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REDUCING UNDECLARED EMPLOYMENT IN HUNGARY

Currency Equivalents
(Exchange Rate Effective May 31, 2008
Currency Unit = HUF
USD = 155.71

Fiscal Year
July 1, 2007 – June 30, 2008

Abbreviations and Acronyms

APEH	Hungarian Tax and Financial Control Administration	LFS	Labor Force Survey
BEEPS	Bank Business Environment and Enterprise Performance Survey	NRA	National Tax Administration
EKHO	Simplified Contribution to Common Charges	OECD	Organization of Economic Collaboration and Development
EU	European Union	OMMF	Hungarian Labor Inspectorate
EVA	Simplified Entrepreneurs' tax	ONYF	National Pension Insurance Agency
FDI	Foreign Direct Investment	PWC	Price Waterhouse Coopers
GDP	Gross Domestic Product	SNA	System of National Accounts
GST	Goods and Services Tax	SSC	Social Security Contribution
HUF	Hungarian Forint	UK	United Kingdom
IMD	IMD Business School in Switzerland	VAT	Value Added Tax

Vice President: Shigeo Katsu
Country Director: Orsalia Kalantzopoulos
Sector Manager: Arup Banerji
Task Team Leader: Gordon Betcherman

REDUCING UNDECLARED EMPLOYMENT IN HUNGARY

Contents

Boxes

Figures

Tables

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This report summarizes the main research findings and recommendations of a World Bank study on reducing undeclared work in Hungary. The study was undertaken at the request of the then Minister Responsible for Coordination of Government Administration and was carried out in collaboration with his Secretariat for Public Policies. Contributions have been provided by the Ministry of Finance, the Tax and Financial Control Administration, the Ministry of Economy and Transport, the Ministry of Justice and Law Enforcement, and the Ministry of Social Affairs and Labor. The World Bank team would like to recognize the leadership throughout the study of Tibor Draskovics, formerly Minister Responsible for Coordination of Government Administration and currently Minister of Justice and Law Enforcement. In addition, the World Bank acknowledges the contributions of Attila Kotán, who led the work program from the Hungarian side, and Kinga Bruhács, who was responsible for administrative coordination.

The research has been carried out by Gordon Betcherman (task team leader), Ákos Bognár, Péter Elek, Marje Josing, Willi Leibfritz, János Köllő, Arvo Kuddo, Sangeetha Malaiyandi, William Mayville, Ágota Scharle, Endre Sik, Emilia Skrok, Jan Svejnar, Bálint Szabó, and Mirco Tonin. Arup Banerji has provided guidance throughout the study. The report has benefited from comments provided by the peer reviewers, Carmen Pagés, Carlos Silva-Jauregui, and Omar Arias, and from participants in a workshop in Budapest in December 2007 and a conference in Budapest in April 2008.

EXECUTIVE SUMMARY

Undeclared work and incomes are a serious concern for the Government of Hungary, primarily because of the negative consequences for the country's already difficult fiscal situation. The Government is committed to a program of fiscal adjustment that reduces the country's large deficit and debt burden. The fiscal position would certainly benefit from the potential tax revenues to be gained by "whitening" the undeclared economy, which is estimated to account for somewhere between 15%-25% of the total economy. However, it should be emphasized that Hungary already collects a substantial share of GDP in tax revenues and that the fiscal adjustment program will not be successful without better control over public expenditures.

The Government has already introduced a number of reforms intended to reduce undeclared economic activity. Much of the effort to this point has focused on strengthening the "stick" through enforcement and sanctions. Measures have been introduced to increase the risks and costs that entrepreneurs and individuals face by operating in the "black" or "gray" economy. The administration of the tax system and the labor inspection function have been strengthened and penalties for non-compliance have been increased. Evidence suggests that steps taken in these areas have paid off in terms of improved tax revenues and worker registration. Further improvements, especially in the capacity of the relevant administrative agencies and their methods, would result in additional gains against the informal economy. Policy-makers need to be aware, though, that at some point, intense enforcement can risk driving entrepreneurs and worker more deeply into the hidden economy or to cease operations altogether. Consequently, the costs and benefits of these efforts to "whiten" the economy need to be regularly evaluated by the Government.

A successful strategy to combat the undeclared economy also requires more effective "carrots" that improve the incentives to operate in the formal sector. The most important measures will involve reforms to lighten the tax burden, especially on labor. Tax avoidance is the number one reason why Hungarians choose not to declare work or income. The overall tax burden is high and the tax system has a number of features that create significant disincentives to declare work and wage earnings. Reducing these disincentives will be critical for achieving the overall objective of a smaller undeclared sector and greater tax revenues. This can be done even within the fiscal-neutrality constraints of the adjustment program by shifts in the structure of taxation and removal of various "traps" and distortions that occur through the interplay of taxes and benefits. Over the longer run, as the fiscal situation stabilizes, the Government should consider significant reductions in the labor tax wedge, both to encourage the full declaration of wages and also to create a more favorable situation for job creation.

Public information and education is the final element in a strategy to move Hungary to the "tipping point" in the struggle against the undeclared economy. How employers and individuals assess the costs and benefits of declaring economic activity or not is influenced by their attitudes about the informal economy and the value of participating in the formal economy. Public information and education can make a significant difference in altering these attitudes. The experience of countries that have been successful in reducing informality suggests that public education, combined with rising living standards and appropriate structural reforms, can bring a society to a "tipping point" where tolerance of undeclared activities becomes a deviant and socially unacceptable position. This is critical for completing the transition from a "bad" equilibrium of weak institutions, intrusive regulations, a narrow tax base, and a large informal economy to a "good" equilibrium characterized by strong institutions, light regulation, a broad tax base, and little undeclared economic activity.

Summary of recommendations

Reform area	Recommendation
Taxes and benefits	Reduce employer social insurance contribution
	Eliminate or reform EVA and EKHO (after labor tax wedge has been significantly reduced)
	Introduce progressive real estate tax and (if needed), raise the VAT
	Smoothen rate structure of personal income by considering an intermediate rate
	More gradual phase out of income-dependent social benefits, including employee tax credit and housing benefit
	Remove minor taxes and eliminate loopholes and exemptions
	Strengthen links between social insurance contributions and benefits, including capping employer pension contributions
	Introduce a reemployment allowance or a partial earnings disregard for unemployment benefit recipients
Business and labor market regulatory reform	Further simplifications in procedures for business start-ups
	Ease requirements for property registration
	Simplify licensing procedures
	Ease restriction on working time
	Keep basic minimum wage low
	Consider feasibility of different approaches to differentiated minimum wages
Enforcement	Increase penalty rates for tax evasion
	Consider reforms to APEH's structure to combine functional and tax payer models
	Consider consolidating the customs agency, local tax administration, and tax fraud into APEH
	Review latest international best-practice in labor inspection
Public information and education	Implement campaigns with segmented communication plans
	Educate the public on public finance
	Involve the social partners

1. INTRODUCTION

The informal economy has become an increasing concern. Countries at all stages of development are concerned about undeclared economic activity, in part, because there is some evidence that it may be growing (Schneider and Klinglmair 2004; World Bank 2007a). But it also reflects an increasing awareness of the potentially negative economic and social effects of informality. There are various reasons why governments may be concerned about large informal sectors. These include potentially negative consequences for competitiveness and growth, incomplete coverage of formal social programs, undermining social cohesion and law and order, and fiscal losses due to undeclared economic activity. For most governments, these concerns outweigh any advantages that the informal sector offers as a source of job creation and as a safety net for the poor.

While these are all relevant considerations for the Government of Hungary, the fiscal issue is the most immediate concern. This is due to the Government's current financial difficulties which led to the adoption of a strong fiscal consolidation program covering the period to 2010 (Government of Hungary 2006). Fighting the "black economy" and illegal work was highlighted in the Prime Minister's September statement on the 2007-2008 Government program. Various ministries have implemented measures to this end. The Ministry of Finance (2007) has introduced tax reforms to discourage untaxed activity and is considering additional changes in tax policy and administration to further reduce undeclared economic activity.

At the request of the Government, the primary objective of this study is to present concrete policy advice and recommendations to reduce the size of the largely untaxed informal economy. To this end, the study has surveyed the international experience regarding actions that have been tried and has then has applied this experience to the prevailing conditions in Hungary. The analysis of the situation in Hungary has involved studies in four specific areas – taxes and benefits, regulation, enforcement, and public education and information -- in order to identify potential reforms to encourage the declaration of economic activity. The study has also included background research necessary to guide these policy recommendations including analysis of the scope and composition of the undeclared economy and motivations for operating informally. These background studies are listed at the end of this report.

In the next section, the context is established for understanding the challenge of reducing undeclared work in Hungary. The heart of the report is Section 3 which presents our analysis of measures that should be considered by the authorities in their efforts to reduce undeclared work. In each of these areas, recommendations are presented. These recommendations are summarized in the executive summary.

2. INFORMAL ECONOMIC ACTIVITY IN HUNGARY

The informal economy refers to activities and income that are partially or fully outside government regulation, taxation, and observation. Although there is an active debate on the precise definition and boundaries, and even the terminology,[1] the informal sector essentially describes economic activity that is outside government statistics, taxation systems, formal social insurance plans, and the enforcement of business, product market, and labor market regulations. Three additional points are relevant. First, the informal sector is very heterogeneous, capturing a range of activities and employment forms. Second, it should not simply be equated with illegal activity, though the evasion of taxes and other aspects of non-compliance may be illegal.[2] Third, the undeclared economy encompasses entrepreneurs and workers operating completely outside the formal system ("black" economy) and those operating partially outside, by reporting only part of their actual production or income ("gray" economy).

2.1 SCALE AND COMPOSITION

There is a lot of uncertainty regarding measurement but the undeclared economy is clearly significant in Hungary as it is in other transition countries. For obvious reasons, it is not a simple matter to precisely measure the size of informal economies. Several methods exist to make estimations.[3] However, these can yield quite different results, as shown in Table 1. This table presents estimates of the undeclared economy as a share of GDP for EU members, using two different methodologies: indirect methods (European Commission 2004) and structural modeling (Schneider and Klinglmair 2004). The latter methodology consistently finds higher shares than the former, although the difference in the case of Hungary (25% vs. 18%) is less than in many other countries. The new member states have considerably larger informal economies than the older EU members, with the exception of Greece and Italy. In general, the figures in Table 1 demonstrate the negative relationship between national income level and informality. Finally, these estimates, while admittedly not standardized, suggest that Hungary stood in the middle ranks of transition countries in terms of the relative size of the informal economy during the period covered by the data.

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[1] Various terms have been used such as the "black", "underground", "cash", "hidden", and "shadow" economy.

[2] The System of National Accounts (1993) distinguishes between four types of "hidden" (unmeasured, untaxed and/or unregulated) activities: *Informal* activities, which are undertaken 'to meet basic needs' and are within the SNA production boundary (e.g. petty trade, household agricultural production, ambulant street vending, undeclared paid domestic employment, etc); *Underground* activities, which are deliberately concealed from public authorities (e.g. most cases of tax evasion and benefit fraud); *Illegal* activities, which generate goods and services forbidden by the law or which are unlawful when carried out by unauthorized producers (e.g. production of narcotics, smuggling, prostitution, and unlicensed medical practice); and *Household* activities, which produce goods and services for own-consumption and are outside the SNA production boundary (e.g. household cleaning, dwelling maintenance and repair, preparation and serving of meals, care for the sick or elderly, etc).

[3] GDP estimates typically follow one of the following approaches: (1) direct methods, such as survey data or the results from tax audits; (2) indirect methods or "indicator" approaches, such as discrepancy between aggregate income and expenditure, total labor force and formal employment, or monetary methods based on unexplained components of money demand, or electricity consumption; and (3) using structural models. Informal employment is typically estimated using questions from household survey data on affiliation to social security, the mandated benefits workers receive, the size of the firms they work for (in terms of the number of employees), specific employment status, or using a combination of those variables.

Table 2.1: Undeclared economic activity in EU countries, mid-1990s to early 2000s

New (Transition) EU Member States	% of GDP		EU Member states pre 2004	% of GDP	
	Indirect method	Modeling method		Indirect method	Modeling method
Bulgaria	22-30	37	Austria	1.5	10
Czech Rep.	9-10	19	Belgium	3-4	22
Estonia	8-9	n/a	Denmark	5.5	18
Hungary	18	25	Finland	4.2	18
Latvia	18	40	France	4-6.5	15
Lithuania	15-19	30	Germany	6	16
Poland	14	28	Greece	>20	29
Romania	21	34	Ireland	n/a	16
Slovak Rep.	13-15	19	Italy	16-17	27
Slovenia	17	27	Netherlands	2	13
			Portugal	5	23
			Spain	n/a	23
			Sweden	3	19
			UK	2	13

Source: European Commission (2004), for indirect method estimates. Depending on the country, year is between mid-1990s and early 2000s. The estimate for Hungary is for 1998 and is based on employer surveys and expert interviews. Schneider and Klinglmair (2004), for modeling estimates. Year is 1999/2000. No data are available for Luxembourg.

