

## THE HUNGARIAN CRISIS

### 5.1 Introduction

Hungary was initially the front-runner among the former socialist countries of Central and Eastern Europe in terms of market reforms and gradually liberalised its economy in the 1980s. At the beginning of the 1990s, it seemed to be in the best position to converge fast with the European Union both in terms of income level and institutional quality. However, this convergence has stalled since the mid-2000s, with recent policy measures undermining the security of property rights and private contracts. Hungary was the first country to apply for an International Monetary Fund (IMF) administrated international bail-out during the latest financial crisis in the European Union (see Table 5.1 for a summary of Hungary's macroeconomic data). By the end of 2011 it was one of the most financially vulnerable countries in Europe outside the euro area.

This chapter summarises recent developments in Hungary and aims to shed some light on why Hungary failed to live up to the expectations of the early 1990s. Section 5.2 analyses Hungary's growth

performance since 1990, and is followed by an analysis of its labour markets in Section 5.3. Section 5.4 assesses its fiscal policy and Section 5.5 explains why Hungary was one of the first countries in Europe to be bailed-out, and how the Hungarian economy responded to crises. Lastly, Section 5.6 assesses the economic policy measures implemented by Hungary since mid-2010, and their implications for future growth and employment. The chapter closes with some general conclusions.

### 5.2 Growth performance

Hungary's GDP grew annually by about three percent over the period of 1995–2008 (see Table 5.1). The GDP of the old EU member states<sup>1</sup> grew annually by 2.2 percent on average during the same period. This difference in growth rates is not large enough to close the income gap between Hungary and the old EU members in the foreseeable future. To shed more light on why GDP growth in Hungary was relatively low, we first present the evolution of Hungary's income gap defined as GDP per capita relative to the old EU

<sup>1</sup> Old EU member states are defined as the 15 members in 1995.

**Table 5.1**

**Macroeconomic statistics for Hungary**

	Average 1995–2001	Average 2002–2008	2009	2010
Growth rates, in %				
GDP	2.9	3.1	– 6.8	1.3
Private consumption expenditure	1.7	3.2	– 6.2	– 2.2
General government consumption expenditure	– 0.3	1.7	– 0.6	– 2.1
Gross fixed capital formation	5.0	3.5	– 11.0	– 9.7
Exports of goods and services	14.4	10.9	– 10.2	14.3
Imports of goods and services	12.7	10.1	– 14.8	12.8
Inflation, CPI, in % <sup>a)</sup>	16.2	5.4	4.0	4.7
Unemployment rate, in %	8.0	6.8	10.1	11.2
Government finances, in % of GDP				
General government net lending	– 5.5	– 6.9	– 4.5	– 4.3
General government gross debt	63.6	62.7	78.4	80.2
Current account, in % of GDP	– 5.5	– 7.5	– 0.2	1.1
Foreign direct investment, in % of GDP	6.3	4.6	1.6	1.2

<sup>a)</sup> OECD data for 1995–2001 and Eurostat for all other periods.

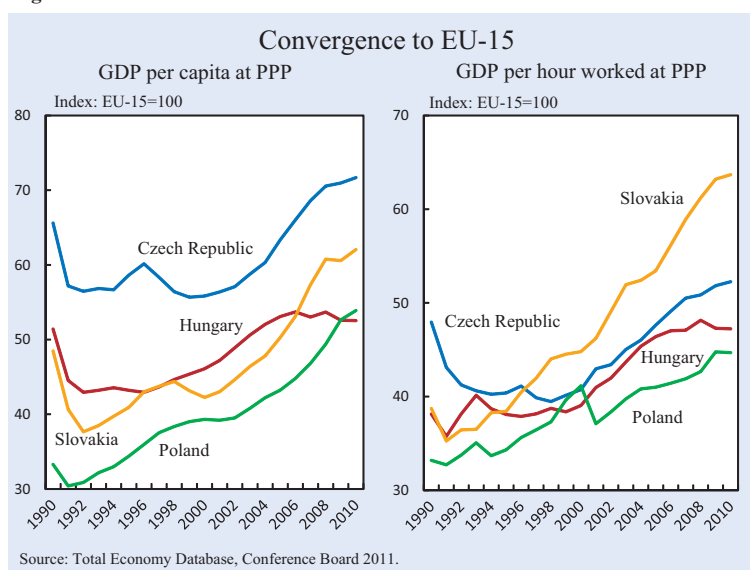
Source: OECD, Eurostat, last accessed on 19 October 2011.

member states, and the evolution of its labour productivity gap similarly defined as GDP per hour worked relative to the old EU member states.<sup>2</sup> Secondly, we provide a decomposition of the income gap and use classical growth accounting to understand the factors behind Hungary's growth performance.

The first panel of Figure 5.1 shows the time evolution of the income gap for Hungary and for the other three Visegrad Group countries<sup>3</sup> measured in GDP per capita. After initially falling in the early 1990s, relative GDP increased in all four countries.

Since 2005, however, Hungary's relative income has stagnated. By 2010 it was the poorest member of the Visegrad Group due to the strong growth performance of Slovakia and Poland since 1995. The second panel of Figure 5.1 shows the evolution of the labour productivity gap. Firstly, it is important to note that the income gap and labour productivity gap of Hungary display the same flat pattern after 2005. Secondly, Hungary only exhibited strong labour productivity growth between 2000 and 2005

Figure 5.1



Source: Total Economy Database, Conference Board 2011.

when it closed the labour productivity gap by eight percentage points. In the other periods, the Hungarian labour productivity gap was flat. Slovakia, on the other hand, has exhibited strong labour productivity growth since the early 1990s, and closed its labour productivity gap by 25 percentage points.

Let us now breakdown the income gap into three parts: the worker-to-population-ratio gap, the hours-per-worker gap and the labour-productivity gap. This breakdown is performed for 1995 when the shock due to the reform and liberalisation in the early 1990s had already dissipated, and for 2008, the last year before the full force of the financial crisis' impact was felt. The result of the breakdown is displayed in Table 5.2.

Table 5.2

Accounting for GDP per capita gap relative to EU-15

	GDP per capita gap	Worker to population ratio gap	Hours per worker gap	GDP per hour worked gap
1995				
Czech Republic	- 53.4	19.5	17.8	- 90.7
Hungary	- 83.9	- 4.7	17.3	- 96.5
Poland	- 106.8	- 6.9	7.1	- 107.0
Slovakia	- 89.4	- 4.3	10.6	- 95.7
2008				
Czech Republic	- 34.9	13.1	19.6	- 67.6
Hungary	- 62.2	- 9.9	20.8	- 73.1
Poland	- 70.6	- 10.4	25.0	- 85.2
Slovakia	- 49.8	- 9.9	9.2	- 49.1

Note: Gaps are calculated as log differences multiplied by 100 to preserve additivity. A negative (positive) entry in the table is equivalent to the relevant ratio being below (above) 100 percent.

Source: Total Economy Database, The Conference Board 2011.

As Figure 5.1 also shows, GDP per capita is closer to that of the old EU members than labour productivity. This is primarily accounted for by employees in the Visegrad countries working longer hours than those in the old EU member states. The worker-to-population-ratio<sup>4</sup> gap plays a lesser role in explaining the income gap, and unlike hours per worker, the worker-to-population ratio is lower in the old EU member states than in the Visegrad countries, except for the Czech Republic. The breakdown highlights that the relatively small Czech income gap is largely explained by longer hours worked and by a higher employment rate. One important implication of this breakdown exercise is that longer hours worked play an important role in three out of these four countries in raising relative income. However, further increases in the number of hours worked per worker are unlikely to lead to a sustained income convergence.

