SHORT TERM UPDATE

3-10

Quarterly Newsletter
October 2010

Headlines Belgian Economy

Special Topic in this issue
The Europe 2020 strategy for Belgium
Quarterly Newsletter of the Federal Planning Bureau

Short Term Update (STU) is the quarterly newsletter of the Belgian Federal Planning Bureau. It contains the main conclusions from the publications of the FPB, as well as information on new publications, together with an analysis of the most recent economic indicators.

HEADLINES BELGIAN ECONOMY

Since mid-2009, the world economy has been recovering from one of the worst post-war economic crises. As of mid-2010, world economic growth should slow down as stimulus measures are gradually reduced or phased out and stock building becomes less of a support to economic growth. Moreover, western economies now face major challenges in restoring health to public finances. As a result, the international context remains surrounded by major uncertainties, with downside as well as upside risks.

During the second half of 2009, the Belgian economy posted positive quarterly growth rates driven by recovering exports and an acceleration of private consumption growth. In 2010Q1, the economic recovery was, however, interrupted due to a drop in construction activity owing to the cold weather. Strong GDP growth in 2010Q2 (0.9%) was in turn partly due to a catch-up by the construction sector, but exports boomed as well because of the strong growth of the German economy. In line with the international business cycle, qoq GDP growth should decelerate to 0.3% on average during the second half of 2010. In the course of 2011, export growth should pick up again, resulting in average quarterly GDP growth of 0.5% in the second half of the year. On an annual basis, GDP growth should amount to 1.8% in 2010 and 1.7% in 2011.

The past recession has had a smaller impact on domestic employment than initially expected. A temporary strong decrease in hourly labour productivity and in average hours worked per person softened the downward impact on the number of employed persons. Consequently, the net decrease in employment in 2009 was limited to 17500 persons (-0.4%). Hourly labour productivity and average working time should catch up in the course of this year and next year. Combined with a modest economic recovery, the net increase in employment should therefore remain limited to 10100 persons in 2010 and 4700 in 2011. The harmonised Eurostat unemployment rate (which is based on labour force surveys) is expected to increase from 7% in 2008 to 9% in 2011.

During recent years, Belgian headline inflation (as measured by yoy growth of the national index of consumer prices) has primarily been influenced by the evolution of raw materials prices. As from May 2010, underlying inflation has also been creeping up. In the course of the next year, underlying inflation should remain on an uptrend. Nevertheless, consumer price inflation is expected to decelerate somewhat because of the quasi-stabilisation of energy prices. On an annual basis, inflation should drop from 2.1% in 2010 to 2% in 2011.

STU 3-10 was finalised on 1 October 2010

The Federal Planning Bureau (FPB) is a public agency under the authority of the Prime Minister and the Minister of Economy and Reform. The FPB has a legal status that gives it an autonomy and intellectual independence within the Belgian Federal public sector.

FPB activities are primarily focused on macroeconomic forecasting, analysing and assessing policies in the economic, social and environmental fields.
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All FPB publications, mentioned in this STU, can be obtained either by sending a fax (+32 2 5077373) or by filling in the necessary form on our Internet site (http://www.plan.be).
The Europe 2020 strategy for Belgium

During the European councils of March and June 2010, the European Heads of State or government decided on a new European strategy for jobs and growth, called “Europe 2020, a strategy for jobs and smart, sustainable and inclusive growth”. This strategy can be considered as a successor to the Lisbon Agenda, which defined challenges to and structural policies for increasing growth and jobs for the period 2000-2010. This special topic defines the main objectives of the new strategy for Europe as a whole, and possible targets for Belgium.

The Council has defined headline targets in five areas. Each of these targets form objectives for the EU as a whole. Member States will have to define similar national targets, taking into account their relative starting positions and national circumstances, and detailed actions for achieving these targets in their National Reform Programmes (NRP) due in November of this year. The remainder of this article will look at the five areas of headline targets and will present the EU objectives and possible Belgian targets, as suggested by the FPB. As a point of comparison, the weighted average for each indicator of Germany, France and the Netherlands is also included.