Roughly one-fifth of all employed people in Hungary are engaged in unregistered work. One way to statistically identify and estimate informal work is to compare employment levels reported in the Labor Force Survey (LFS) and in the National Pension Insurance (ONYF) administrative database. Since, in principle, the LFS data should capture all employment while only registered employment is reported to the ONYF, the difference can be interpreted as a measure of completely unregistered ("black") employment.[4] Comparing LFS and ONYF data in a background paper for this study, Elek, Scharle, and Szabo (2008) calculate that, in 2004 (the latest year in which ONYF data were available), about 20-22% of total (LFS) employment was not registered, amounting to 840,000 workers.[5] This share of total employment that was not registered did not change significantly between 2001 and 2004.[6]

The presence of "black" employment varies considerably among different types of workers and in different parts of the economy. Elek, Scharle, and Szabo (2008) find that the rate of undeclared work is higher among men than women. They also document high incidence rates for

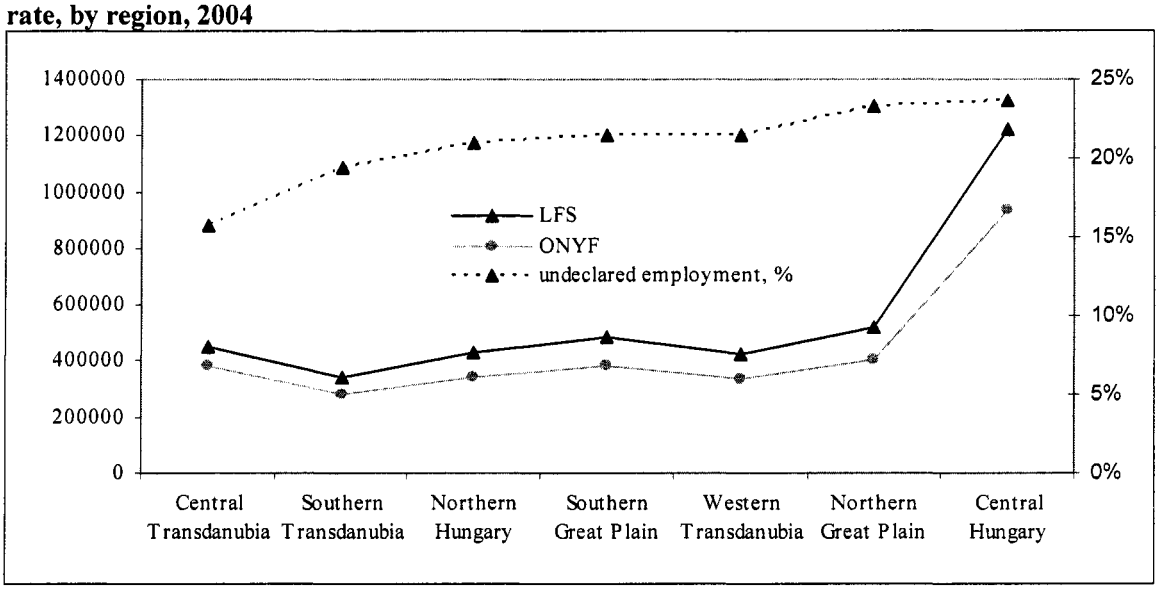
[4] This methodology may generate an underestimate of "black" employment if unregistered workers are reluctant to reveal their status to LFS interviewers or if they do not interpret what they have done as "employment". This latter possibility may be particularly likely to occur for individuals who define themselves primarily through a non-labor force status like student or pensioner. Indeed, it is possible that Hungary's relatively low labor force participation and employment rates (62% and 57% in 2007, respectively) reflect significant numbers of people who are working informally but do not report this to the LFS interviewers.

[5] The estimates require adjustments to the ONYF data to make them as comparable as possible to employment as defined in the LFS. See Elek, Scharle, and Szabo (2008) and Kollo (2008) for further details.

[6] A recent survey across the EU by Eurobarometer (European Commission 2007a), which uses qualitative techniques, arrives at similar orders of magnitude for Hungary. Approximately 20% of the respondents in Hungary estimated that between 10 and 20% of the population works without declaring any or some income and another 22% estimated the undeclared share of the population was between 20 and 30%.

those reaching pre-retirement age; however, in terms of sheer numbers, most undeclared workers are in the prime-age group (25-54 years). As Figure 1 shows, the LFS-ONYF comparison finds that undeclared work is most prevalent in Central Hungary (24%), which accounts for 40% of total undeclared employment in the country. This regional pattern differs from earlier results that suggested that the unregistered economy was strongest in economically undeveloped regions. Elek, Scharle, and Szabo (2008) show that construction and certain personal service occupations have both high incidence rates and large numbers of unregistered workers. Kollo (2008), also comparing LFS and ONYF figures, finds that undeclared work accounts for about one-half of total employment in the agriculture, services, and construction sectors.

Figure 2.1: Employment according to LFS and ONYF data and undeclared employment rate, by region, 2004



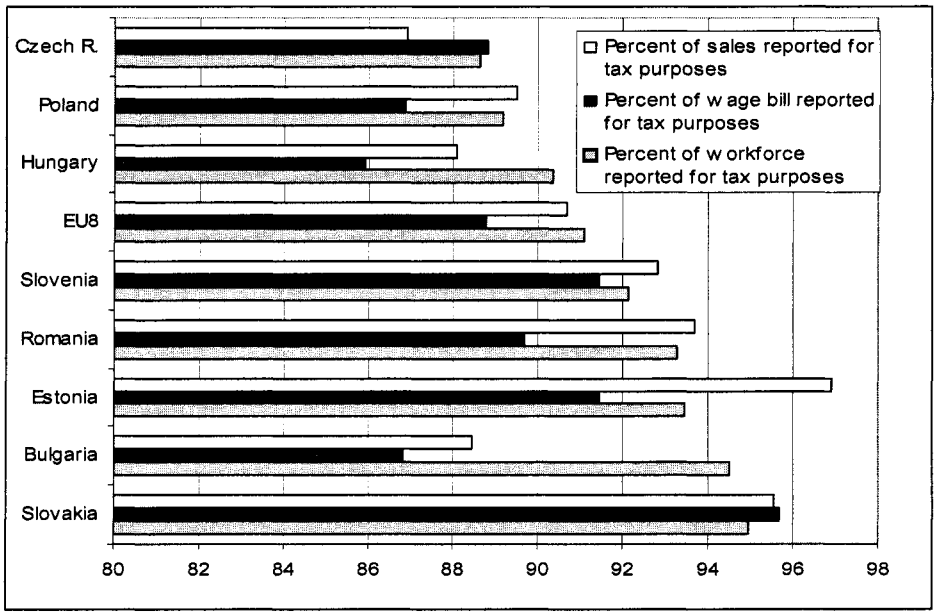
Source: Elek, Scharle, and Szabo (2008)

An additional component of the undeclared economy is underreporting of wages and sales in the formal sector ("gray" economy). The LFS-ONYF comparison underestimates total undeclared work since it cannot detect "gray" employment (i.e., registered work but earnings underreported). For example, a well-documented practice is the use of "envelope wages" where registered employees officially receive the minimum wage, supplemented by an untaxed cash payment. Kollo (2008), using Wage Survey data, and Elek, Scharle, and Szabo (2008), using ONYF and tax data, find that 10-12% of registered employees earn the minimum wage. This relatively large spike does suggest some underreporting but these estimates also suggest that the magnitude of the practice is not nearly as high as has been concluded in some other studies (e.g., Kréko and Kiss 2007).

Both employers and workers believe that some underreporting exists in their industries. The EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS), which samples firms that are operating formally, found that respondents estimated that, on average, firms in their industry underreported around 9% of their workforce, 14% of the wage bill, and 12% of sales (Figure 2). Comparable results are found when employees are asked about underreporting of wages in their industry: on average, respondents in a household survey conducted by TARKI for the World Bank estimated that the typical company in their industry

declares 85% of its wages for the purposes of taxes and social insurance contributions.[7] The BEEPS data suggest that large firms very rarely underreport for tax purposes, with non-compliance essentially limited to small and medium-size firms (less than 250 employees). These qualitative estimates of the extent of underreporting are almost certainly biased downwards because of the reliance of firms in the formal sector to subcontract work, much of which is likely to be done on an undeclared basis.

Figure 2.2: Estimates of reporting rates for sales, wage bills, and workforce, New EU member countries, 2005



Source: BEEPS 2005

2.2 MOTIVATIONS FOR OPERATING INFORMALLY

Undeclared economic activity is due to a range of factors that exclude entrepreneurs or workers from the formal economy or lead them to voluntarily exit that economy. Traditionally, informality has been seen as a consequence of involuntary *exclusion* – i.e., firms or workers could not access the formal sector (and the benefits that go with it) because of regulatory barriers or excessive costs that rationed formal jobs and economic opportunities. Increasingly, the conception of informality has broadened to incorporate the concept of voluntary *exit* – i.e., optimizing decisions made by some firms and workers to minimize or eliminate their engagement with formal institutions of the state, depending on their evaluation of the relative costs and benefits of operating in the two sectors.[8]

For policy-makers trying to reduce the informal economy, this suggests that efforts should focus not only on removing barriers but also on improving the incentives to opt for

[7] This average masks the observation that respondents believe that the majority (about two-thirds) of companies do not underreport. Relatively few (less than 20%) believe that the typical company reports less than one-half of their wage bill.

[8] See, for example, the World Bank (2007a) study of informality in Latin America. This report develops and elaborates a framework based on exclusion and exit.

formalization. This requires an understanding of the motivations for operating informally. Where undeclared economic activity is the result of exclusion due to constrained opportunities in the formal sector, policy reforms need to be directed towards minimizing or removing any regulatory barriers. The classic example is a minimum wage set too high that constrains employment in the formal sector. However, when informality is seen through the lens of voluntary exit, policy-makers needs to focus more on reforms that are likely to shift the cost-benefit assessment of entrepreneurs and workers in favor of operating formally. This includes measures that both increase the relative cost of undeclared activity ("sticks") and increase the relative benefits of declared activity ("carrots"). Identifying effective carrots and sticks requires an understanding of why entrepreneurs and workers choose not to (fully) declare activities and income.

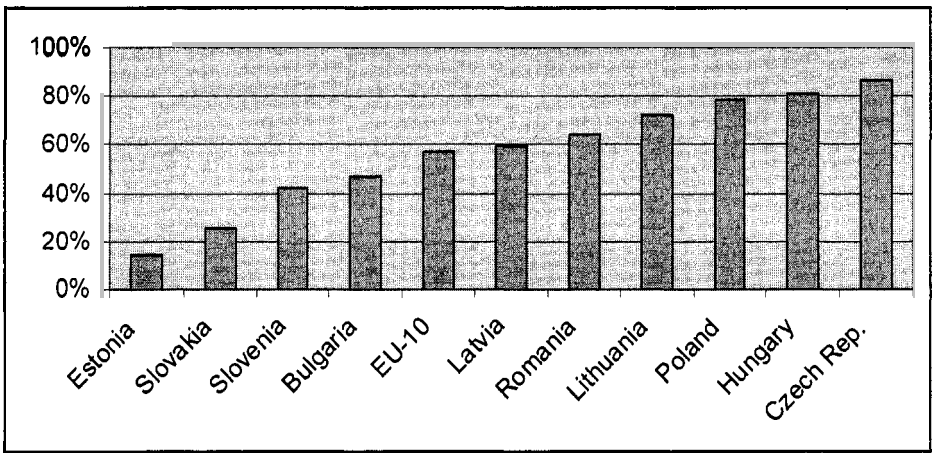
Taxes, including social contributions, stand out as the top factor in discouraging the declaration of jobs and income in Hungary. Widespread informality is a warning signal that something is wrong with the framework conditions for formal work (Leibfritz 2008). Research conducted in many countries shows that there are various aspects of this framework that can matter including taxes, regulations, efficiency of public services, and the integrity of public institutions (e.g., Schneider and Klinglmair 2004, Bovi 2002). In Hungary, while many factors come into play, the evidence points to taxation as the number one disincentive to declare economic activity

Taxes are the most important problem both for employers and individuals. The 2005 BEEPS survey of enterprises indicates that employers are much more likely to identify tax rates as a problem for their operations than any other business factor. Taxes were cited by 81% of respondents, well ahead of cost of financing which was the second most often identified factor (58%). Moreover, while taxes are an issue for firms in many of the EU-10 countries, they were seen as considerably more problematic in Hungary than anywhere else – except the Czech Republic which has had a major tax reform since the survey (Figure 3). Household surveys indicate that high taxes are also problematic for individuals. According to a recent Eurobarometer survey, which collected data on attitudes to informality across the EU, 35% of Hungarians cited excessive taxes and social contributions as the major reason for undeclared work (European Commission 2007a). This was more than double the average in the EU overall. No other reason was cited by more than 13% of the Hungarian sample. In addition to the qualitative evidence summarized in this paragraph, more objective evidence of Hungary's tax burden will be presented in section 3.1.