Sustained labour productivity growth is the key to convergence. Growth accounting helps us to understand the main factors that drive it. Table 5.3 presents the results of a growth accounting exercise comparing two periods: 1995–2001 and 2002–2008. The growth rates of real GDP per hour worked are broken down into the contribution of the labour composition,<sup>5</sup> into two types of capital and total factor productivity (TFP). The analysis suggests that the primary source of Hungary's labour productivi-

ty growth was growth in capital stock and, to a lesser extent, growth in TFP. Capital accumulation contributed 2.0 percent and 2.4 percent respectively to the 3.0 percent and 3.2 percent growth of real GDP per hour worked in Hungary in the first and second period. In contrast, TFP growth was the primary source of labour productivity growth in both periods in Poland and in Slovakia, and in the second period in the Czech Republic. Weak and declining TFP growth in Hungary suggests serious structural problems, which inhibit faster productivity growth. Unless TFP picks up, we expect Hungary to eventually diverge from the rest of Europe, as margins of convergence through hours worked and capital accumulation are gradually exhausted.

Kónya (2011) provides explanations for why growth in capital stock is a more important source of labour productivity growth than in the other Visegrad countries. He calibrates a one-sector real business cycle model to assess the size of distortions in the Czech Republic, Hungary and Poland.<sup>6</sup> The labour wedge distorts the labour and leisure choice, and the investment wedge distorts saving-investment decisions. A high labour wedge means that labour taxes deter people from working, implying that the amount of total hours worked is sub-optimally low. Similarly, the investment wedge is the gap between the total and private return on investment. The greater that wedge, the lower the productive investment relative to the optimal level. Kónya finds that the labour wedge on average was significantly higher in Hungary than in the

<sup>4</sup> Workers here are measured as the number of persons engaged in production, and include full-time workers, full-time equivalent, part-time workers and the self-employed.

<sup>5</sup> The change in labour composition is calculated as the weighted change in the skill composition of the workforce where labour compensation for each skill group is used as weight.

<sup>6</sup> Distortions are formally defined as wedges between marginal rates of substitution and the corresponding prices.

**Table 5.3**

**Growth accounting for the Visegrad countries**

	GDP per hour worked growth	Contribution of			
		labour composition	ICT capital services <sup>a)</sup>	non-ICT capital services	TFP
Average 1995–2001					
Czech Republic	2.7	0.2	1.1	1.9	–0.5
Hungary	3.0	0.2	0.8	1.2	0.8
Poland	3.8	0.1	0.4	0.9	2.4
Slovakia	4.2	0.1	0.5	0.9	2.7
Average 2002–2008					
Czech Republic	3.9	0.3	0.2	1.5	1.9
Hungary	3.2	0.6	1.5	0.9	0.2
Poland	3.6	0.3	0.7	0.7	1.9
Slovakia	5.7	0.2	1.1	0.8	3.6

<sup>a)</sup> ICT refers to “information and communication technologies”.

Source: Total Economy Database, The Conference Board 2011.

other two countries.<sup>7</sup> If distortions in the labour markets are relatively large, firms will substitute capital for labour.<sup>8</sup> This can lead to a faster increase in capital services for a prolonged period of time in a country with high labour market distortions, even if distortions in the labour markets only affect the level of GDP and not its growth rate in the long run. Moreover, it also follows that once firms have adjusted their technology to accommodate a distorted labour market, capital accumulation will slow down, implying a further decline in labour productivity growth. In other words, the large contribution of capital accumulation to Hungarian growth may just be a transitory, and not particularly welcome, phenomenon of capital/labour substitution, similar to the experiences of many Western European countries following increases in labour costs in the early 1970s.

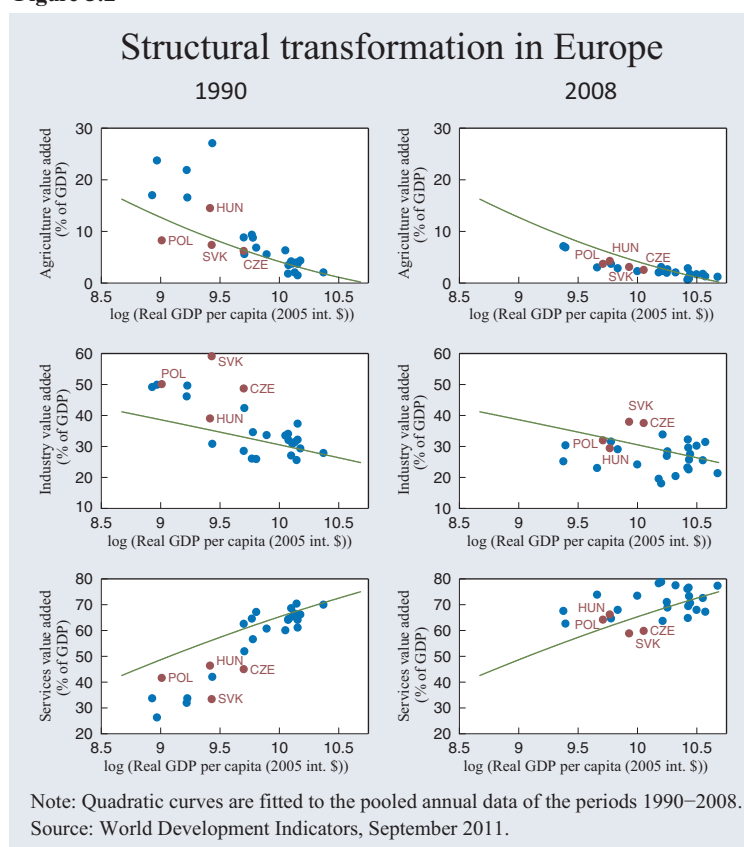
However, this does not account for the lower TFP growth. One factor that may explain it is sectoral change.<sup>9</sup> If productive resources are reallocated to sectors with low productivity growth, aggregate growth falls. Bah and Brada (2009) study structural change in the Central and Eastern European countries. They point out the stylised fact that central planning generated a higher share of agriculture and industry in output than observed in market economies. This is documented in the left panel of Figure 5.2, which shows that the shares of agriculture and industry (construction, manufacturing, mining and utilities) of GDP were significantly higher and the share of services significantly lower in 1990 in the former socialist countries than the share that their level of development would imply. In 2008 the shares of the three sectors in the former socialist countries were more or less in line with the

<sup>7</sup> The difference in average investment wedges across the three countries is much smaller than the labour wedge.

<sup>8</sup> See Blanchard (1997) on this type of substitution after the mid-1970s in Europe.

<sup>9</sup> See Duarte and Restuccia (2010) and Herrendorf and Valentinyi (2011).

Figure 5.2



shares implied by their level of development. There was therefore a reallocation towards the service sector. Since the service sector tends to have lower productivity growth than manufacturing, this reallocation could be a source of lower TFP growth in Hungary.<sup>10</sup> A related explanation is that distortions within these broad sectors are the sources of low TFP growth in Hungary. Since such distortions can have a large effect on TFP,<sup>11</sup> its growth in Hungary is likely to depend on

<sup>10</sup> This effect can be offset by reallocation if the resources devoted to agriculture and industry were inefficiently high before liberalisation, and the reallocation improved efficiency significantly in agriculture and industry afterwards. However, this offsetting effect is more likely to be important in the periods shortly after liberalisation i.e., in the 1990s and not in the 2000s.

<sup>11</sup> Hsieh and Klenow (2009) found that the effect of misallocation of production factors at a firm level on aggregate TFP is substantial.

