicate large size of underground activity in branches such as car-repair and maintenance, private lessons, health services, constructions.

In the rest of the economic branches the informal activities (more closely covering the underground activities) are linked with the structural dynamics of the economy and the effects of the policy decisions. In the transition countries, as a heritage of the formerly centralised system, the industry sector is reported to hide a large share of its activity, as a consequence of lax financial systems and discriminating application of fiscal discipline. However, the non-usual "underground" sectors are more often subject to impact coming from the changes in the market mechanisms and structure and in the behaviour of all economic agents.

The widespread informal and/or underground activities in trade, hotel and catering services or in real estate and financial services have their specific determinants. During socialism, this group of services was underdeveloped, sometimes barely existent, and often under strict surveillance of a centralised system. After the markets' opening in the beginning of the transition, most of the people who were left without jobs, or with less real income, as well as those willing to forge themselves a new entrepreneur style of living found good opportunity within these sectors of activity to start a business. Another reason for starting entrepreneurship in such branches is the fact that they are intensive in labour but not in fixed capital and nor do require big financial start-up capital. The large share of informal activity in these branches could be explained by several reasons. In the beginning of transition the administrative procedures and the legislation were unclear and inconsistent in the area of company registration and fiscal behaviour, and people found

easier to fill the demand of the society for their services with no concern in the changing regulatory framework. The low standard of living of the population put barriers to the entry of foreign large wholesale-retailers due to the low margin left for profits particularly in connection to the newly introduced high indirect taxes. Trading informally offered the possibility of reducing the sales price, while using informal labour was a solution for further reducing the cost of business (no social security taxes and no wage tax). The stricter administrative regulations and the competition coming from foreign companies entering the market are pushing even more the domestic small businesses to act in informal sector, as they can hide the productivity gap under the tax avoidance procedures. The development of real estate and financial services was induced by the low development of the respective formal markets and by the high inflation, which led numerous businesses to be managed in foreign currency equivalents.

8. The developments within the informal sector in each of the countries investigated in our analysis follow similar patterns. However, there are different time paths for Hungary, Bulgaria and Romania, with the latter two countries showing a lag behind Hungary in terms of restructuring their economies, reaching the status of functional market economies and thus witnessing a reduction in the share of the informal sector in overall economic activity.

– In the beginning of transition, all countries witnessed a strong increase in the share of the informal sector in overall economy, followed by a decrease after reaching a stable growth path. The main reasons for the outburst of hidden activities were everywhere the dismantling of the former centralised institutional system at a higher pace than the building of new market mechanisms, as well as the variability and intensity of the regulatory framework. Hungary was more rapid in building market institutions and opening its economy. As a result, the competitive pressures made their appearance at earlier stages of transition within the Hungarian economy and the main drivers to informality lost faster their importance in motivating economic agents to switch to hidden activities than in the other two South-Eastern European countries. The evidence of the earlier presence of competitive structures in Hungary is documented in the papers belonging to work-packages 1 and 2 of this project.

9. The empirical evidence shows that the increase in the share of informal activities and in the size of informal economy had almost the same determinants in all the three countries.

– The group of drivers includes the growth rate of the economic output, the income tax rate, the size of non-wage paid labour force, the unemployment rate and the long-term unemployment rate, and the real wage index. The increase in income inequality, the high variability of the fiscal system and the increasing gap between the level of official tax rates and the effective tax revenue shares in the GDP, the institutional structure and the administration inference in the economy (the high intensity of regulations) and the high volatility of inflation were also important factors of influence in generating more underground/informal actions.

It is likely that with the increased stability of the economic system and of the related fiscal framework, and with people more and more willing to enjoy legal social security benefits, the share of the informal sector will diminish (particularly in the area of market services, such as trade and catering-tourism). As for real estate or financial services, the reduction in informal activities has already started since inflation entered a stabilisation path.

4. Informal economy was an escape solution for new SMEs to survive competition from subsidised state-owned institutions and foreign-owned subsidiaries, which used monopolistic tools to gain higher shares on the fragile and weakly protected (against monopolistic behaviour) emerging markets.
 - Faced with increasing bureaucratic obstacles and growing corruption, more and more SMEs increased their informal activity. Bureaucracy is perceived as being a major cause of the growth of the informal sector. Empirical evidence (Daianu et al 2001) demonstrates that the “most important barriers to business are more economic rather than institutional” and that the public is very concerned with corruption, administrative barriers and bureaucracy. These are, by order of ranking: taxes and regulations, inflation, unsafe financial system, policy instability, exchange rate depreciation impact, anti-competition practices, corruption, the judiciary system, economic crime, and poor physical infrastructure.