Not declaring work or income is also more socially acceptable in Hungary than in most EU countries. Relative to EU averages, Hungarians have a more favorable assessment of the social acceptability of various types of undeclared activities such as not declaring private household services, other types of work, or income (European Commission 2007a). In part, this seems to reflect a sense that public institutions are somewhat unfair and ineffective. For example, according to one recent survey, four out of five people reported a belief that significant tax evaders will never be caught (TARKI 2008). Moreover, there are concerns about the general effectiveness of enforcement mechanisms. Over half of the respondents to the Eurobarometer survey believe that chances are "small" that tax or social contribution evaders will be detected (European Commission 2007a). Finally, many people question how well the government uses tax revenues.[9]

[9] To cite one example, 59% of respondents in a recent TARKI survey agreed with the statement that "[t]ax income is not well used by the state" (TARKI 2008).

Figure 2.3: Share of employers identifying tax rates as a problem for operations



Source: BEEPS (2005)

2.3 INFORMALITY AND THE FISCAL CHALLENGE

A sizeable informal sector is primarily a concern in Hungary now because of its fiscal impacts. Undeclared economic activity has important consequences for productivity and innovation, social protection, and social inclusion. It also has fiscal implications, most obviously stemming from losses in potential government revenue. Moreover, to the extent that informality narrows the tax base, this limits possibilities for lower statutory rates that, in turn, would create incentives for the formalization of economic activity. At the same time, the informal sector benefits from at least some government services so, while it does not directly contribute on the revenue side, it still increases government expenditures.

These fiscal effects of undeclared economic activity are especially concerning because of Hungary's deficit. The Government has run a deficit since the mid-1990s, largely due to spending that is not sustainable over the long term. Consolidated government spending represented one-half of GDP in 2007. Social benefits (18.2% of GDP in 2007) constitute the largest expenditure item, accounting for over 35% of total spending in that year (Table 2). Primarily as a result of these high spending levels, Hungary has the largest fiscal deficit among EU countries, although the deficit has been reduced by 3 percentage points since the 2006 level shown in Figure 4. The debt burden exceeds 60% of GDP. Against this background, and also in view of the budgetary impact of an aging population, the sustainability of Hungarian public finances is at high risk (European Commission 2007b).[10] The additional adjustment of more than 10% of GDP is projected to ensure the sustainability of public finances in the long term.

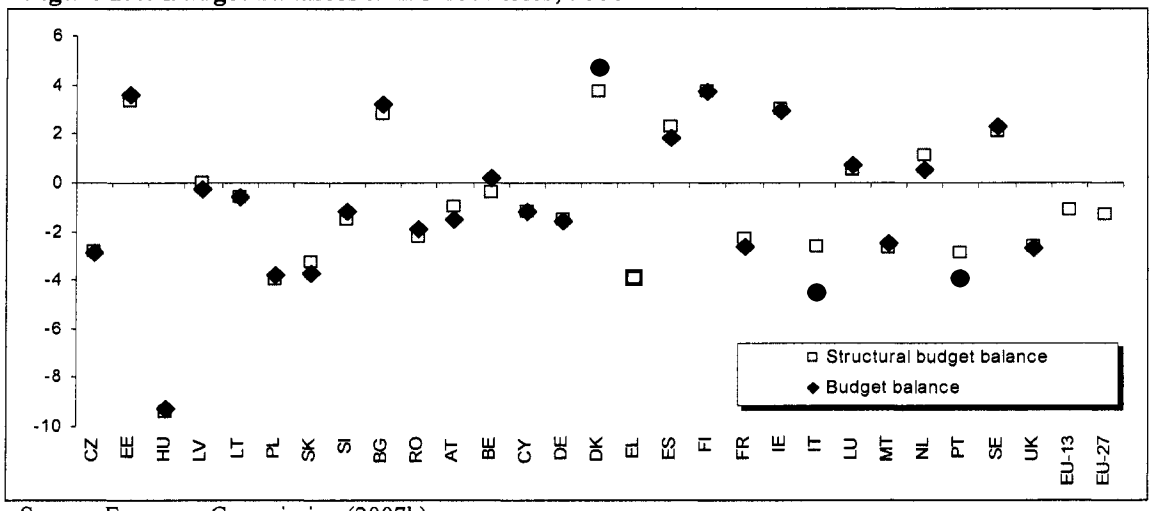
[10] For a discussion of the fiscal pressures due to population aging in transition countries, see World Bank (2007b).

Table 2.2: Government expenditures by economic category, 2007

Category	Expenditures as % of GDP	Distribution (%)
Intermediate consumption	6.4	12.8
Compensation of employees	11.4	22.8
Interest	4.1	8.2
Subsidies	1.5	3.0
Social benefits	18.2	36.4
Other current expenditure	3.0	6.0
Capital transfers payable	1.8	3.6
Capital investments	3.6	7.2
Total expenditures	**50.0**	**100.0**

Source: Ministry of Finance

Figure 2.4: Budget balances in EU countries, 2006



Source: European Commission (2007b)

The fiscal imbalances have had significant economic consequences. The fiscal situation has contributed to high real interest rates, current account deficits, and exchange-rate volatility. These are particular concerns in light of the current global financial instability, as well as the longer-term objective of entering the Euro zone. The fiscal imbalances have almost certainly played a key role in the recent weakening of economic performance. Growth slowed to below 2% in 2007 and is expected to lag behind neighboring countries in upcoming years. The main reason behind the decelerating economic growth has been waning domestic demand, as a result of impacts of the fiscal adjustments made in 2006. The direct effects of government measures were reflected in the fall in government consumption, social transfers, and government investment. Moreover, household consumption and investment demand have declined also as a part of the indirect impacts of fiscal adjustments, mainly the increase in companies' tax and contribution burdens.

The Government is making a determined effort to reverse the poor fiscal outcomes and low credibility of policy. The fiscal consolidation program has included immediate measures to raise revenues, including tax increases, many of which are intended to be temporary. The program also involves wide-ranging structural reforms to public spending including subsidies for pharmaceutical products, public services (natural gas, utilities) as wells as the financing of local governments and the reduction of public employment and the spending freezes in public-sector pay. Moreover, several mechanisms helping budgetary discipline have been strengthened, including tightening rules on state guarantees and spending on infrastructure. In addition,

important reforms with longer-term payoffs are either being implemented or are in the pipeline, notably in health, education and pensions.

Reducing undeclared economic activity is an important element in achieving the goals of the overall fiscal strategy. While tax rate increases have been part of the first stage of the fiscal adjustment program, this measure has only limited revenue-raising potential because of the disincentives it creates for declared economic activity. Moreover, the Government needs to be aware of the competitiveness of Hungary's tax regime relative to that of its neighbors, some of whom have introduced pro-growth reforms in recent years. In this context, then, reducing undeclared economic activity is seen as an important element in the fiscal adjustment effort since it can create additional tax revenue without these potentially negative consequences. The Ministry of Finance (2007) estimates that foregone tax and social contribution revenues because of the black economy exceed HUF 1,000 billion (about 4% of GDP).[11] According to Ministry figures, total revenues from taxes and contributions would be increased by more than 10% if these potential receipts were collected. However, as Leibfritz (2008) notes, caution is needed when interpreting the estimates of fiscal costs of tax evasion.[12]

[11] This includes a number of aspects of the "black" economy: unregistered or partially registered employment, smuggling and excise duty fraud, and various types of tax avoidance.

[12] Leibfritz (2008) identifies three reasons. First, estimates may ignore the fact that some undeclared activities would not be carried out if they were fully taxed. Second, informal firms do bear some tax burden since they buy goods and services that may have been taxed at earlier stages. Third, the government may have adjusted tax rates by setting higher rates on income and consumption so that desired revenues are collected despite evasion.

3. POLICY MEASURES TO REDUCE UNDECLARED ECONOMIC ACTIVITY

Countries in the EU, elsewhere in the OECD, and in Latin America have considerable experience in attempting to reduce undeclared work. In a background paper undertaken for this study, Kuddo (2008a) has reviewed the international experience with efforts to reduce informality. The review describes actions taken, primarily in OECD countries but also in middle-income countries, spanning a broad range of policy areas covering tax policy, including benefits; business and labor market regulatory reform; institutional reform, including improved enforcement; and public information and education. Table 3 provides an illustrative list of some of the types of measures that have been undertaken.[13]

Table 3.1: Some examples of measures introduced to reduce undeclared work in OECD and middle-income countries[1]

Category	Some examples of measures	Some recent country examples
Tax/benefit policy	Reduce/restructure tax rates (VAT, income tax, corporate tax, etc.) and social insurance contributions	Many countries
	Presumptive taxes	Italy, several Latin American countries
	Remove "traps" from social benefits	Bulgaria
	Tax concessions in high-informality sectors	Sweden, France, Belgium
Business/labor market regulations	Simplify/ease business start-up, registration, licensing, closing ("one-stop")	Many countries
	Reduce costs of labor law compliance	Many countries
	Reduce compulsory payments for non-regular workers	Germany
	Activation policies for unemployed	Slovakia, several EU-15 countries
Institutional reform	Strengthen capacity/powers of inspection agencies	Germany, Lithuania, Austria, Bulgaria, Estonia
	Increase sanctions for non-compliance	Austria, Belgium, Denmark, Germany, Ireland, Spain
	Improve information exchange	Most EU members
Public education and information	Education campaign	UK, France, Sweden, Canada
	Publicize high-profile violators	Ireland

1. This list is only illustrative of some measures that have been taken and some countries where measures have been introduced.
Source: Based on Kuddo (2008a, Table 8), which has a more extensive list

The international experience does not provide "silver bullets" but leads to the conclusion that the country-specific situation matters and that success depends on a multi-pronged approach that includes both "carrots" and "sticks". Unfortunately, there has been very little serious evaluation of the effect of these efforts so, in most cases, it is not possible to provide quantitative

[13] For details on country experiences with these measures, see Kuddo (2008a).

estimates of the impacts of individual actions or to empirically demonstrate that certain types of interventions have a stronger impact than others. Much more empirical analysis is required. However, the existing studies reviewed by Kuddo (2008a) lead to two important conclusions: First, the success of particular measures depends on the country-specific situation with respect to the nature of the informal sector and the particular obstacles to formalization. Second, an effective strategy must include a range of measures, incorporating both improved incentives to operate formally and higher risks of detection and stronger sanctions for violators. Indeed, some countries have made considerable inroads into reducing undeclared work (see Box 1 for a summary of the Estonian experience).

Box 3.1: Gains against the undeclared economy in Estonia

Over the past decade, the Government of Estonia has made substantial progress in reducing the size of its undeclared economy. In 2000, it was estimated to account for nearly 10% of GDP and by 2006, it had fallen to less than 5%. Estonian entrepreneurs now believe that the informal economy has much less negative impact on national economic development than was the case before. For example, according to the IMD International Competitiveness rating on this dimension, Estonia ranked 20th in 2007 compared to 40th in 2001. This improvement is due to a number of different factors.

Economic growth and development. Real annual GDP growth has averaged over 8% since 2000. This has, in itself, contributed to the decline in the informal sector share of the total economy. As disposable incomes have risen, fewer Estonians are inclined to purchase informal goods and services because of their low purchasing power. And, as unemployment has fallen, it is easier for workers to find legal employment.

Government efficiency. It has become easier for people to operate formally because of more efficient regulation, support of entrepreneurship, and an effective, modern banking system. At the same time, transparent budgeting has created a more positive attitude towards what the government does. Finally, improvements in the police, tax, and customs offices have made enforcement more effective.