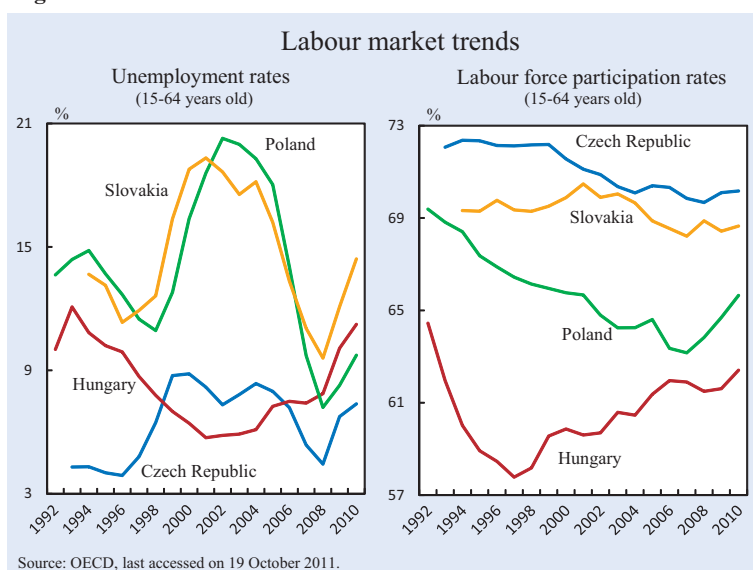
Table 5.4

## Growth rate of real gross fixed investment

	Average 1995–2001	Average 2002–2008	2009	2010
Czech Republic	1.6	5.4	– 11.5	0.2
Hungary	6.5	2.9	– 11.0	– 9.7
Poland	8.6	9.0	– 1.3	– 0.1
Slovakia	5.7	6.3	– 19.7	12.4

Source: Eurostat, last accessed on 21 November 2011.

Figure 5.3



whether these distortions can be eliminated in the years ahead.

Finally, if TFP growth is driven by technology adoption, and technology adoption requires investment, then declining investment can be a source of lower TFP growth. Table 5.4 shows that the growth of fixed investment was relatively high in Hungary compared to the other Visegrad countries in 1995–2001, but was lowest in 2002–2008.<sup>12</sup> Moreover, Hungary experienced the largest fall in investment in 2009–2010, and the quarterly data suggest that this fall in investment continued into 2011. To the extent that investment itself is a source of TFP growth, the declining investment in Hungary may constitute an explanation of low TFP growth.

### 5.3 Labour market trends

The Hungarian labour market is characterised by a moderate unemployment rate, a relatively low participation rate and flexible labour market institutions. The left panel in Figure 5.3 shows the evolution of unemployment, whereas the right panel illustrates the participation rates in the Visegrad countries. The Hungarian unemployment rate hovered around 7.5 percent between 1995 and 2008, which is not particularly high in Europe. The Czech unemployment

rate remained below 9 percent between 1993 and 2010. In Poland and Slovakia, on the other hand, unemployment increased drastically in the late 1990s, remaining above 15 percent for several years and only dropping after 2005. However, it increased again due to the impact of the financial crisis of 2008.

The Hungarian labour market is flexible.<sup>13</sup> Union coverage is low and declining, and the unions have little power. Hungary's employment protection index is also the lowest in the region, while hiring and firing costs are low by international comparison.

The adjustment of wages is also relatively easy.<sup>14</sup>

The more striking feature of the Hungarian labour market is displayed in the right panel of Figure 5.3. Labour force participation is significantly lower in Hungary than in other Visegrad countries. It fell from about 65 percent in 1993 to about 58 percent in 1997. It subsequently increased, but still stood at a low 62 percent in 2010. Labour force participation was in 2010 in the Czech Republic and in Slovakia about 8 percentage points higher than in Hungary. The rapid initial decline of participation in Hungary can be primarily explained by two factors: privatisation that affected labour demand, and pension and benefit policy that affected labour supply.

Privatisation in Hungary led to a change in the composition of labour demand: demand for skilled workers increased relative to demand for unskilled workers. Unlike some other Central and Eastern European countries, Hungary did not adopt a mass privatisation scheme whereby state assets were distributed among its citizens. Instead, it sold its assets on a case-by-case basis to investors, primarily foreigners. This led to increased competition among firms and generated a massive restructuring and a reallocation of resources across different activities. This can also be seen in Figure 5.2, which shows reallocation among broad

<sup>12</sup> Note that figures in Table 5.4 measure the growth rate of investment. In contrast, Table 5.3 measures the contribution of growth in capital services to the growth rate in GDP per hour worked. Although growth in capital services is related to investment, the figures across the two tables are not directly comparable. Hence it is possible that the contribution of capital services to the growth rate in GDP per hour worked is high, while the growth rate of investment is low in the same period.

<sup>13</sup> See Köllő (2011) for a discussion.

<sup>14</sup> Kátay (2011) finds that Hungary has the lowest downward real wage rigidity among the European countries that participated in the International Wage Flexibility Project (IWFP). It also has lower than average downward nominal wage rigidity. The IWFP was sponsored by the European Central Bank and its goal was to provide micro-economic evidence of the costs and benefits of inflation in labour markets for a number of advanced economies.

sectors. Between 1990 and 1995 employment in Hungary fell by 10 percentage points in agriculture and by 4 percentage points in industry. During this process a lot of jobs, primarily low skilled ones, were destroyed. *Ceteris paribus* this shifted labour demand towards skilled workers. Secondly, the new owners invested in modern technology inducing a rapid skill-biased technological change, which also shifted labour demand towards skilled workers.<sup>15</sup> If only these factors affecting labour demand were at work, however, we would expect the employment rate to eventually recover, since they are transitory factors associated with the restructuring of the Hungarian economy from a centrally planned to a market economy.

There is, however, a second factor that negatively affects labour supply and contributes to the low participation rate in Hungary, namely the pension and benefit policies of successive governments. Until 1996 the legal retirement age was 55 for women and 60 for men. After 1996, the legal retirement age was gradually increased to 62 for both sexes. The retirement age is 62 for men as of 2001 and the same age for woman as of 2009. This is still relatively low by international standards. Furthermore, with a sufficiently long employment history, it was possible to retire up to three years earlier than the legal retirement age with

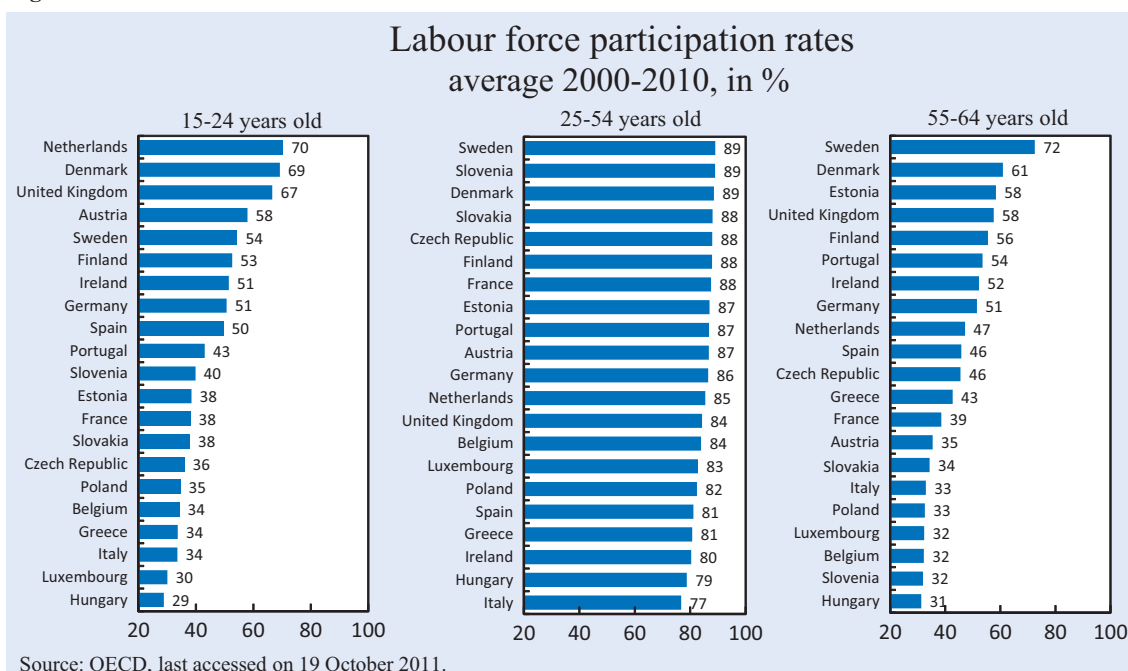
no or little penalty in terms of a lower pension. Not surprisingly, the average effective retirement age in Hungary was about two and a half years lower than the legal one according to OECD data. In addition, there was also the option of retiring on health grounds and drawing disability pension, which was the equivalent to a regular old age pension after 25 years of work. Cseres-Gergely (2007) estimates that the financial incentive built into the pension system had a significant impact on labour supply among the older population. One of the driving forces behind the rise in labour force participation after 1996, depicted in Figure 5.3, was the gradual rise of the retirement age.<sup>16</sup>

The transition to a market economy and privatisation may explain the sharp drop in the participation rate in the first half of the 1990s, while anomalies in the pension system may account for the lower participation rate among 55 and 64 year olds. However, Figure 5.4 indicates that there must be other factors affecting labour force participation in Hungary. The diagram breaks down labour force participation into three age groups: 15–24 years old, 25–54 years old and 55–64 years old. In addition, it shows the average labour force participation in each group over

<sup>15</sup> Kézdi (2002) documents a sharp rise in skill premium during the 1990s. He also documents that there was an additional premium not captured by measuring education levels for working at a foreign-owned company.