**Headline target 1: Employment**

The target is defined in terms of the employment rate for the 20-64 age group. The EU target is set at 75%. Given the starting point in Belgium, it seems reasonable to target for a share below 75% for Belgium. In a “no policy change” scenario, the employment rate in Belgium is expected to be 66.9% in 2010 and 69.8% in 2020. An objective of between 71% and 74% seems possible but is ambitious. The lower bound corresponds to one of the scenarios that the European Commission has calculated for all Member States: to halve the difference between 75% and the expected employment rate for 2010.

**Table 1 - Employment rate, 20-64 years old**

<table>
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<tr>
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<th>2000</th>
<th>2009</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>65.8</td>
<td>67.1</td>
<td>71-74</td>
</tr>
<tr>
<td>Average of GY, FR, NL</td>
<td>69.1</td>
<td>73.2</td>
<td></td>
</tr>
<tr>
<td>EU27</td>
<td>66.6</td>
<td>69.1</td>
<td>75</td>
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</table>

Source: Eurostat, Europe 2020 indicators, based on Labour Force Survey

The upper bound corresponds to the lower bound plus 4%-points for each Member State. An increase in the employment rate from 66.9% to 71% corresponds to a yearly increase in employment of 41,000 persons. An increase to 74% corresponds to a yearly increase of 61,000 persons.

**Headline target 2: Research and development (R&D) and innovation**

The target has remained the same as that proposed in 2002 in Barcelona and repeated in the Lisbon Agenda: 3% of GDP should be spent on R&D. In the future, the Commission will propose an indicator that takes into account not only R&D, but innovation intensity in more general terms. The Belgian R&D objective could lie between 2.6% and 3%. As the starting point in Belgium is similar to that in the EU, one could set the EU objective as the upper bound for Belgium. However, given the expected evolution of the industrial structure (an increasing share of services) in Belgium as well as in the EU, it will be extremely difficult to obtain the 3%. In the event that the Flemish Region achieves 3% (which is its target) and that a continuation of the trend in R&D expenditure observed in 1996-2008 in the two other regions materialises, Belgium will reach 2.6%.

Needless to say, the 3% target assumes a break in the trend observed in the past 10 years, along with significant increases in public and private R&D expenditure.

**Table 2 - R&D expenditure as a share of GDP**

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2008</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>1.85</td>
<td>1.92</td>
<td>2.6-3</td>
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<tr>
<td>Average of GY, FR, NL</td>
<td>2.27</td>
<td>2.28</td>
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<tr>
<td>EU27</td>
<td>1.9</td>
<td>1.9</td>
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</table>

Source: Eurostat, Europe 2020 indicators

**Headline target 3: Education**

The Europe 2020 strategy defines two separate targets: to reduce school drop-out rates to less than 10% and to increase the share of 30-34 year olds having completed tertiary or equivalent education to at least 40%. The challenges in terms of difference between the observations and the targets for both indicators seem to be somewhat less.

The drop-out rates (defined as the share of the 18-24 year olds that have at most a lower secondary education degree and are not in further education or training) for 2009 are 14.4% for the EU and 11.1% for Belgium. A continuation of the trend observed for the past 10 years, should reach a level of 9.5% in Belgium. As an upper bound, the 10% EU target can be applied to Belgium.

1. 2020 is taken as the year when targets have to be achieved, even though in 2020 the data for that year will not yet be available.
The share of people having a tertiary degree (ISCED 5 and 6, i.e., at least first-stage tertiary education) is 32.3% in the EU and 42% in Belgium. In other words, the EU-target of 40% has already been reached in Belgium. However, further improvements may be possible. The upper bound (50%) is a continuation of the trend observed in the past, but with a maximum for each community in Belgium. The lower bound could be achieved if Belgium attains the level of the best performing country in the EU (which is Denmark).