Tax reform. Estonian tax policy is relatively simple. With flat taxes and contributions, all individuals above the tax-exempt threshold pay the same marginal rate. In recent years, direct taxes (income tax) have been lowered while indirect taxes (VAT) have risen. It has also helped that national tax policy has remained clear and stable. Tax filing has been simplified and the capacity of the Tax and Customs Board has improved.

Attitudes toward the shadow economy. According to opinion surveys, the percentage of people saying they did not approve of unreported wages rose from 57% to 93% between 2000 and 2005. This appears to reflect greater understanding of the implications of undeclared income for social benefits and public services. The Tax and Customs Board has launched public campaigns in recent years to underline these links. Special campaigns have also been held in industries where underreporting is a problem.

Source: Based on Josing (2007)

Hungary has already taken a number of steps to reduce undeclared work. Before turning to our analysis of what reforms could reduce undeclared work in Hungary, it is important to note that the Government has already undertaken various measures. For example, the Ministry of Finance (2007) has introduced some reforms to discourage untaxed activity, with further changes proposed for 2008. The steps already taken focus largely on administrative actions such as simplification, greater transparency, stiffer penalties, improved use of information for compliance

purposes, and enhanced enforcement capabilities. Regular employment and labor relations are now a pre-condition for participation in public procurement tenders and to be eligible for state subsidies. A number of business regulations have been simplified, which should encourage entrepreneurs to operate formally. Some measures have been taken to improve the effectiveness of labor inspections and some other measures have been introduced that are meant to encourage the declaration of wages. Health insurance coverage has been made a mandatory condition to receive health care services. Many of these measures are discussed in the ensuing sub-sections.

3.1 TAX AND BENEFIT POLICY[14]

Reforming the tax and benefit system would address the most important factors driving undeclared economic activity. Section 2.2 highlighted survey evidence suggesting that high taxes and social contributions are the primary reason for undeclared employment and income in Hungary. Accordingly, the reform of the tax and social contribution systems will be the most important steps taken to combat the undeclared economy. These reforms need to include improved incentives through changes in tax and benefit rates and rules ("carrots"), which are discussed in this sub-section, and more effective enforcement and administration ("sticks"), which are discussed in section 3.3.

While this study has focused on the implications of the tax system for undeclared economic activity, it should be noted that tax reform needs to be based on the related but more encompassing objectives of overall efficiency, equity, and competitiveness. This study has looked at the tax-and-benefit system specifically in terms of how it affects decisions of entrepreneurs and individuals to declare income and employment. Based on this analysis and international experience, it discusses potential measures that would encourage the declaration of income and, thus, increase tax receipts. These actions should contribute to the overall goals of a comprehensive tax reform, whenever it is introduced in Hungary.[15] Measures that encourage formalization will contribute to the overall tax reform objectives of a more equitable and efficient tax system by reducing inequities between tax-payers and tax-evaders and by encouraging the higher growth potential that exists in the formal sector (Leibfritz 2008).

3.1.1 Analysis of tax and benefit system

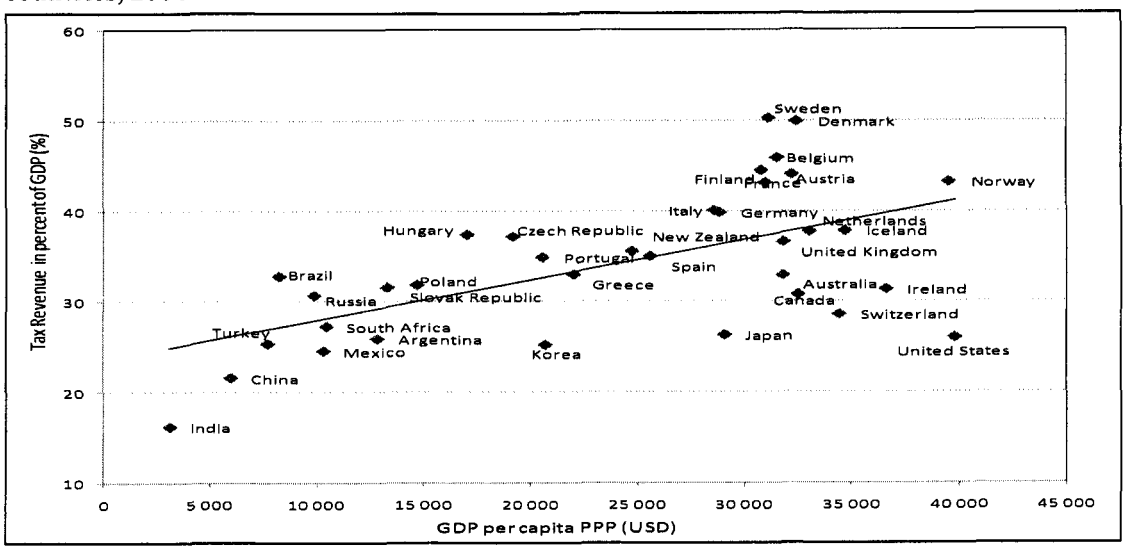
Hungary is a high-tax country, with high public expenditures. Hungary collects more tax revenue (as a share of GDP) than the average OECD country and considerably more than a number of middle-income or transition countries (Figure 5). A major factor is the high social contributions that are needed to finance the social insurance programs. More generally, Hungary must collect a large share of its national income in taxes because of the high government expenditures, already discussed, which exceed public spending levels in much of the OECD and in all middle-income and transition countries (Figure 6). Indeed, even the high tax revenues have not been sufficient to finance this spending, with the resulting deficits and debt noted earlier.

[14] This sub-section summarizes the analysis and conclusions in a paper by Leibfritz (2008) undertaken for this study. More detail is available in this paper.

[15] At the time that this report was being prepared, the Government was considering tax reform possibilities. In February 2008, the Prime Minister proposed three different options to reduce tax burdens.

Labor and consumption taxes are the dominant sources of tax revenue. Hungary relies on the taxation of labor and consumption while capital income and property are relatively minor sources of revenue (Figure 7). This tax mix is often found in Central and Eastern European countries (and elsewhere) which have comprehensive social insurance systems where the benefits are meant to be financed through payroll-based contributions.[16] Consumption taxes are also important, with a VAT rate that is now 20%, reduced by 5 percentage points in 2006.[17] Like a number of transition countries, Hungary has a relatively low tax on capital in order to attract business investment, particularly FDI. Taxes on property are among the lowest in the OECD.

Figure 3.1: Relationship between tax-to-GDP collections and per capita incomes, OECD countries, 2004[1]



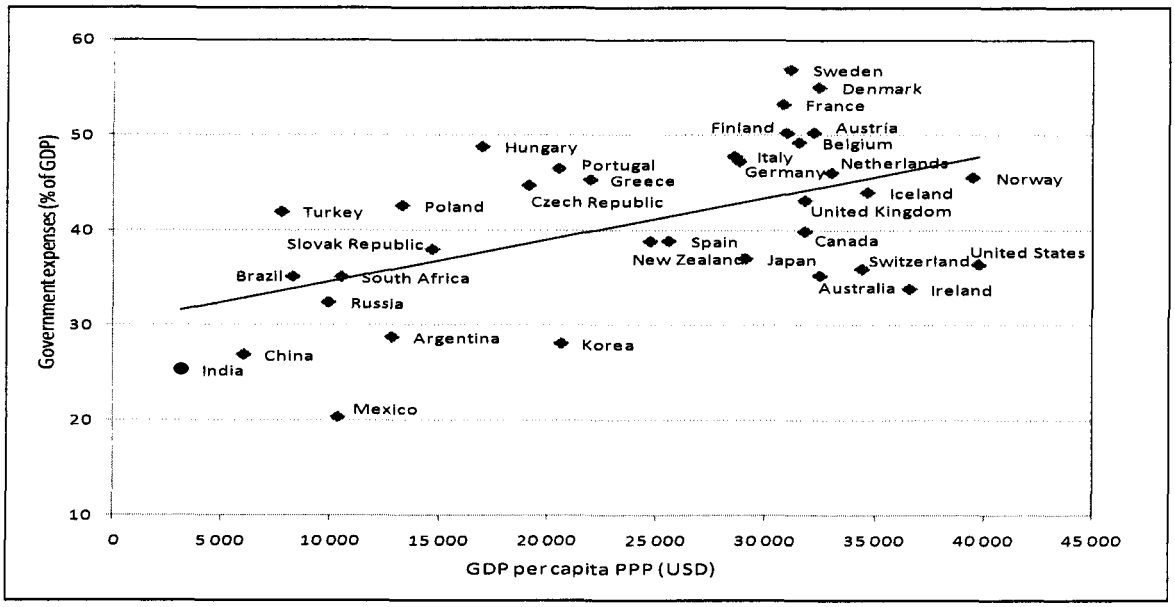
1. Includes social insurance contributions

Source: Leibfritz (2008), based on OECD data

[16] In 1998, Hungary introduced a new two-pillar pension system, with the existing (though reduced) defined-benefit pension and a new mandatory, funded, defined-contribution pension. The old defined benefit pension will eventually be phased out.

[17] At the same time, the reduced rate of 15% for some products was abolished although other selected products (drugs, medical instruments, books) are still taxed at only 5%.

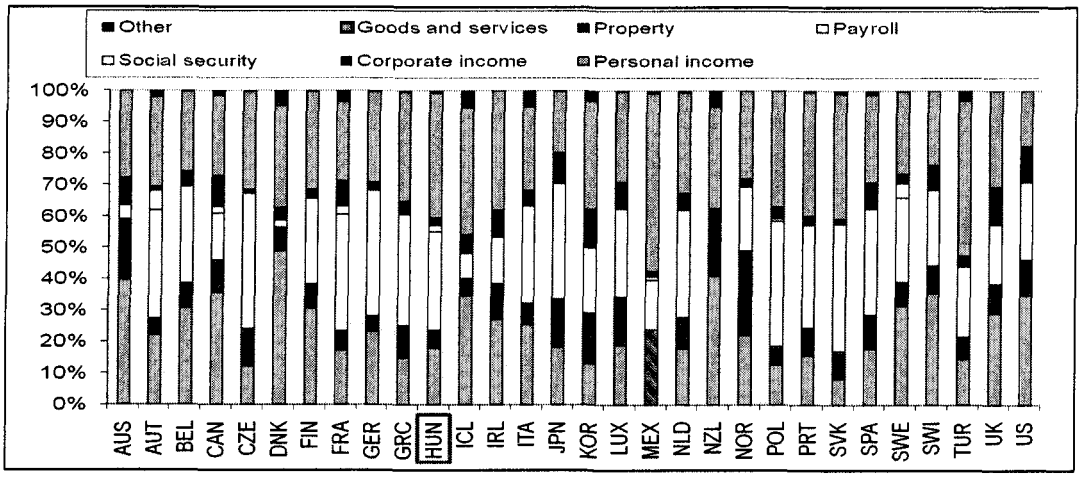
Figure 3.2: Relationship between Government spending-to-GDP and per capita incomes, OECD countries, 2004[1]



1. Includes social insurance expenditures

Source: Leibfritz (2008), based on OECD data

Figure 3.3: Composition of tax revenues, OECD countries, 2006



Source: Heady (2008), based on OECD data

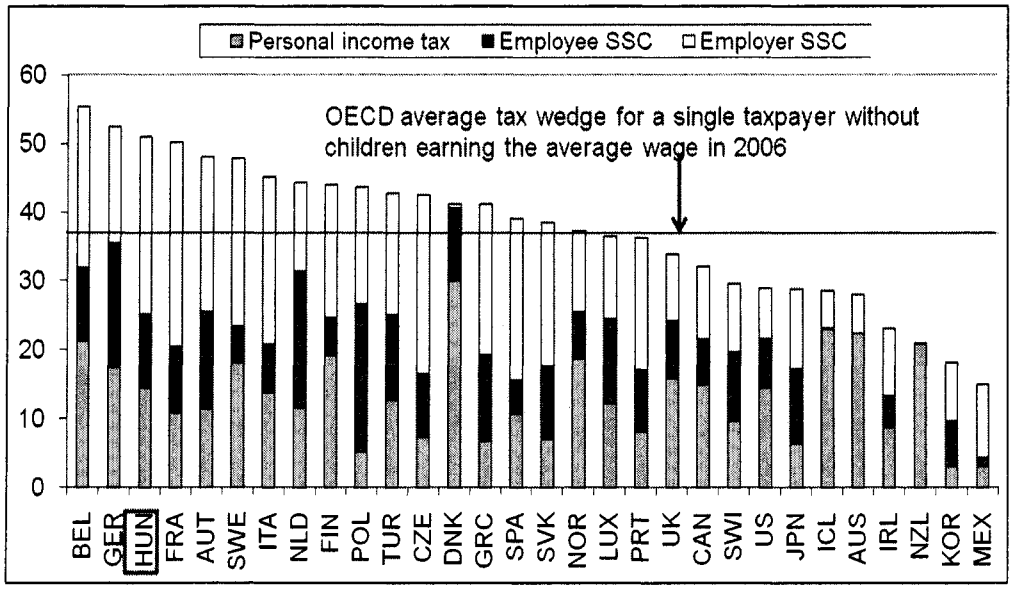
The tax burden on labor is high. The largest component of the labor tax is the employers' contribution to social insurance (33.5% of gross wages plus a 1950 HUF lump-sum health tax payment). Employees contribute 17% of gross wages plus personal income taxes, with marginal rates ranging from 18%-40%. The resulting tax burdens are high. The "tax wedge" is a common indicator of the burden of labor taxes and measures the gap between total labor costs and take-home pay due to employer and employee social contributions and income taxes.[18] The tax wedge for a single worker earning the average production wage in Hungary is about 50% and is the third

[18] Specifically, the tax wedge is calculated as income taxes and combined (employer-employee) social security contributions, minus cash benefits, as a percentage of total labor compensation.

highest in the OECD (Figure 8). Even though the tax wedge for low-wage labor has fallen in recent years (due to the introduction of the employee tax credit), it is still well above the OECD average (Figure 9).