<sup>16</sup> Kátay and Nobilis (2009) provide a full decomposition of rising labour force participation into different explanatory factors. They found that, in addition to transfers, demographic factors and education play an important role in explaining changes in labour participation in Hungary. Among transfers, old age pension is the most important.

Figure 5.4



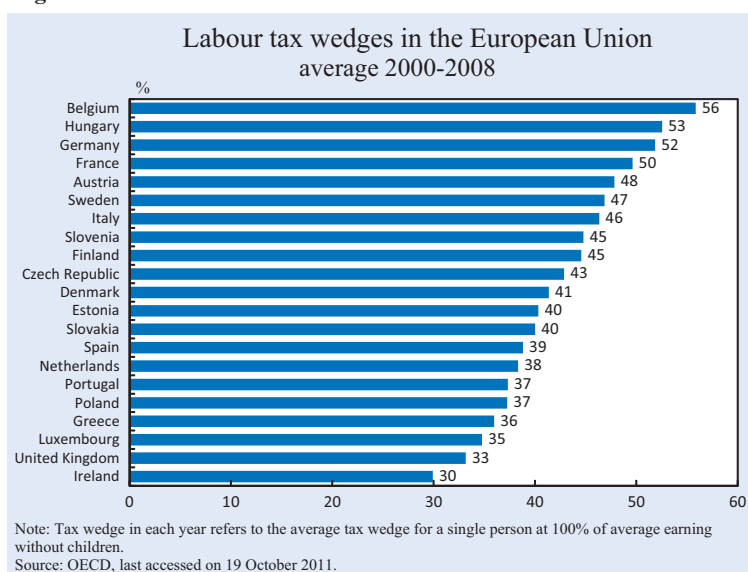
2000–2010 across EU countries. The figure shows that, in terms of labour force participation, Hungary ranks lowest both in the young and in the old age group, and second to last in the prime age, 25–54 years old group. The variation within the prime age group is significantly smaller than in the others. The lowest participation rate is 77 percent and the highest is 89 percent. The participation rate in Hungary nevertheless remains 6 percentage points lower than the median of the group. This difference is 11 percentage points in the young and 15 percentage points in the old age group.

A more disaggregated accounting for cross-country differences in labour force participation reveals that Hungary's lower participation rate is mainly due to three welfare dependent subgroups: the low skilled, the working age population aged fifty or over and women of child-bearing age.<sup>17</sup>

One of the key questions facing Hungarian policy makers is how to increase labour force participation. Higher employment would increase income in Hungary relative to the old EU member states for a given level of labour productivity. It would also increase the tax base and reduce government expenditure on benefits and pensions. Here we discuss two policy instruments: taxes on labour and the minimum wage. Let us begin by looking at taxes on labour. The stylised facts on this topic are summarised in Figure 5.5 which shows the average labour tax wedges for 21 EU countries. The tax wedge measure is defined as the difference between the total labour cost to the firm and take-home pay, as a fraction of the former. Hungary has the second highest average tax wedge after Belgium. The other Visegrad countries are behind Hungary by at least 12 percentage points in terms of average tax. In 2011 the wedge declined due to the introduction of a flat income tax at a 16 percent rate, but it will rise again in 2012 due to the increase in labour related taxes levied on firms.

The average tax wedge is a measure of the total tax burden on labour. The greater that wedge is, the lower

**Figure 5.5**



the take-home pay for a given total labour cost. Lower take-home wages reduce labour supply at the extensive margin primarily for younger and older workers. Benczúr et al. (2011) estimate a structural model of labour supply on Hungarian household surveys to provide more precise estimates of labour supply responses at the extensive margin. They break down the effect of net income changes into changes in take-home wages, taxes and transfers. Firstly, they find substantial heterogeneity in terms of labour supply responsiveness across different subgroups. More importantly, they find that labour supply responsiveness is high in all three subgroups, which account for the most differences in labour force participation between Hungary and other EU countries. Therefore changing the benefit and transfer system or increasing take-home wages are likely to have a significant positive effect on labour supply at the extensive margin, and hence on participation.

The effect of a minimum wage on the labour supply is ambiguous. An increase in the minimum wage raises the take-home wage, but lowers the probability of finding work because firms are less likely to hire at the higher minimum wage. The overall effect on expected wage and hence on labour supply is ambiguous. Minimum wage usually affects unemployment, but it can also impact participation through the discouraged worker effect. However, the effect of minimum wage on labour supply is non-standard in Hungary<sup>18</sup> as in several other Central and Eastern European

<sup>17</sup> See National Bank of Hungary (2008). As far as the labour supply of woman is concerned, it is important to note that the benefit per child relative to GDP per capita in Hungary is the highest among OECD countries. Hence, there is a strong incentive for women of child-bearing age to drop out from the labour force. See Bálint and Köllő (2008).

<sup>18</sup> Hungary has a two-tier minimum wage system. Minimum wage applies to unskilled workers, and the so called wage minima, which is higher than the minimum wage, applies to skilled workers with a well-defined educational degree.

countries. The reason for this is that in these countries the minimum wage interacts with tax evasion. Firms and workers may decide to under-report worker's earnings to avoid taxes and social security contributions. In this case, workers receive cash-in-hand wages in addition to their reported wages. Minimum wage legislation affects the decision about how much of workers' earnings could be reported i.e., firms have to report at least the minimum wage.<sup>19</sup>

Tonin (2011) provides a theory and evidence as to the effect of such interaction on employment and take-home wages. He constructs a model whereby minimum wage and tax evasion interact. Firstly he shows that wages are underreported resulting in a large fraction of workers reporting the minimum wage. Secondly, he also shows that an increase in the minimum wage is equivalent to an increase in labour income tax. This is because a rise in minimum wage increases the fraction of workers' earnings that has to be reported, and hence increases the proportion of these earnings subject to taxation and social security contributions. To provide empirical evidence, he analyses changes in the food consumption of households affected by the 2000–2001 minimum wage hike<sup>20</sup> compared to those unaffected. He finds that food consumption fell in the treatment group relative to the

<sup>19</sup> Such under-reporting is relatively wide spread in Central and Eastern Europe. According to a recent European Commission Report (see European Commission 2007), 8 percent of Hungarian workers reported receiving cash-in-hand wages in the previous twelve month period. Other Central and Eastern European countries had similar or higher figures. In contrast, only one percent of workers in Germany, France or United Kingdom reported such incidents.

control group. This fact is consistent with a decline in take-home wages due to the minimum wage hike. This has a negative effect on labour supply.