The bureaucracy is related to corruption, rent seeking and the number of special requirements, exemptions and facilities that affect the labour market and the economy at the micro level, with a negative outcome on the business environment. In all transition countries regulation was a normal prolongation of the former command economy. The central administration used complicated mechanisms of regulation in various markets, attempting to seek additional rents in order to compensate for the loss of official power and the reduction in their real revenue.

5. The expansion of the informal economy is documented to have increased the income inequality at the top end and the low end of the household decile distribution in both Hungary and Romania. The same phenomenon is evidenced in the Hungarian and Romanian literature in terms of regional distribution. It seems that the increased competitive pressures in emerging market economies are working in the same direction.
 - In previous sections, we showed that in Hungary the very rich and the very poor increased their inequality gaps versus the rest of population during the period of expansion of informal/underground economy. The same phenomenon is reported by Stanculescu (in Neef & Stanculescu, 2002) in the case of Romania during the late 90s. On the other hand, the poorest county in Hungary and the rich region of Budapest are reported to have the highest shares of informal sector. The same is true for the Romanian regions, where Bucharest and the extremely poor regions struggle with the presence of underground activities at a higher extent. The competitive forces of a free market are producing the same effect, at least during the initial years following restructuring, as the rich people and the rich regions are much more capable

of attracting and using the scarce available resources that exist within the yet weakly structured socio-economic system. While the development of market mechanisms helps in generating larger middle-income strata of the population, with less income inter-gaps, the households living below poverty line or close to it will miss the tools and know-how to reach the existing resources and will lower their standard of living even more (at least in relative terms). The informal economy and the competitive pressures working in the same direction in increasing income and regional inequalities should be an alarming signal for the policy makers!

6. Finally, we may say that the most important resource that is shared by formal and informal economy as well and receives the greatest impact from competitive pressures and from any policy actions is the labour force (population in general). Evidence from above referred studies suggests that individuals tend to act already as if they were in an overall free market environment, but within the global system represented by formal and informal economies jointly. The first years of transitions were characterised by an increase of the share of self-employment in total employment, increase of unemployment and, generally, increase of non-wage paid type of employment, which has been proved to be one of the main drivers (if not the main driver) of informal economy.
 - Although the initial factors that drove people and firms to work underground may have disappeared after several years of transition and the establishment of functional market economy in these countries (considering the lags between them in the various stages of transformation), the share of non-wage paid labour in total employment continues to stay relatively high in all the referenced economies. This is a sign for the existence of a strong pattern of hysteresis in the labour markets of these countries, which may add to the administrative barriers and may delay the needed adjustments in mobility and flexibility (which are partially missing for the moment on these labour markets). And this may result in negative feedback given to the development of the competitive free market system.

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ANNEX 1

Figure 1 – The shares of non-wage paid people in total employment in Romania, 1990-2002, by sector of economic activity (%)

thousand persons	Non-waged employment (self-employment included) (% of total employment)												
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	24.8	29.8	34.1	33.7	35.7	35.1	36.7	38.0	39.1	43.5	46.4	46.1	45.2
Agriculture	75.8	77.9	81.0	82.1	84.2	84.6	86.7	89.5	90.6	93.0	94.4	94.5	94.6
Manufacturing	4.5	4.7	1.9	0.6	1.2	4.4	6.7	2.3	2.9	4.3	7.7	7.1	13.1
Constructions	0.3	3.0	20.7	6.6	8.5	7.5	9.3	11.8	3.3	8.6	10.5	9.1	18.0
Trade	5.6	29.0	37.5	20.0	22.2	23.7	24.0	23.6	21.7	23.4	26.8	27.4	34.3
Tourism and catering	-4.8	19.2	30.3	14.5	8.8	6.5	6.0	9.2	4.1	9.0	9.7	13.9	20.0
Transportation and telecommunications	5.2	2.0	6.5	3.4	2.7	7.2	9.5	8.5	4.6	7.7	11.7	10.7	13.2
Financial-banking	2.6	6.8	10.5	6.1	5.1	5.6	2.8	-1.4	0.0	0.0	4.1	5.9	4.3
Real estate and market services	-0.8	29.5	41.7	44.4	46.8	39.8	28.0	27.6	32.5	29.8	34.7	34.4	33.2
Public administration	9.1	6.1	6.2	6.0	1.6	0.8	0.0	0.0	0.0	0.0	-0.7	0.0	0.7
Education	10.5	-3.3	0.9	1.2	2.1	2.3	2.0	0.7	2.8	3.3	3.3	4.5	6.0
Health	1.3	-1.3	0.7	0.6	1.2	1.5	0.6	-1.9	1.9	-2.2	10.6	12.4	12.6
Other activities, nes.	10.8	44.7	11.5	7.1	18.1	17.4	19.2	23.8	27.5	31.9	32.3	31.0	39.6

Note: negative figures may come from statistical inconsistencies, related to different periods of sampling.