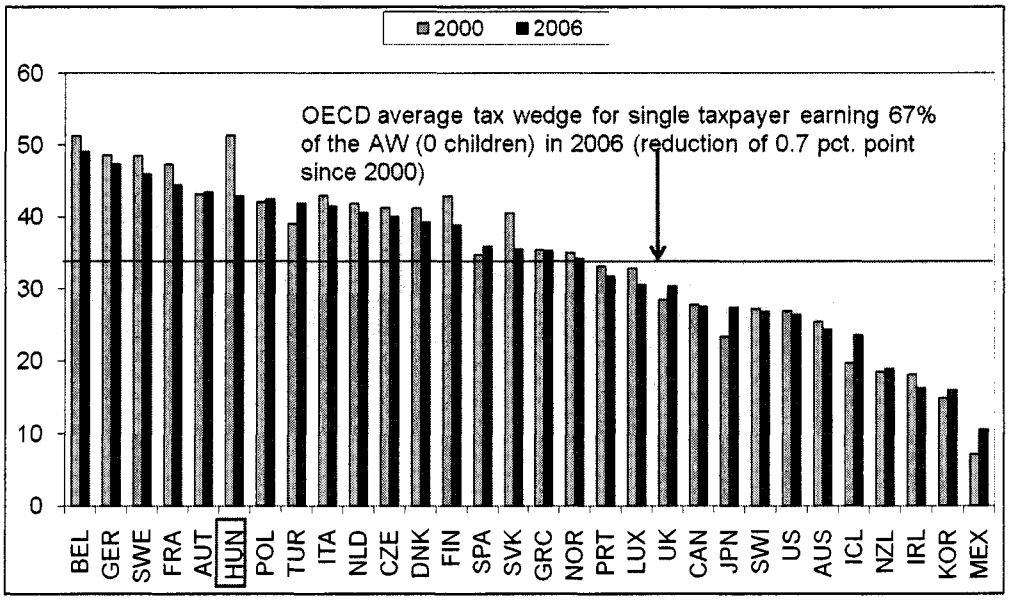
High tax wedges discourage declared work, with the effect strongest for low-wage labor. A high tax wedge acts to reduce declared employment and earnings because of its effects on both labor demand and labor supply. To the extent that social contributions and personal income taxes raise total labor costs, they decrease employer incentives to formally hire workers or to fully declare their earnings. At the same time, by cutting take-home pay, a high tax wedge reduces incentives for workers to participate in the formal labor market or to fully declare their wages. Because of how the elasticity of labor supply and demand and the final incidence of labor taxes (i.e., who actually pays) vary along the wage distribution, the negative employment effects of a high tax wedge tend to be strongest for low-wage labor. As the minimum wage sets a floor to the gross wage, the combination of a relatively high minimum wage and high employer contributions to social security leads to high wage costs for low-skilled workers and reduces their job opportunities in the formal sector.

Figure 3.4: Tax wedge for single worker with no dependents earning the average production wage, OECD countries, 2006



Source: Heady (2008), based on OECD (2006)

Figure 3.5: Tax wedge for single worker with no dependents earning 67% of the average production wage, OECD countries, 2006



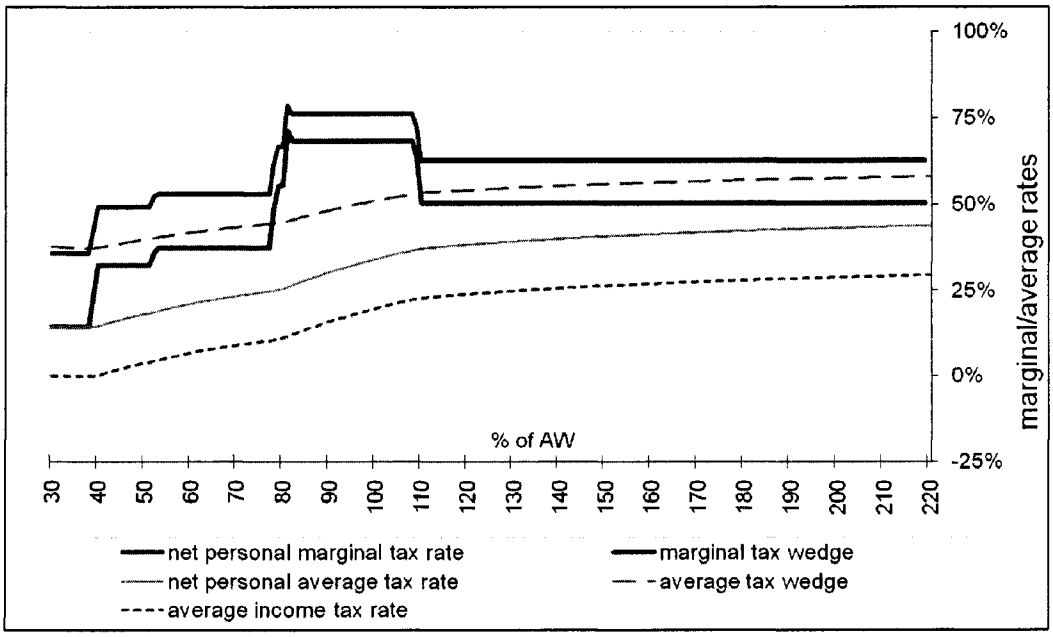
Source: Heady (2008), based on OECD (2006)

Given Hungary's low participation and employment rates, especially for unskilled workers, the tax wedge is a significant problem in the labor market. Hungary's labor market has been relatively sluggish, with key performance indicators below the levels in most EU countries. In 2006, the labor force participation rate (15-64 years) was 62%, compared to the EU-27 average of 70% and the employment rate was 57%, compared to the EU-27 average of 65%. Although many factors are involved, a high labor tax regime that discourages formal sector labor demand and labor supply can only contribute to the problem. The barrier that these tax and contribution levels pose for low-wage labor is a particular concern since 6 out of 10 poorly educated prime-age adults are currently not working (Kollo 2008).

The interplay between taxes and benefits creates serious "traps" that further discourage individuals from declaring employment and earnings. The withdrawal of income-dependent benefits as earnings increase creates some large spikes in marginal tax rates. For affected individuals and households, these "traps" create additional disincentives to work formally and to declare wages. An initial spike occurs when individuals move from unemployment to work and lose the unemployment benefit. A second spike occurs when the housing benefit disappears (at HUF 1.4 million per year). Other instances of very high marginal tax rates occur at incomes where the tax credit and supplementary tax credit for low-income earners is withdrawn and where taxable income moves the individual into a higher tax bracket (especially from 18% to 36%).

When the social contributions of employers are also considered, additional incentives to under-declare earnings are evident. Figure 10 tracks how the tax wedge and average and marginal tax rates evolve as wages rise. For individuals earning between 80% and 110% of the average wage, the effective marginal tax rate is around 75%. These workers are affected by both the high labor taxes and the withdrawal of employee tax credits. With this marginal tax rate, an employer would need to incur an increase of 4,000HUF in total labor costs if it wanted to increase the (declared) disposable income of an employee by 1,000HUF. This creates strong incentives for both parties to minimize the declaration of earnings. The effective marginal tax rate decreases somewhat as the employee tax credit is phased out but, as Figure 10 shows, it still remains high.

Figure 3.6: Average and marginal tax wedges and tax rates by wage level, 2006



Source: Heady (2008), based on OECD data

The relatively favorable taxation of profits compared to labor also provides incentives for firms to under-declare wages. When profit tax rates are significantly lower than labor tax rates, as is the case in Hungary, firms have an incentive to not to fully declare wages even though labor costs are deductible as an operating expense. This does require employers to find a way to make the undeclared wage payments, which usually necessitates under-reporting sales.

The VAT should reduce this underreporting (due to input tax credits) but this is unintentionally undermined by Hungary's various simplified tax programs. In Hungary, various special tax treatments exist that are intended to ease the administrative burden for small operators. One example is the simplified entrepreneurs' tax (EVA) which is available to entrepreneurs and contract workers with annual gross revenues up to 25 million HUF. Tax-filers under EVA pay a flat rate (25%) on income and are not required to file expenses. While they must add VAT to their invoices, they neither make VAT payments nor can they claim credits on their inputs. They do make social contributions but are allowed to make them at the minimum wage regardless of actual income (which almost all do). Cultural workers can opt for the EKHO scheme which also provides a simplified tax treatment. Individuals have significantly lower tax wedges under EVA or EKHO than if they are considered as employees so these schemes create incentives to adopt self-employment rather than employee status. While this favorable tax treatment does provide an incentive to move from the informal to formal sector, at the same time these schemes encourage non-declaration because tax-payers cannot claim VAT credits and may also have incentives to under-declare revenues by not giving receipts to customers.

The design of social insurance programs may also be contributing to undeclared work. Social insurance programs, including health care and pension, disability, and unemployment benefits, can create incentives for undeclared work if benefits are not tightly linked to premium payments or if the design of programs encourages beneficiaries to supplement benefits through undeclared work. The recent measure to make health insurance payments compulsory in order to receive

health services represents an important step and, indeed, seems to have led to increased worker registration. The reforms to introduce a defined contribution system as the major pension component should also encourage registration of work and incomes since benefits are directly linked to contributions under this scheme, as opposed to the defined benefit pension. This should also discourage early retirement, which now seems to be combined often with informal work. However, the effective retirement age of men has still not increased. Finally, unemployment benefit and social assistance recipients also have incentives to earn undeclared income, especially since benefits are fully reduced with declared earnings and since employment offices appear to have only limited capacity and incentive to monitor beneficiaries. Only 59% of the registered unemployed receiving unemployment benefits or social assistance were actively looking for work in 2006. While many of those not seeking jobs were undoubtedly truly inactive, it seems likely that some were working informally.

3.1.2 Tax and benefit policy reforms to reduce undeclared work and income

The recommendations put forward in this sub-section to improve the incentives to declare economic activity need to accompany measures to strengthen enforcement, discussed later. Given the fiscal adjustment program, it could be argued that tax-related reforms to "whiten" the economy should be limited to "sticks" that increase the detection risks of tax evasion and the penalties, if detected. While better enforcement is important, it could drive more people underground or even cease operations unless it is accompanied by "carrots" that ease tax burdens and improve incentives to formalize.

In addition to encouraging the "whitening" of the economy, our proposals are guided by two necessary conditions: broadly maintaining fiscal neutrality and improving the incentives for job creation. While some of the recommendations do imply reduced revenues from certain sources, compensating revenue sources are identified.[19] This figures most prominently as a result of recommended reductions in social insurance contributions. The proposal to cut these contributions is consistent with the second condition guiding these proposals – that reforms improve the labor market, which is a major concern in Hungary's overall economic situation.

Tax and benefit recommendations include:

- ***Reduce employer social insurance contributions.*** This is the most important proposal for encouraging formal-sector employment and the declaration of earnings. By diminishing the labor tax wedge, reduced social insurance contributions would increase incentives for both employers and workers to declare employment and earnings. Social contribution reductions targeted on low-wage labor would have a particularly large effect on employment while reducing the fiscal losses of an across-the-board reduction. A targeted reduction in employer social insurance contributions would need to be carefully designed to avoid introducing a new spike in marginal tax rates.