Direct evidence of the employment effect of the minimum wage in Hungary can be found in Kertesi and Köllő (2002). They estimated a significant negative effect of the minimum wage hike on employment at small firms, but did not find a significant effect at large firms. The reason for this difference is that 37.5 percent of employees at firms with 5–10 employees, 28.2 percent of employees at firms with 11–20 employees, and 17.2 percent of employees at firms with 21–50 employees were paid the minimum wage.<sup>21</sup> Hence a minimum wage hike affects the take-home wage of a much larger proportion of workers at small firms than at their large counterparts. Thus, the finding of Kertesi and Köllő (2002) is consistent with the theory of Tonin (2011).

#### 5.4 Fiscal policy

Hungary has been under the Excess Deficit Procedure of the European Union ever since it joined the

<sup>20</sup> The 2000–2001 minimum wage hike was drastic. When the minimum wage hike was announced in 2000, 32.7 percent of total private sector employees earned less than the new minimum wage (see Elek et al. 2011, p. 5). Over this two-year period the minimum wage doubled in nominal terms, and increased by more than 50 percent in real terms. The minimum wage had risen by 20 percent in nominal terms by January 2012, which amounts to an increase of around 13–15 percent in real terms.

<sup>21</sup> The figures are from a wage survey in 2003. See Table 5 in Elek et al. 2011, p. 30. Please also note that this fact means that there is a spike in the wage distribution at the minimum wage as the theory of Tonin (2011) predicts.

#### Box 5.1

##### Hungarian experiment with the Fiscal Council

The Hungarian Parliament passed a Fiscal Responsibility Act in 2008, which called for a Fiscal Council, an independent fiscal watchdog, to be established. The council had three members nominated by the President of the Republic, the Governor of the National Bank of Hungary, and the President of the State Audit Office and confirmed by the parliament for a non-renewable tenure of nine years. The council had its own analysts (Office of the Fiscal Council) and was required to evaluate the consequences of the budget bill, to prepare macroeconomic and fiscal forecasts and to scrutinise whether the budgetary practice of the government was consistent with the accounting principles described in the Fiscal Responsibility Act. The council was also required to assess quantitatively the effect of any legislative proposal with budgetary implications, including the effects of structural reforms. However, it did not have the legislative power to enforce its assessment. It relied on communication and the dissemination of information concerning the implications of the proposals as an enforcement instrument.

After the 2010 elections, the new government, having won a two thirds majority in Parliament, abolished the Office of the Fiscal Council and narrowed the council's remit to the requirement that the council state its broad opinion on the budget bill. The composition of the council also changed. The President of the Republic now appoints the Chair for a six year term on a part-time basis, and two other members are the Governor of the central bank and the President of the State Audit Office. The new constitution passed in 2010 limits the public debt to 50 percent of GDP and the Fiscal Council also has to judge whether the budget bill satisfies constitutional requirements.



**Box 5.2****Constitutional ceiling on general government debt in Hungary**

In spring 2011 a new constitution was passed which came into effect on 1 January, 2012. It puts a ceiling on the general government debt at 50 percent of GDP. In addition, it stipulates that if the debt-to-GDP ratio exceeds 50 percent, the parliament cannot pass a budget bill for the central government that would lead to an increase in the debt-to-GDP ratio. The government can deviate from this rule if the economy is in a prolonged and deep recession. On December 23, 2011 the parliament passed a Financial Stability Act. It stipulates that if GDP declines in real terms, it should be understood that the economy is in a prolonged and deep recession. It also requires that, as long as the debt-to-GDP ratio exceeds 50 percent, the growth rate of nominal debt cannot exceed the difference between inflation and half of the growth rate of real GDP. However, this formula will not come into effect until 2015.

2006, fiscal adjustment was necessary. As part of the adjustment program, the Parliament passed the Fiscal Responsibility Act in 2008, establishing an independent Fiscal Council. After winning a two thirds majority in April 2010, the new centre-right government abolished the council in its existing form and set up a new body. In particular, the new Fiscal Council was stripped of its staff and its remit was drastically narrowed. Without independent forecasts and analyses, it is impossible for the new council to provide the kind of fiscal transparency and

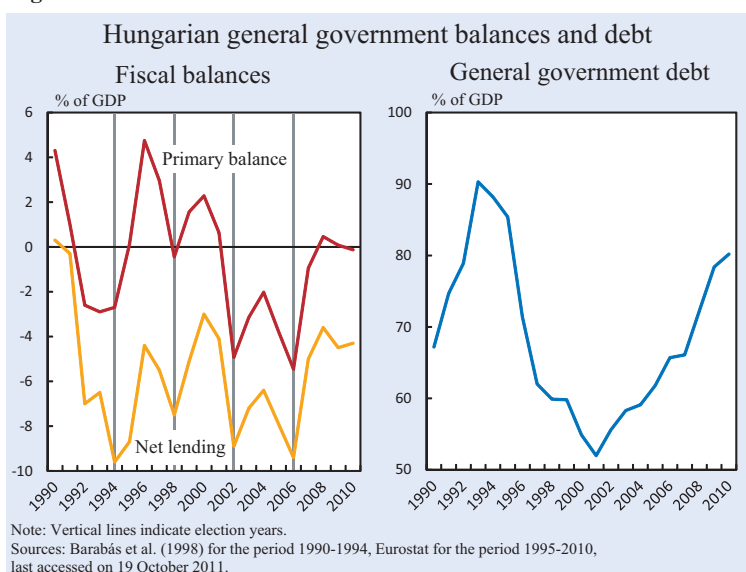
European Union in 2004. The left panel in Figure 5.6 shows the evolution of its deficit since 1990. As we can see, there is a strong election cycle in fiscal policy: the deficit increased significantly prior to every single election since 1990. This very strong election cycle was broken by the financial crisis in the run up to the 2010 election, when a politically weak government continued to implement the fiscal consolidation program started in 2007. In addition, very little fiscal correction took place after the 2002 election, hence the general government deficit exceeded 5 percent of GDP until 2007 and was accompanied by a rapid accumulation of public sector debt between 2001 and 2007.

Hungarian fiscal institutions are unable to credibly commit politicians to a sustainable fiscal policy. This fact is highlighted by the experiment with a Fiscal Council in Hungary (see Box 5.1). As a result of the deterioration in government finances in 2005 and

evaluation of sustainability that the original council was able to. For example, the three members of the Fiscal Council approved the budget proposal for 2012 with a two-to-one majority,<sup>22</sup> while the European Commission expressed strong reservations.<sup>23</sup>

In addition to creating a weak Fiscal Council, the Hungarian parliament passed a new constitution, which limits the debt-to-GDP ratio to 50 percent (see Box 5.2).<sup>24</sup> The problem is that the actual debt-to-GDP ratio according to Figure 5.6 is over 80 percent. The legislation stipulates that the Parliament pass budget proposals aimed at reducing public debt levels. In addition, it instructs the Fiscal Council to evaluate whether or not the proposed budget fulfils this criterion. However, the new Financial Stability Act passed subsequently weakened the constitutional requirement by making the debt ceiling applicable from 2015 onwards, and stipulating that it does not apply when-

ever GDP declines. Enshrining fiscal rules in the constitution can help to make fiscal policy sustainable and restore its credibility. However, without independent monitoring, evaluation and forecasting as conducted by the

**Figure 5.6**

<sup>22</sup> The two members of the council who approved the proposal have recently been appointed and have close ties to the government.

<sup>23</sup> The European Commission's Excessive Debt Procedure report on Hungary published on 11 January 2012 states that the structural deficit in 2012 will exceed the 3-percent-of-GDP Treaty threshold. In addition, the assessment of the European Commission is that "no effective action has been taken to bring the deficit below 3 percent of GDP in a sustainable manner".

<sup>24</sup> A debt limit in the constitution is not particularly meaningful economically. It specifically implies a strong pro-cyclical fiscal policy.

Hungarian Fiscal Council in its original form, it is hard to see how one can credibly verify whether the government actually follows those rules.<sup>25</sup>

Despite the lack of a commitment device, significant fiscal adjustment took place in 2007–2010 due pressure from the markets and the European Commission. The financial crisis made it impossible for Hungary to continue its ill-disciplined fiscal policy, as borrowing became more difficult and costly. However, putting the deficit reduction on a solid footing turned out to be a difficult task because of the size of the public sector in Hungary. There are few criteria to judge whether the size of the public sector is small or large, but one of empirical regularity is that its size tends to increase with average income levels. Figure 5.7 plots the government expenditure-to-GDP ratio against the log of per capita GDP for countries in the European Union. The size of the Hungarian public sector appears to be larger than would be implied by its income level.<sup>26</sup> The graph also reveals that only five countries in Europe had larger public sectors than Hungary over the period between 2000 and 2008. In addition, the public administration in Hungary is one of the least efficient in the OECD countries.<sup>27</sup> Hence downsizing the government in Hungary can potentially lead to efficiency gains.

Despite fiscal consolidation efforts since 2007, government expenditure remained high. The implied high overall tax burden and the inefficiency of government spending may be one impediment to economic growth in Hungary. In addition, the strong election cycle increases volatility in aggregate demand. The higher aggregate uncertainty in the economy generated by

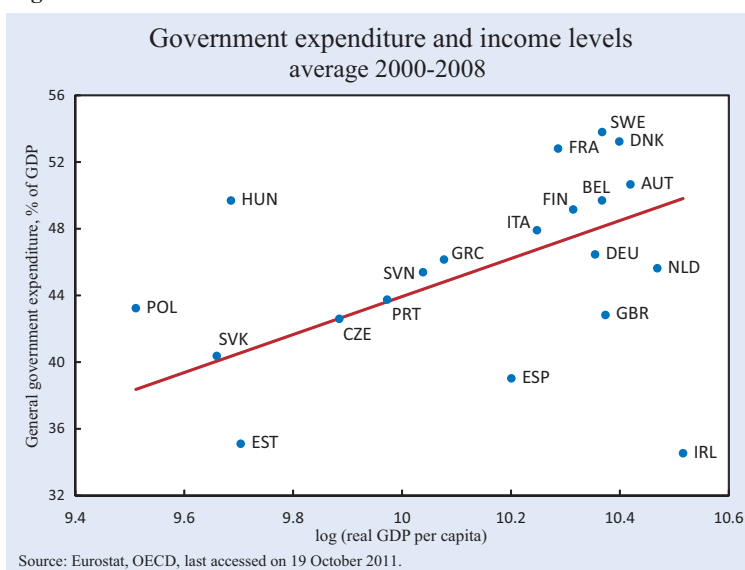
fiscal uncertainty is another impediment to economic growth.

## 5.5 Financial crisis and bail-out

The financial crisis of 2008 hit Hungary early on, leading the country to request IMF assistance in late October 2008. It is easy to see why Hungary felt under pressure at that time. Figure 5.8 plots the net external debt of a number of emerging countries (public and private) against their public debt. At the end of 2007 most emerging economies either had high external debt or high government debt. Hungary was the only country with both high external and high government debt.

High external debt makes a country financially vulnerable, particularly if a substantial fraction of that debt is denominated in foreign currency. It has been argued, and also documented, that private sector debt, particularly bank debt, is a contingent liability of the government. In times of crisis, the government is likely to bail-out the private sector.<sup>28</sup> If the country's external debt is high but government debt is low, the government has the ability to bail-out the private sector when an adverse external shock hits the private sector's balance sheet. However, if both external and the public debt are high, then the government may be unable to bail-out the private sector or if it does, it may default soon afterwards unless there is external assistance in place.<sup>29</sup> The international financial crisis found Hungary in such a financially vulnerable state in October 2008.

**Figure 5.7**



We discussed above how Hungary accumulated a relatively high level of public debt prior to 2008. We will now proceed to explain the origin of this high external debt. During the run up to accession to the European Union, Central and

<sup>25</sup> See Calmfors and Wren-Lewis (2011) for an overview of what fiscal councils do, and why the change in Hungary is a poor example of the development of fiscal councils.

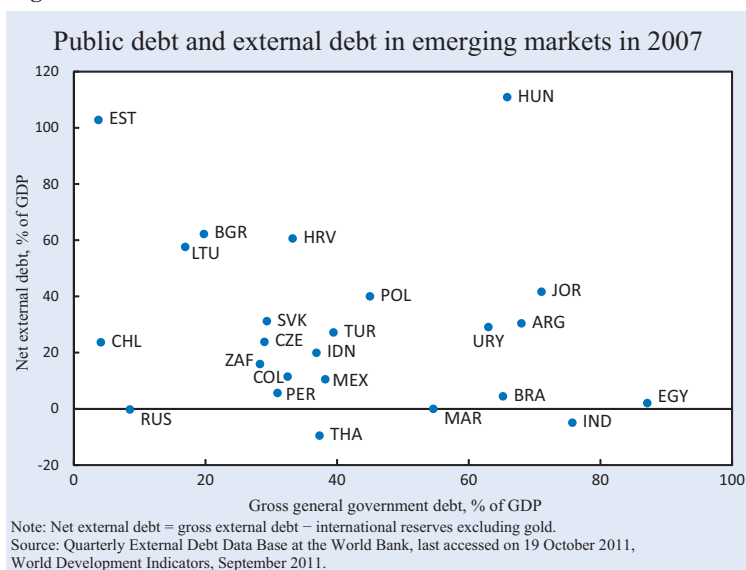
<sup>26</sup> Income level is not the only factor, which may affect the size of the public sector. See Rodrick (1998).

<sup>27</sup> OECD (2010).

<sup>28</sup> This idea was originally emphasised by Diaz-Alejandro (1985), and later formally modelled by Velasco (1987). More recently, Kaminsky and Reinhart (1999) and Reinhart and Rogoff (2010, 2011) presented evidence, which is consistent with this contingent liability hypothesis.

<sup>29</sup> Reinhart and Rogoff (2010) document that high external debt is a good predictor of sovereign default.

Figure 5.8



foreign currency borrowers were firms, and even that stock did not exceed 10 percent of GDP. In contrast, the foreign currency debt-to-GDP ratio in Hungary reached 30 percent, which means that about half of the credit to the private sector was denominated in foreign currency. In the case of households, foreign currency debt amounted to almost 70 percent of total household debt in Hungary at the onset of the financial crisis in September 2008. Macro-prudential regulation in Hungary failed to address the problem of systemic risk generated by foreign currency loans, which made Hungary vulnerable.<sup>31</sup>

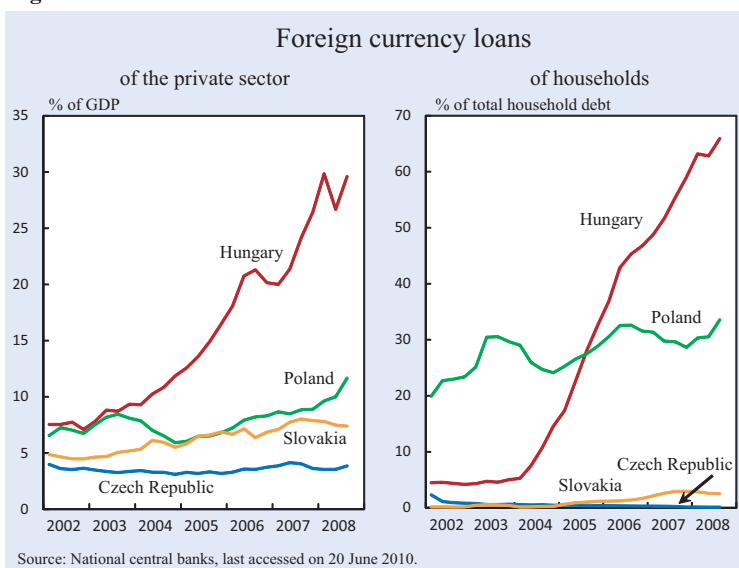
Eastern European countries liberalised capital movements. Privatisation in the corporate and the banking sector led to a large presence of multinationals in Hungary. These multinationals had easy access to international capital markets. In particular, banks funded at low costs by their parent banks offered low-cost mortgage loans to households denominated in foreign currencies, primarily in Swiss francs. Underestimating exchange rate risk, firms and households, particularly liquidity-constrained households to which the size of their monthly payment was important, borrowed in foreign currency.<sup>30</sup> As a result, Hungarian households built up a large unhedged foreign currency position. The difference between this currency mismatch and that built up in East Asia in the 1990s is that this mismatch did not appear explicitly on the banks' balance sheets.