- ***After the labor tax wedge has been significantly reduced, eliminate or reform EVA and EKHO.*** Eventually, these schemes could be removed – or, if continued for reasons of

[19] Leibfritz (2008) suggests that, as a compromise in the current fiscal context, the Government might consider setting a revenue target and promise that any additional revenue from improved enforcement could be used for tax cuts in the following year.

simplification, they should be made less discriminatory against dependent employment, thus restoring horizontal equity.

- ***Consider financing part of the labor tax cuts by introducing a progressive real estate tax and – if needed – raising the VAT.*** These sources of revenue would have more favorable consequences for the labor market than the currently high social insurance contributions.

- ***Reduce the spikes in the effective marginal labor tax by smoothing the rate structure of the personal income tax and by a more gradual phasing out of income-dependent social benefits, including the employee tax credit and the housing benefit.*** Introducing an intermediate personal income tax rate (between the current 18% and 36%) should be considered. While a flat income tax could also be an instrument for addressing the spike problem, it is not recommended for equity reasons and because the single rate would have to be set at quite a high level to remain fiscally neutral.[20]

- ***Simplify the tax system by removing minor taxes and eliminating loopholes and exemptions.*** According to the Ministry of Finance, there are 37 types of taxes yielding less than 1% of GDP. These minor taxes reduce the efficiency of the tax system while raising the costs of compliance. Eliminating loopholes and exemptions would also broaden the base of the main taxes.

- ***Strengthen the links between social insurance contributions and benefits, most notably for pensions.*** For example, given that there is a cap on benefits in the defined benefit scheme, employer contributions (and not just employee contributions) should also be capped. While progress has been made to reduce incentives for early retirement, some incentives still exist (such as in the "advanced retirement pension") and should be removed. Such strengthening of the link between contributions and benefits should be reinforced by public communication to deepen awareness of the need for this connection.

- ***Introduce a reemployment allowance or a partial earnings disregard for unemployment benefits recipients.*** When accompanied by closer monitoring of beneficiaries, this would reduce incentives for these beneficiaries to work informally.

3.2 Business and Labor Market Regulations[21]

Business and labor market regulations can be an important factor in determining how much undeclared activity exists in an economy. Informality may be encouraged by barriers to entry into the formal sector or excessive business and labor market regulations that make compliance costly. Empirical evidence supports the hypothesis that more regulation is associated with higher levels of undeclared economic activity (Schneider and Klinglmair 2004). However, this relationship is complicated by a number of factors. First, deregulation can go too far if market failures are not adequately corrected. Second, there can be a contradiction between limiting the regulatory requirements imposed on firms and rooting out fictional economic actors. Third,

[20] The equity concern could be handled by a substantial personal exemption. However, this would imply revenue losses and, also, a sizeable spike at the point that the basic exemption was phased out, especially if the single rate is set at a relatively high level.

[21] This analysis and recommendations on business and labor market regulations are based on a paper by Kuddo (2008b), prepared for this study.

enforcement is a key element since it is how regulations are enforced that often determines the actual burden of regulation, rather than the rules themselves.

3.2.1 Analysis of business regulations

Hungary has introduced regulatory reforms that have made it more attractive to invest and operate in the formal sector. The Government's efforts to increase the competitiveness of Hungary's business environment has led to regulatory and procedural reforms that have reduced barriers and improved incentives for entrepreneurs to declare their activities. The "In Tune with Business" program, launched in 2006, is expected to achieve large-scale savings for enterprises over the next five years by reducing operating and transaction costs. According to the World Bank's *Doing Business* indicators, the regulatory environment is becoming more business-friendly, although it still lags behind the leading reformers both globally and in the region.[22] In the latest rankings (2008), Hungary placed 45th among the 178 countries included in the study. This represents the continuation of an upward movement, from 51st in 2007 and 66th in 2006. Among transition countries, it was rated 7th in 2008, up from 12th in 2007.

In some areas, though, regulations still create disincentives for doing business formally. There is also general uncertainty among firms about the regulatory environment. Table 4 shows the Doing Business rankings for Hungary in the 10 areas of the business environment covered by the study. Many of these areas are directly relevant to the decisions made by entrepreneurs about whether to declare their businesses and how much of their operations to declare. Paying taxes remains the number one concern. This is due both to tax rates, discussed in the previous sub-section, and tax administration, which is covered later in this report. Other areas where Hungary continues to rank poorly include protecting investors, registering property, dealing with licenses, and employing workers (dealt with below). Many of the concerns that emerge from the Doing Business results are also evident from the EBRD-World Bank BEEPS survey. In addition, the firms participating in the BEEPS survey also highlighted a general uncertainty about regulatory policies.

Table 3.2: Hungary's rankings (178 countries), Doing Business measures, 2007 and 2008

	2008 rank	2007 rank
Ease of Doing Business-Aggregate Ranking	45	51
Starting a Business	67	91
Dealing with Licenses	87	88
Employing Workers	81	94
Registering Property	96	101
Getting Credit	26	21
Protecting Investors	107	105
Paying Taxes	127	124
Trading Across Borders	45	42
Enforcing Contracts	12	12
Closing a Business	53	52

Source: www.doingbusiness.org

[22] The Doing Business results and methodology can be found at www.doingbusiness.org

The requirements for starting a business are an important factor in determining whether entrepreneurs will choose to declare their operations. Hungary has introduced measures to streamline the process but further reforms need to be made. Undeclared enterprises often perceive business start-up requirements and costs as a serious barrier to entry in the formal sector. According to Doing Business, Hungary managed to reduce the time to complete the registration of a business from an average of 38 days in 2006 to 16 days in 2007.[23] At the same time, the costs of duties and publication fees were also slightly reduced. These changes reflect the impact of a new Act on Business Associations and a new Act on Company Registration Proceedings, both coming into force in mid-2006. The Act on Company Registration Proceedings (including amendments in 2007) reduced time limits on registration, simplified proceedings, made electronic registration compulsory, and reduced administrative and minimum capital requirements. However, the Doing Business database indicates that some countries, including Australia, Canada and New Zealand, have streamlined start-up procedures beyond those that exist in Hungary, even after the reforms introduced in the last two years.[24]

Registering property is another area relevant for business formalization where Hungary lags behind leading reformers. Hungary ranks 96th in Doing Business in terms of the administrative requirements and costs required to register property.[25] On average it takes 4 procedures, 63 days, and 11% of the property value to legally register property in Budapest; OECD averages, in comparison, are 4.9 procedures, 28 days, and 4.6%. Efforts have been made to improve land registration processes. For example, a second registry office has been functioning in Budapest since 2005 to deal with commercial and industrial property transfer cases. However, while the official deadline for the land registry office to register a right under the application is 30 days, it usually takes 1-3 months. The registration fees have increased from HUF 5000 to HUF 6000. Transfers of property are subject to a 20 percent VAT. Documentation requirements are considerable.

Licensing procedures are still too complicated and create a disincentive for formalization. Difficulties obtaining licenses can present another obstacle to businesses and this can also contribute to informalization. The process of obtaining a business license is a basic first step toward formality which entails both entry and permanent costs. Overall Hungary currently stands at 87th position in the Doing Business database, which uses the procedures, time, and costs to build a warehouse as the measure in this area. Compared to the average OECD country, Hungary requires cumbersome, costly, and time-consuming procedures.

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[23] The procedures and costs associated with setting up a business reflect a standardized company – Limited Liability Company in Budapest with minimum capital requirement of HUF 1,500,000.

[24] In the Doing Business database, "starting a business" identifies the bureaucratic and legal hurdles an entrepreneur must overcome to incorporate and register a new firm. It examines the procedures, time, and cost involved in launching a commercial or industrial firm with up to 50 employees and start-up capital of 10 times the economy's per-capita gross national income. They include: (i) all procedures required to register a firm; (ii) average time spent during each procedure; (iii) official cost of each procedure, and (iv) minimum capital required as a percentage of income per capita.

[25] This topic examines the steps, time, and cost involved in registering property, assuming a standardized case of an entrepreneur who wants to purchase land and a building in the largest business city—already registered and free of title dispute. The main indicators include: (i) number of procedures legally required to register property; (ii) time spent in completing the procedures, and (iii) the costs, such as fees, transfer taxes, stamp duties, and any other payment to the property registry, notaries, public agencies or lawyers. The cost is expressed as a percentage of the property value, assuming a property value of 50 times income per capita.

3.2.2 Labor market regulations

Labor market regulations can be a potentially important disincentive for employers to hire workers in formal jobs. Restrictive and costly hiring and firing rules, constraints on the deployment of workers, inflexible wage setting, and high minimum wages (discussed separately in section 3.2.3) are all aspects of labor market regulation that can discourage firms from hiring employees, especially in registered positions.

However, these regulations do not appear to be a major factor in encouraging the non-declaration of work in Hungary. Labor market regulations are not particularly rigid. Hiring and firing rules have few restrictions. Wages are flexible and are responsive to market conditions. Researchers also do not consider labor market regulations to be a serious issue (e.g., Kollo and Nacsa 2005). This perception is reinforced by Hungary's scores on different comparative measures of the flexibility/rigidity of labor market regulations. Hungary is just slightly above the OECD average and below the average for transition countries on the Doing Business Rigidity-of-Employment Index. According to the OECD measure of the strictness of employment protection legislation, Hungary has the lowest rating (i.e., most flexible) among new EU member countries. There is also a clear tendency towards further liberalization of the labor market compared with the late 1990s.

In practice, some employers do see labor market regulations as a problem, most probably because of constraints in working hours. According to the 2005 BEEPS results, 36% of responding firms in Hungary indicated that labor market regulations were a problem for doing business. The main problems seem to lie in the rigidities involving working hours. This is the one aspect of regulation where the Doing Business study found Hungary to have more constraints than is typically found in OECD countries.[26] Restrictions on night work, holiday work, and the maximum number of days in the work week, overtime limits, plus paid vacation rules, may create hiring disincentives. However, while changes in these rules might encourage more (registered) employment, employers do not consider the magnitude of the effect of the current rules to be substantial.[27]

3.2.3 Minimum wages

The minimum wage is an important policy tool for reducing undeclared work. There are two ways in which the minimum wage can affect informality and the declaration of employment and earnings. Most obviously, declared employment will decrease if the minimum wage is set above what employers are willing to pay for an unskilled worker since this will either eliminate jobs or push workers into "black" employment. On the other hand, minimum wage policy can be an instrument for reducing tax evasion where underreporting is a problem.[28]

Hungary's minimum wage is currently set an appropriate level from an economy-wide perspective; however, it is relatively high compared to prevailing wage levels in some low-wage sectors. In 2001 and 2002, Hungary increased the minimum wage by about 70% in real terms.[29] Since then, the level of the minimum wage has been around 40% of average gross earnings,

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[26] The rigidity of hours index in Hungary was 80, compared to an average of 39.2 in the OECD (Doing Business 2008).

[27] BEEPS respondents indicated that if there were no restrictions due labor market regulations, regular, full-time employment would increase by less than 5%.

[28] This aspect of minimum wages is the focus of papers prepared by Tonin (2008) and Kollo (2008) for this study.

[29] See Benedek *et al.* (2006) for a review of the effects of the 2001-2002 minimum wage increases.

which is not particularly high compared to most countries in Europe. However, in low-wage industries, the statutory minimum wage is much closer to the average wage: for example, about 65% for manual workers in primary industries and over 70% for manual workers in textiles and in the hotel and restaurant sector. In these parts of the labor market (and especially in low-wage regions), the minimum wage may act as a disincentive for employers to hire and declare unskilled workers.

The minimum wage is received by about one in 10 private-sector workers, which includes "genuine" minimum-wage earners as well as workers receiving undeclared cash payments on top of their official wage. As was noted earlier, analysis undertaken for this study has found that 10-12% of workers are paid at the minimum wage (Kollo 2008; Elek, Scharle, and Szabo 2008). This incidence of minimum wage payments is not nearly as large as some observers have suggested. However, it is still considerably larger than corresponding shares in many other countries (e.g., less than 3% in Czech Republic, Poland, Slovakia, and Slovenia). One interpretation of this employment spike at the minimum wage is that it includes not only unskilled workers who are actually paid minimum wages but also significant numbers of higher-productivity workers who are officially paid at the minimum wage but also receive undeclared "envelope wages" on top of the minimum. Indeed, Kollo (2008) shows that, while the incidence of minimum wages is relatively high in several low-skill occupations, it is also significant in a number of higher-skilled managerial and professional occupations where one would presume that true earnings are above the minimum wage. Raising the minimum wage could reduce the undeclared earnings of "non-genuine" minimum wage workers. But, for the "genuine" (low-productivity) minimum wage workers, it would lead to job losses or push them into the black economy. An effective minimum wage policy must be able to distinguish between these two groups.