The large stock of foreign currency loans created a new channel for the exchange rate to have a significant direct effect on the balance sheet of the private sector. To see how hard the private sector in Hungary was hit by the depreciation of its currency after September 2008, we can consult Figure 5.10, which displays the exchange rate of the forint, vis-à-vis the euro and the Swiss franc. Between September 2008 and March 2009, the forint depreciated by 24 percent relative to the euro and 34 percent relative to the Swiss franc. The euro exchange

<sup>31</sup> IMF (2011) provides a broad overview of the problem of foreign currency loans during the current financial crisis.

Figure 5.9 gives an idea of the problem in Hungary. The left panel shows total foreign currency loans relative to GDP, while the right panel shows the foreign currency loans of households relative to total household debt between 2002 and September 2008. Firstly, we see that foreign currency loans featured in all four Visegrad countries. However, in the Czech Republic and Slovakia the dominant

Figure 5.9



<sup>30</sup> See Csajbók et al. (2010), Rosenberg and Tirpák (2008), Brzoza-Brzezina et al. (2010) and Ranciere et al. (2010).

rate has not changed too much since; but the depreciation of the forint vis-à-vis the Swiss franc between September 2008 and November 2011 reached 66 percent. Ceteris paribus the foreign-currency-loans-to-GDP ratio would have risen from the 30 percent of GDP in the third quarter of 2008 shown in Figure 5.9 to almost 50 percent of GDP. Moreover, the depreciation also led to a significant rise in monthly repayments over time and an increase in loan delinquency. In addition, Hungarian banks face a rollover risk. Banks primarily lent in Swiss francs because the demand for Swiss franc loans was higher than the demand for euro loans due to the lower interest rate on Swiss franc loans. The banks, however, were holding funds in euros. They swapped their euro funds for Swiss francs on the swap market. These swap contracts needed to be rolled over periodically since their maturities were shorter than the maturities of the mortgage loans. As the international financial market came under growing strain in autumn 2008, however, the maturity of the swap contracts drastically shortened, requiring more frequent rollovers and increasing the rollover risk. Finally, the Hungarian sovereign did find it increasingly difficult to issue bonds; thus increasing the rollover risk of the sovereign. All in all, both the default risk of households and the rollover risk of banks and the sovereign made it potentially worthwhile to withdraw Hungarian assets. Such a run manifested itself in a sharp depreciation of the currency in October 2008. Eventually Hungary turned to the IMF, which together with the EU Commission provided a 20 billion euro bail-out.

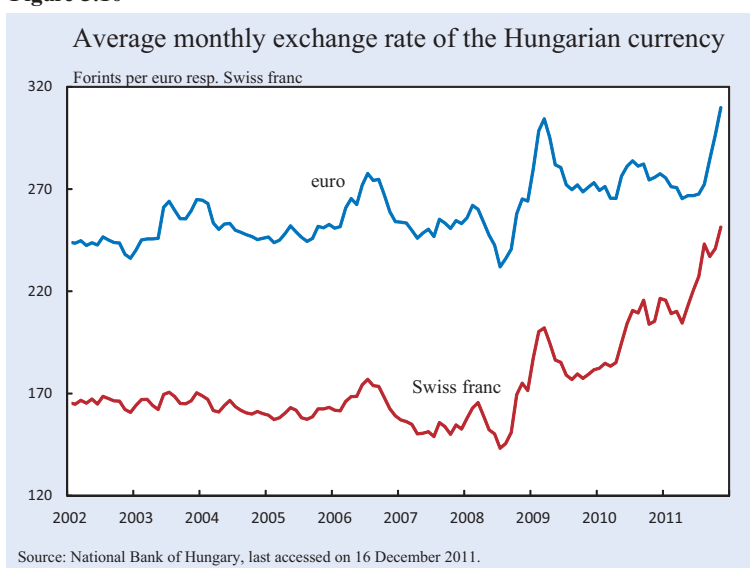
### 5.6 Recent policy measures and their probable long-term impact

The centre-right government won a two thirds majority in the 2010 election and embarked on a series of unorthodox policy measures. These policies are unorthodox in the sense that most of them are usually not implemented in developed countries, but they are not unorthodox in the sense that they are new or particularly innovative.

To keep the budget deficit on target in 2010, the new government introduced exceptional taxes on the financial, telecommunication and the retail industries, which are predominantly foreign-owned. Taxes on the financial sector were based on past assets and about an order of magnitude higher than taxes discussed in Europe. To boost economic growth, the government cut the corporate tax rate for small and medium size enterprises. More importantly, in 2011 it introduced a 16 percent flat tax rate on wage income. To support this drastic tax cut, private pensions were nationalised at the beginning of 2011, and the assets of the pension funds, among others, were used to cover the revenue shortfall in 2011. The government also announced a plan to cut expenditure of which relatively little had been implemented by the end of 2011. Since economic growth did not increase and tax revenues did not rise, the Hungarian government announced an increase in the VAT rate from 25 percent to 27 percent, as well as increases in the social security contributions paid by firms and several other taxes in 2012.

The government also aimed to solve the problems of the foreign exchange mortgage loans. Firstly, it introduced a temporary moratorium on the repossession of real-estate whose owners had fallen behind mortgage payments. It also passed several pieces of legislation in order to ease the problems of foreign currency debtors (see Box 5.3). More specifically, a legislation passed in September 2011 unilaterally changed the terms of all foreign currency loan contracts by allowing debtors to make a one-off repayment of their loan at a discounted exchange rate. The costs of this scheme are to be born entirely by

Figure 5.10



**Box 5.3****Dealing with the problems of foreign currency loans**

During 2011, the Hungarian government introduced a series of measures to ease the problems faced by households with foreign currency loans. The three schemes below now run concurrently.

1. The government and representatives of the financial sector agreed on an exchange rate protection scheme in which households could participate from mid-August 2011. Under this scheme the monthly repayments of foreign currency loans are calculated at a discounted fixed exchange rate (250 forints per euro, 180 forints per Swiss franc) until the end of 2014. The difference between the repayment at the market and the fixed exchange rate is accumulated as a local currency debt of the household on which it pays the interbank rate. Repayment of such loans does not start until 2015.

2. In September 2011 the government, without consulting representatives of the financial sector, passed legislation enabling households which could afford to do so to make a one-off repayment of their foreign currency loans can do so at a discounted exchange rate of 250 forints per euro and 180 forints per Swiss franc between mid-September 2011 and the end of February 2012. The banks are to bear all of the losses resulting from these transactions.

3. The government and representatives of the financial sector agreed in mid-December 2011 that:

a) in cases where the foreign currency mortgage debtor with loans is delinquent for more than 90 days, its loan will be converted into local currency and 25 percent of the loan will be cancelled by 15 May 2012, provided that the value of the real-estate serving as collateral did not exceed 20 million forint when the mortgage loan contract was concluded. Banks can deduct 30 percent of the losses due to this cancellation from the exceptional taxes they have to pay in 2012.

b) Foreign currency mortgage debtors with loans delinquent for less than 90 days can apply to participate in the exchange rate protection scheme until the end of 2012. This scheme is like the exchange rate protection scheme discussed above with two important differences. Firstly, the household pays no interest on the local currency debt accumulated due to the difference between the market and the discounted fixed exchange rate. The loss due to the interest free nature of this debt is shared equally between the banks and the government. Secondly, the repayment of this loan will not start until 2016.

the banks. In mid-December 2011 the government and the banks agreed on additional arrangements to ease the problems of foreign currency debtors. The cost of these new arrangements was shared between the government and the banks. None of these arrangements has led to bank failures so far, but they have certainly worsened the banks' capital positions. Banks can adjust to this by either raising capital or reducing their balance sheet. They appear to be doing both in Hungary. The reduction of balance sheets implies slow or even negative credit growth in the near future, which is likely to have a negative impact on growth.

Introducing flat taxes has its merits. Several Central and Eastern European countries followed this course during the boom years. However, introducing flat taxes during a recession is unwise because it may have short-run recessionary effects. This is because moving to a flat tax reduces the net income for low income, high-propensity-to-consume households who faced a lower tax rate before the reform, and increases the net income for high income, low-propensity-to-consume households. This effect was likely to be strong in Hungary where the minimum wage was tax-free

before the reform. The beneficial effect of lower labour taxes may materialise in the longer run once labour supply has adjusted to the lower taxes, but this is of little help in the short run. Taxing the financial sector so heavily during such a deep recession and a financial crisis also slows down economic growth – one does not want to increase the cost of credit in a situation where it is feared that there might be a credit crunch. Such fiscal consolidation measures may backfire as they ultimately make it more difficult to meet the deficit target that investors view as sustainable. Doubts about the Hungarian government's ability to bring deficits and public debt under control are reflected in the gradual rise of Hungary's CDS spread since mid-2011 (see Figure 5.11). Reflecting the higher sovereign risk, the rating agency Moody's downgraded Hungarian government bonds below investment grade on 25 November 2011, which was followed by a downgrade by Standard & Poor's on 22 December 2011.

The rapid deterioration in the outlook of the sustainability of Hungarian government debt forced the government to call for IMF assistance once again. This marks an important policy shift in Hungary because

the government had refused to communicate with the IMF after September 2010. However, events and the consequences of its policies finally forced it to resume talks. However, it is unclear at the time of writing (15 January 2012) under what conditions the IMF together with the European Commission is willing to step in with a new loan. One of the reasons is that the European Commission objects to several pieces of recent government legislation including the Financial Stability Act and the National Bank of Hungary Act. The proposed changes in the latter are viewed as a serious infringement of central bank independence.<sup>32</sup> However, the Hungarian government has made it clear that it has no intention of changing the proposed legislation. Both pieces of legislation were passed by the Hungarian parliament by the end of December 2011.<sup>33</sup>

The Hungarian government's policies do not seem to address the main problems of the Hungarian economy, and may actually make them worse. Firstly, sector specific taxes will increase rather than decrease distortions, which are a prime suspect for low TFP growth in Hungary. Secondly, flat taxes will not reduce the average labour tax wedge because the reduction in revenues is compensated for by higher social security contributions. This will not help to increase labour force participation. Thirdly, over-taxing the financial sector leads to lower growth and makes the recovery from recession even longer. Finally, and probably most importantly, nationalising private pensions, as well as the invalidation of private contracts by governments (as in the above mentioned forced conversion of foreign

currency contracts) increases expropriation risk and undermines property rights. This may act as a deterrent to investment in the long run and hence reduce growth. Moreover, the collective reputation of Europe as a whole may suffer as a result of some member countries not playing by the rules of the Single Market.

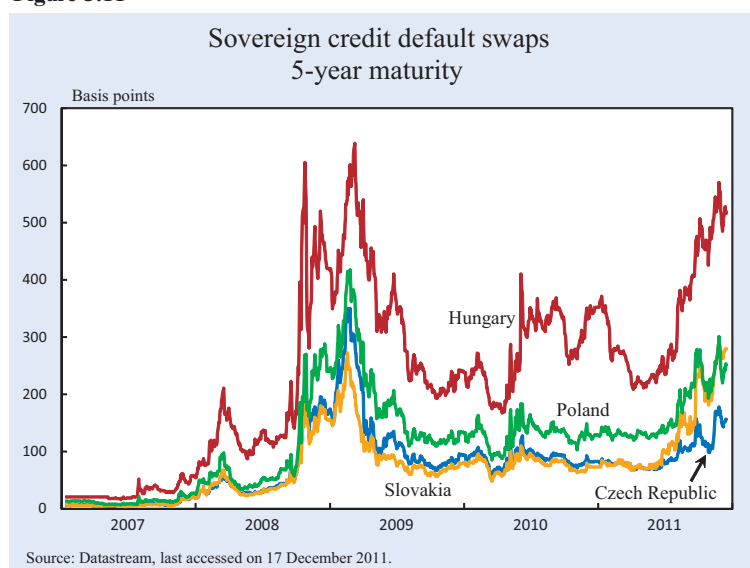
## 5.7 Conclusions

Hungary was initially the front-runner of market reforms in Central and Eastern Europe, but by the end of the 2000s its economy showed serious structural problems, which manifest themselves in slow growth, low investments and low labour force participation. Moreover, its fiscal institutions do not appear to be strong enough to eliminate the electoral cycle in government spending. The financial crisis hit its economy the hardest among the Visegrad countries. We can draw several lessons from the Hungarian crisis.

Firstly, a fiscal policy that varies strongly with the election cycle may sufficiently increase uncertainty in an economy to have a negative effect on investment, which ultimately reduces total factor productivity and economic growth. Hence the creation of a fiscal framework that ensures prudent and sustainable fiscal policies is not only important to avoid financial crises, but is also important to ensure sustained growth. The Excess Deficit Procedure of the European Union was unable to enforce fiscal discipline in Hungary or in other EU member states. The Hungarian crisis indicates that an independent national fiscal watchdog may be an important component of an effective fiscal framework. Such a watchdog probably acted as an effective constraint on fiscal policy in the case of Hungary. If it had not, the Hungarian government would not have abolished it after it criticised the government's budget for over-optimistic assumptions and a lack of transparency.

<sup>32</sup> The European Central Bank also expressed its strong reservation about the proposed National Bank of Hungary Act.  
<sup>33</sup> On 17 January 2012 the European Commission started accelerated infringement proceedings against Hungary over three issues including the independence of its central bank.

Figure 5.11



Secondly, the absence of labour market rigidities does not necessarily ensure positive labour market outcomes. Recurrent fiscal problems keep taxes on labour high, which ultimately make take-home wages low. This can have a negative effect on labour supply, and eventually on labour force participation. Minimum wage legislation interacting with tax evasion can have similar effects. This, in turn, keeps government expenditure on transfers to those out of the labour force high because it is difficult to change politically. The equilibrium of high labour taxes, low labour force participation and high transfers can be difficult to change.

Thirdly, a financial crisis and a perilous fiscal position often lead to government policies, which are not conducive to long-term growth. For example, sovereign crises are often followed by financial repression in developing countries during which the government raises revenues from the financial sector. This reduces credit growth, which has a negative effect on growth.<sup>34</sup> The Hungarian government introduced exceptional taxes on the financial sector, which is likely to have a negative effect on economic growth. In addition, the Hungarian government also introduced other measures, which undermined property rights and private contracts. Strong economic institutions are crucial to prevent governments from introducing such policies. These institutions were not strong enough in Hungary. Hence its longer-term growth is likely to suffer.

Finally, Hungary has implemented several policy measures since mid-2010, which were greeted by strongly-worded protests from the European Commission and the European Central Bank. These measures were nevertheless implemented. In particular, the Hungarian government turned down a specific request from the European Commission in December 2011 to put on hold two pieces of legislation until further consultation. This highlights that the European Union lacks mechanisms to enforce “good behaviour” on the part of its member states in the short run. Hence actions undertaken by some member states may have negative spill-over effects on other members.<sup>35</sup> Without enforcement mechanisms, it is hard to see how the European Union can handle a crisis more effectively the next time one occurs.

<sup>34</sup> As long as firms are credit constrained, economic growth and credit growth are linked. See Levine (2005) for an overview.

<sup>35</sup> The change of the terms of the foreign currency loan contracts in Hungary leads to losses for banks in Hungary, but also for their parent banks in other countries, which undermines their financial stability as well.

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