Hungary has tried to address this problem through the introduction of a double minimum wage contribution base with opt-out possibilities. Presuming widespread tax evasion through undeclared earnings, Hungary has established the employer's social contribution base at twice the minimum wage, unless the employer declares that workers are indeed earning the minimum wage (which, in turn, raises the risks of a tax audit). According to Government figures, employers paid double contributions for 110,000 workers who were paid less than double the minimum wage, which increased social contributions by about 0.5% of GDP.[30]

Another approach is to introduce multiple minimum wages to differentiate among workers with different productivity levels. Some countries have put in place differentiated minimum wages (or contribution bases) to reflect presumed variations in the productivity level of workers with different characteristics. Minimum wages that are set higher for categories of workers with higher productivity (and expected wages) can be a potentially effective way to reduce undeclared earnings by shifting some portion of wages from cash to taxable income. Admittedly, the costs of administering such a system are likely to be higher. Hungary is trying a differentiated approach, with the recent introduction of a three-tier minimum wage scheme defined by the educational requirements of the job. It is not clear at this point how this policy is being applied or what its effect has been. However, experiences with an education-based minimum do not appear to have been fully successful since it is relatively easy for employers to manipulate the requirements of a given occupation. Another option is to differentiate the minimum wage according to sector and occupation. This has been done in Bulgaria, where the social partners appear to have been largely successful in agreeing on appropriate minimums (Tonin 2008). Yet another alternative is to set different minimum wage levels by region, given the substantial differences in regional wages in

[30] This additional revenue is roughly in line with estimates made by Kollo (2008) about the likely gains in revenues with a major reduction in disguised minimum wages.

Hungary (as in other countries).[31] Whatever model is implemented, it is critical to maintain a low minimum wage for unskilled workers so that they are not priced out of the formal labor market.

3.2.4 Business and labor market regulatory reforms to reduce undeclared work and income

Business and labor market regulations are not major reasons that entrepreneurs and workers operate informally in Hungary. In recent years, various measures have been introduced to reduce the costs of complying with business regulations and the Government seems committed to continued reforms along these lines. The framework for regulating the labor market is quite flexible with relatively few disincentives for employers to under-declare their workforces and payrolls.

However, some specific regulatory reforms would contribute to the effort to reduce undeclared work. These include:

- ***Further simplifications in procedures for starting a business***. Registration costs could be reduced and minimum capital requirements could be eliminated for all companies (in addition to limited and general partnerships that already have no requirements).

- ***Making it easier to register property.*** The Government should consider strengthening the capacity of the land registry offices. The high stamp duty, currently at 10% of property value, should be reduced, even if this has some fiscal implications.

- ***Simplify licensing procedures.*** The procedures for licensing can be streamlined and some licensing requirements can be eliminated. The authorities should also consider automatic licensing ("silence is consent") to simplify the process further.

- ***Ease restrictions on working time.*** Reducing or eliminating current limitations on night work, holiday work, hours of work, and overtime would improve employer incentives for formal job creation.

- ***Keep the basic minimum wage low***. This will ensure that unskilled workers are not priced out of the formal labor market. Social partners should be encouraged to consider the potentially negative effects of the minimum on declared employment in low-wage sectors, in particular.

- ***Consider the feasibility and potential impact of different models for differentiating minimum wages***. These approaches can be a tool for reducing underreporting of earnings; however, there are different variations (e.g., educational requirements, sector/occupation, region) which should be carefully analyzed before moving forward.

3.3 INSTITUTIONS, INCLUDING ENFORCEMENT

Public institutions can also be a significant factor in determining the scale of undeclared economic activity. While tax policy and business and labor market regulations may define the substantive conditions governing the formal economy, institutions also matter since they strongly shape perceptions regarding the costs and benefits of operating formally vs. informally. For

[31] For example, in 2005, the national minimum wage was equivalent to 27% of the average wage in Budapest and 45% in Békés.

example, the efficiency and reliability of public services such as the provision of health care and pension benefits affects individual assessments about whether social contributions are pure taxes (and thus to be avoided) or reasonable payments for important services. Another important institutional factor is the effectiveness of enforcement which provides the "stick" in the overall strategy to combat undeclared economic activity.

Institutional weakness contributes to Hungary's high level of informality. Recent surveys suggest that Hungarians are skeptical both about the efficiency of public services and about the effectiveness and fairness of enforcement. Almost 60% of respondents to the TARKI survey cited earlier agreed with the statement that "tax income is not well used by the state" (TARKI 2008). Most people think that risk of detection for not declaring income is small.[32] Moreover, there appears to be a widespread perception that enforcement is unfair: 81% of the respondents in the TARKI survey believe that "significant tax payers will never be caught". The administration of the tax system is also seen as an issue among employers. Close to half of the BEEPS sample identified tax administration as an obstacle for doing business.

3.3.1 Tax administration[33]

The collection of more taxes will be a fundamentally challenging task in Hungary. The effectiveness of tax collection naturally depends in part on the organization and capacity of the tax administration. However, the challenges facing a tax administration in carrying out its functions will vary considerably depending on the framework conditions. In countries like Hungary with high tax rates and complex tax systems, and where tax evasion is deeply engrained in society, it is inherently difficult to collect taxes. The low effective VAT rates and the prevalence of earnings not declared for tax and social contributions attest to this difficulty. However, some countries with similar, or even more unfavorable, framework conditions are achieving some success with tax administration reforms (see Box 2 for the case of Bulgaria).

Box 3.2: Bulgaria's National Revenue Administration

In recent years, Bulgaria has made considerable progress in reducing tax evasion due to the undeclared economy. In 2006, the new approaches were institutionalized with the creation of the National Tax Administration (NRA). A study by PWC found that Bulgaria, in fact, was the top reformer in the improvement of business tax systems. Some of the keys to success have been the establishment of a sophisticated performance monitoring system, organizational innovations, and highly organized communication.

Performance monitoring. A critical factor was the development of a set of sophisticated and comprehensive performance indicators. A unit was staffed with experts who could gather, monitor and assess the data on a regular basis and provide reliable input on compliance performance. This monitoring included longitudinal trends and contributing factors, such as how many taxpayers are registered to pay what type of taxes, how much has been collected from whom, and what are the results of taxpayer services and communication campaigns in contributing to increases in compliance as measured by periodic surveys.

[32] According to the Eurobarometer survey, 52% of respondents think the risk of detection is small, compared to 37% who assess the risk as high (European Commission 2007a).
[33] This discussion of tax administration is based on Leibfritz (2008).

Organizational innovations. A unified approach for strategic and operation planning was developed for the NRA, based on international best practice. A model for performance assessment was also implemented. Planning is based on five-year cycles and cover topics like motivation, organizational structure, sharing of responsibility, management style, and authority relationships. NRA was also given authority to hire its own staff and is recruiting from the private sector, as well as elsewhere in government. The organizational changes call for much higher professional requirements for staff than was the case previously.

Communication. The focus has been on providing accessible, comprehensive, and meaningful information and services to taxpayers. The NRA has developed a five-pronged communications strategy which encompasses internal (centralization, consolidation, and new organizational culture) and external communications (new institutional identity of NRA and new tax culture among the public and NRA clients). This strategy is now being implemented.

Impact. The NRA is now one of the most modern revenue administrations in the EU. It has managed to establish strong client service relations with all taxpayers segments and is moving systematically to an e-filing environment. There has been a restructuring of the agency in all its 29 territorial directorates and transferring local taxes and fee to the municipalities. In addition, efficiency increases include strengthened processes of collection of taxes and social security and health contributions, resulting from new Tax and Social Security Procedural Codes. Moreover, capacity is rapidly being built for information exchange with countries of the EU. This reflects continuity of intensive institution building from 2004 to the present. One notable outcome was the identification of the NRA by the government as the best-run institution in the public administration as well as having the best human resources department. The increased collection effectiveness, rationalization of the tax burden, and effective client services have had a positive impact that augurs well for the future sustainability of results.

Source: Mayville (2007)

The Hungarian Tax and Financial Control Administration (APEH) is responsible for the collection of all main taxes and social insurance contributions. APEH is a semi-autonomous administrative agency reporting to the Ministry of Finance. It collects all major taxes and social insurance contributions; combining these responsibilities in the tax agency has been a positive development. However, customs and excises are collected by the Hungarian Customs and Finance Guard and local taxes are the responsibility of local tax authorities. APEH is also not responsible for tax fraud functions which are under the jurisdiction of a separate Criminal Directorate. APEH is organized internally along functional lines (e.g., registration, accounting, auditing, collection, appeals, etc.). Some other countries follow a tax payer structure (e.g., large business, small business, employees, etc.) or a mixed functional/tax payer model. Compared to other countries in the OECD, the costs of tax administration (as a percentage of collected revenue) in Hungary are about average and somewhat lower than in some neighboring countries including Poland and the Czech Republic (Leibfritz 2008).

APEH appears to have improved the efficiency of its auditing and is improving its risk analysis. Data provided by the tax administration indicates that auditing efficiency has improved. In part, this is because more revenues have been found among large tax payers; it is not clear whether auditing has been strengthened in the case of less visible firms and individuals. APEH is currently in the process of improving its risk analysis to better identify potential evaders. To sharpen the approach against undeclared earnings, the tax administration would benefit from models which help to predict average wage levels by sectors and regions; firms that declare much

lower wages than predicted by the model for their region and sector would then face a higher likelihood of being selected for auditing. An Italian scheme along these lines is described in Tonin (2008). These more sophisticated approaches would increase the tax administration's need for more and higher skilled auditors.

There appears to be some room to further improve the effectiveness of APEH. Currently, APEH is responsible for some tasks (e.g., managing student loans) that are not connected to tax administration. Centralizing some administrative tasks might also be effective. The agency could also consider measures that would improve the motivation of its employees, such as performance-based pay.

Better information and, perhaps above all, stricter sanctions have been key elements in the strategy to reduce undeclared economic activity. In addition to the operational reforms within APEH, efforts to reduce tax evasion have emphasized information collection and data sharing and, above all, stronger penalties for non-compliance. For example, data exchange between the tax administration and relevant agencies (Labor Inspectorate, Construction Authority, Housing Authority, etc.) has improved. Electronic reporting is being used increasingly. In terms of sanctions, to offer a few examples, measures have been introduced or will be introduced shortly that provide for increased fines for non-compliance, larger penalties for failure to certify origin of goods or registration of employees, and the suspension of tax identification numbers.

3.3.2 Labor inspection

Since 2005, identifying undeclared work has been a priority of the Hungarian Labor Inspectorate (OMMF). The Hungarian Labor Inspectorate is responsible for enforcing labor legislation, including the registration of workers. OMMF statistics indicate that the Inspectorate has become more successful in identifying infractions related to undeclared workers. In 2004, only 10,000 cases were found; by 2006, this figure had risen to about 42,000 and in the first 8 months of 2007, about 50,000 cases of undeclared work were found.

The increases in undeclared worker infractions are due to changes in inspection methods and more resources dedicated to the task. In addition to focusing more on identifying undeclared workers, OMMF has introduced some new methods. Inspections are targeted on sectors (especially construction and agriculture) where non-registration is known to be a problem. Site visits are less predictable (e.g., outside working hours) and inspectors sometimes return to inspected workplaces. Inter-agency cooperation has improved, with data sharing (e.g., with APEH) and joint inspections. OMMF has also introduced internal changes, including more flexibility in allocating resources across regions. The constraint of inadequate numbers of inspectors is being addressed, with numbers doubling over the past three years and further additions anticipated.

Sanctions for undeclared work have also been increased. Penalties for labor violations have been increased. As well, firms with infractions are now ineligible for state subsidies for 2 years and are excluded from public procurement procedures for 5 years. These provisions are expressly intended to further discourage employers from hiding employment. APEH now has powers to determine and assess contributions that are due from employers with undeclared workers. OMMF has started publishing the names of firms with labor violations, including hidden employment, on its website.

3.3.3 Tax administration and labor inspection reforms to reduce undeclared economic activity

Further gains in reducing undeclared economic activity could be achieved by additional reforms in tax administration.

- ***Increase detection through continued efforts to enhance risk analysis.*** This could include the implementation of more sophisticated models to estimate expected tax liabilities.

- ***Increase penalty rates for non-compliance.*** There does seem to be scope for higher penalties since Hungary's penalty rates are considerably lower than rates in some other OECD countries, such as Ireland, Austria, and Denmark.

- ***Consider reforms to APEH's structure by combining its "functional" approach with a "tax payer type" model.*** A number of OECD countries are using this combined structural model.

- ***Consider consolidating additional tax enforcement functions in APEH.*** Merging the Customs and Finance Guard and the local tax administration into APEH and also giving APEH responsibility for tax fraud could lead to improved enforcement.

- ***Strengthen political independence of the tax administration, with more scope for implementing incentives for improved performance.*** This has proven to be successful in tax agencies in some other OECD countries.

In the area of labor inspection:

- ***Consider recent experiences of other OECD countries that have introduced innovative approaches to inspection.*** These approaches, often based on the involvement of the social partners to set and monitor industry standards, could complement current more traditional approaches.

More intense auditing by tax and labor agencies and stiffer penalties for violators are major weapons to combat undeclared economic activity; however, there are limits to what these measures can achieve by themselves. Without minimizing the obvious importance of enforcement, there is a risk that heavy auditing and very strong sanctions will drive some small firms, entrepreneurs, and workers more deeply into the black economy or that they will even cease to produce at all. Moreover, when the regulations themselves are viewed as too complicated or tax levels as too high, then heavy fines will be seen as unfair and will contribute to law and order problems. In the end, stronger enforcement will not achieve its objective unless incentives for declaring economic activity are improved, above all through a less burdensome tax regime. This underscores the importance of a "carrot and sticks" strategy.

3.4 PUBLIC INFORMATION AND EDUCATION[34]

Public information and education is the final element in a comprehensive strategy to reduce undeclared economic activity. How employers and individuals assess the costs and benefits of declaring economic activity or not is influenced by their perceptions and attitudes about the informal economy, the efficiency of government services, the risk and costs of being detected, the fairness of the "system", and so on. When combined with sound framework conditions (i.e., reasonable taxes and regulations, strong institutions), public education can make a difference in bringing a society to a "tipping point" where undeclared work becomes a deviant and irregular proposition.

Currently, Hungary is well away from this "tipping point", not only with respect to the framework conditions but also in terms of public opinion. Survey data suggest that people see undeclared economic activity as widespread and that the risk of detection and punishment is fairly small, especially for law-makers and the well-off. Appreciation for the social welfare and social solidarity aspects is uneven: many people do not acknowledge the connection between paying taxes and the provision of public goods and services.

Many countries, including Hungary, have launched communication campaigns to change public perceptions. These campaigns have tried to emphasize different core messages. For example, in 2006, the U.K. focused on positioning tax evaders as a minority that damaged the interests of the majority. Some campaigns have targeted high-informality sectors. One example is the Canadian construction industry which focused on consumers, informing them of the legal and financial disadvantages of "cash deals" and linking quality and professionalism with registered contractors (see Box 3). Hungary's "Fair Play" campaign in 2007 emphasized, among other messages, the damage that tax evasion does to the country's financial situation. A serious evaluation of the effect of this campaign would be important for informing future communication efforts.

[34] For a more detailed analysis, see the paper from TARKI (2008) prepared for this project.

Box 3.3: Canadians urged to "Get It in Writing"

As is the case in many countries including Hungary, a substantial portion of the construction industry in Canada operates in the informal economy, resulting in a loss of billions in tax revenues. In the last two years alone, Revenue Canada audited almost 25,000 firms in the construction industry, netting an additional $140 million in unpaid taxes, $44 million in interest and penalties, and $36 million in GST. However, this amounts to just a fraction of the taxes owed.

In a joint effort of the Canadian Home Builders' Association and Revenue Canada, a successful "Get it in Writing" public information and awareness campaign was launched. The idea is to encourage individuals to utilize the services of registered businesses by warning them of the legal and financial ramifications of engaging in business transactions with unlicensed or unregistered contractors. The premise of the campaign was that "professional contractors always work with proper, written contracts" and thus using a written contract may ensure financial and legal protection for the consumer in the event that something should go wrong.

The main tool utilized by the "Get it in Writing" information campaign is an extensive and informative website providing consumers with the who's, how's, and why's of hiring a registered contractor (http://www.hiringacontractor.com/). The site provides consumers with detailed information including national and provincial regulations, a checklist for hiring a contractor, determinants of a binding contract, and includes anecdotal "horror" stories of individuals that faced legal and financial consequences of hiring contractors without written contracts. Additional information is available in a downloadable brochure directly from the website or at the local home builders' association office. Revenue Canada also proactively works with individuals in the construction trade to build awareness of the importance of registering their business by visiting construction sites, informational presentations at trade schools, and seminar and workshops for new businesses. This comprehensive informational campaign provides information for both Canadian consumers and businesses in an effort to protect both the consumers and business owners.

Source: TARKI (2008); Canadian Revenue Agency, http://www.cra-arc.gc.ca/E/pub/tg/rc4406/rc4406-e.html

Altering perceptions about informality must be an ongoing task. Future efforts should consider the following:

- ***Information campaigns with segmented communication plans.*** Public opinion polls show that different groups have different attitudes and behaviors regarding the undeclared economy. For example, young people appear to have a relatively high acceptance level; this group should be a priority in communication efforts, with messages that not declaring work and income are old and outdated practices and underlining their criminal aspect. A common objective of information campaigns should be to position tax evasion as a deviant and increasingly marginal activity, with serious personal consequences. Successful enforcement and sanctioning of tax evasion cases involving the rich and powerful should be widely publicized. Campaigns should also focus efforts on sectors where undeclared activities are significant.

- ***Educating the public on the fundamentals of public finance.*** This involves providing transparent information about how the government spends tax revenues and showing how the payments made by entrepreneurs and individuals are linked to the public benefits they receive. Another important aspect of public education is to clearly illustrate how paying taxes now is a necessary condition for making Hungary a low-tax country in the future.

- ***Involving the social partners***. Registered employers and trade unions have strong and shared motivations to reduce the prevalence of undeclared work in their sectors and workplaces. They should be encouraged to work together to explain the problems with informality to their constituencies while, at the same time, committing themselves to fighting undeclared work in collective agreements.

Studies prepared for World Bank Project

Elek, P. A. Scharle, and B. Szabó (2008). An Estimation of Undeclared Employment in Hungary based on Administrative Data. Ministry of Finance. Budapest.

Josing, M. (2007). Shadow Economy Status and Development Trends in Estonia. Estonian Institute of Economic Research. Tallinn.

Köllő, J. (2008). Two Notes on Unreported Employment and Wages. Institute of Economics. Budapest.

Kuddo, A. (2008a). An International Survey of Policies to Reduce Undeclared Work. World Bank. Washington.

Kuddo, A. (2008b). Policy Interventions to Tackle Informality: Labor and Business Environment. World Bank. Washington.

Leibfritz, W. (2008). Reducing Undeclared Work in Hungary- The Role of Tax Policy and Administration. Munich.

Mayville, W. (2007). Reducing the Gray Economy, Organizational Reform, and Communication Campaigns: The Bulgarian Experience. World Bank. Washington.

TARKI (2008). Background Paper for Planning Public Communication and Education Campaigns to Reduce the Volume of Hidden Economy and Undeclared Work. Budapest.

Tonin, M. (2008). The Minimum Wage and Other Instruments to Reduce Undeclared Work. University of Southampton.

Other References

Benedek, D., M. Rigó, A. Scharle, and P. Szabó (2006). *Increases in the Minimum Wage in Hungary, 2001-2006.* Government of Hungary. Ministry of Finance. Working Paper No. 16.

Bovi, M. (2002). The Nature of the Underground Economy: Some Evidence from OECD Countries, Instituto di Studio e Analisi Economica. Rome.

European Commission (2004). *Undeclared Work in an Enlarged Union: An Analysis of Undeclared Work: An In-Depth Study of Specific Items.* Brussels.

European Commission (2007a). *Undeclared Work in the European Union.* Special Eurobarometer. Directorate General Employment, Social Affairs, and Equal Opportunity. Brussels.

European Commission (2007b). *Public Finances in the European Monetary Union 2007.* Brussels.

Government of Hungary (2006). Convergence Program of Hungary, 2006-2010. Budapest.

Heady, C. (2008). Trends in Taxation Policies in the OECD Area. Presentation in Budapest, January 21, 2008.

Köllő, J. and B. Nacsa (2005). *Flexibility and Security in the Labour Market: Hungary's Experience.* International Labour Office. Budapest.

Krekó, J. and G. P. Kiss (2007): Adóelkerülés és a magyar adórendszer (Tax evasion and the Hungarian tax system), Hungarian National Bank DP 2007/65.

Ministry of Finance (2007). Strategy of the Struggle against Black Economy. Mimeo. Budapest.

OECD (2006). *Taxing Wages 2005-2006.* Paris.

Schneider, F. and R. Klinglmair (2004). *Shadow Economies around the World: What do we Know?* CESifo Working Paper No. 1167 and IZA Discussion Paper No. 1043. University of Linz.

World Bank (2007a). *Informality: Exit and Exclusion.* Washington, DC.

World Bank (2007b). *From Red to Gray: The "Third Transition" of Aging Populations in Eastern Europe and the Former Soviet Union.* World Bank. Washington.


HUNGARY
SELECTED CITIES AND TOWNS
COUNTY (MEGYE) CAPITALS
NATIONAL CAPITAL
RIVERS
MAIN ROADS
RAILROADS
COUNTY (MEGYE) BOUNDARIES
INTERNATIONAL BOUNDARIES
0 20 40 60 80 Kilometers
0 20 40 60 Miles
16°E
17°E
18°E
19°E
20°E
21°E
22°E
23°E
48°N
47°N
46°N
SLOVAK REPUBLIC
UKRAINE
AUSTRIA
ROMANIA
SLOVENIA
CROATIA
SERBIA
BORSOD-ABAÚJ-ZEMPLÉN
SZABOLCS-SZATMÁR-BEREG
NÓGRÁD
HEVES
GYÖR-MOSON-SOPRON
KOMÁROM-ESZTERGOM
BUDAPEST
JÁSZ-NAGYKUN-SZOLNOK
HAJDÚ-BIHAR
PEST
FEJÉR
VESZPRÉM
VAS
ZALA
SOMOGY
TOLNA
BÁCS-KISKUN
BÉKÉS
CSONGRÁD
BARANYA
Bakony
Balaton
Vértes
Börzsony
Duna (Danube)
Tisza
Rimava
Raba
Zala
Sió
Körös
Szamos
Hortobágy
BUDAPEST
Budaörs
Vác
Dunakeszi
Dunaharaszti
Erd
Szentendre
Szigetszentmiklós
Ráckeve
Szekesfehervar
Mor
Tatabanya
Dorog
Esztergom
Gyor
Mosonmagyaróvár
Sopron
Csorna
Kőszeg
Sárvár
Szombathely
Celldömölk
Pápa
Boba
Vasvár
Körmend
Szentgotthárd
Ajka
Veszprém
Balatonfüred
Tapolca
Siófok
Balatonboglár
Keszthely
Zalaegerszeg
Bak
Rédics
Gelse
Marcali
Letenye
Nagykanizsa
Kaposvár
Nagyatád
Sásd
Dombóvár
Szekszárd
Bonyhád
Pécs
Szigetvár
Barcs
Mohács
Bátaszék
Paks
Tamási
Hőgyész
Pincehely
Cece
Dunaújváros
Lepsény
Dunaföldvár
Solt
Kalocsa
Baja
Bácsalmás
Decs
Kiskunhalas
Kiskunmajsa
Soltvadkert
Kiskunfélegyháza
Kecskemét
Lajosmizse
Cegléd
Monor
Vecsés
Nagykáta
Gyöngyös
Hatvan
Jászberény
Szolnok
Tiszaföldvár
Kisújszállás
Mezőtúr
Szeghalom
Gyoma
Mezőberény
Kunszentmárton
Csongrád
Szentes
Szeged
Mórahalom
Hódmezővásárhely
Orosháza
Löcsöháza
Bekescsaba
Szarvas
Gyula
Mátészalka
Nyírbátor
Nyíregyháza
Kisvárda
Sárospatak
Tokaj
Miskolc
Sajószentpéter
Salgótarján
Balassagyarmat
Rétság
Kekes (1,014 m)
Istallóskő (959 m)
Eger
Leninváros
Mezőkövesd
Tiszafüred
Heves
Püspökladány
Berettyóújfalu
Debrecen
Újfehértó
Hajdúszoboszló
Hajdúnánás
Hajdúböszörmény
Derecs
Nagykálló
Mátészalka
To Vienna
To Neunkirchen
To Graz
To Zagreb
To Virovitica
To Osijek
To Subotica
To Arad
To Oradea
To Satu Mare
To Beregovo
To Uzhhorod
To Kosice
To Safarikovo
To Lucenec
To Bystrica
To Nitra
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