**Headline target 4: Social inclusion**

The Europe 2020 strategy includes a target to promote social inclusion. The target aims to lift at least 20 million people out of the risk of poverty and exclusion in the EU according to three indicators (at risk of poverty - which is a relative income indicator; material deprivation - which is a non-monetary measure of poverty; households with no/very low work intensity - which is an indicator of prolonged exclusion of the labour market). The target concerns people corresponding to at least one of the indicators. In 2008, 120.3 million people in the EU face a risk of poverty and exclusion. This corresponds to 24.5% of the population. For Belgium, the corresponding figures are 2.2 million and 20.8% of the population. The lower bound target for Belgium could be that Belgium attains the level of the best performing country in the EU (which is Denmark).

**Headline target 5: Energy and climate**

The Europe 2020 strategy repeats the three targets that were included in the December 2008 EU climate and energy package: cutting greenhouse gases (GHG) by 20% of 1990 levels by 2020; increasing the use of renewables to 20% of gross final energy demand by 2020; cutting energy consumption by 20% of projected 2020 levels.

The GHG target for the EU will be reached by reducing emissions in the sectors that fall under the Emissions Trading System (ETS) as well as in the other industries of the economy (non-ETS). For ETS sectors, a European-wide target exists (a reduction of 21% in 2020 compared to 2005). No targets for individual Member States need to be fixed. For non-ETS sectors, national targets have been given (for the EU, the level in 2020 should be at least 10% lower than the 2005 level, for Belgium the corresponding figure is 15%).

The renewables target for the EU (the share of renewables in gross final energy demand) has been translated to each country. The share for Belgium should reach 13%.

Finally, the energy efficiency target for the EU (defined as a 20% reduction in gross inland energy consumption with respect to a “no policy change” projection) still needs to be translated to Member State level. A 20% reduction for the EU seems very ambitious. However, policies and measures implemented recently and still to be implemented in the framework of the GHG and RES targets will reduce the gap.

**Conclusion**

The targets for many indicators are likely to be difficult to attain without major policy initiatives. In each of the areas, with maybe an exception for the area of education, structural policy initiatives will have to be taken in order to reach the objectives. Moreover, targets interact with each other (e.g. the employment target with social inclusion, or energy consumption with GHG), so an overall strategy, including federal and regional policies, needs to be put in place in the coming months. An additional difficulty resides in the fact that the policy initiatives will have to be taken in a context of fiscal constraints, as defined by the Stability and Growth Pact.
Recovery of the world economy continues, but slows down slightly

Since mid-2009, the world economy has been recovering from one of the worst post-war economic crises. The global recovery was backed by massive monetary and fiscal stimulus measures, which not only impacted economic activity directly, but also strengthened economic agents' confidence. In 2010Q2, euro area economic growth (qoq) accelerated substantially (1%, after 0.3% in the first quarter). Economic growth was not solely driven by exports any more, but also by domestic demand owing partly to a bounce back of the construction industry after an especially cold winter spell.

As of mid-2010, world economic growth should slow down as stimulus measures are gradually reduced or phased out and stock building becomes less of a support to economic growth. Moreover, western economies now face major challenges in restoring health to public finances. Cutting back too drastically may compromise the recovery, while doubts about fiscal sustainability might lead to steep rises in interest rates, affecting economic activity as well.

Against this background, economic growth in the euro area should temporarily weaken after a strong second quarter, as a result of which economic activity should not reach its pre-recession level until after 2011. On an annual basis, GDP growth in the euro area should amount to 1.4% in 2010 and 1.3% in 2011, following a 4.1% decrease last year.

Better than expected growth rates during the past four quarters lead to an upward revision of Belgian GDP growth in 2010

During the second half of 2009, the Belgian economy posted positive quarterly growth rates driven by recovering exports and an acceleration of private consumption growth. In 2010Q1, the economic recovery was, however, interrupted due to a drop in construction activity owing to the cold weather. Strong GDP growth in 2010Q2 (0.9%) was in turn partly due to a catch-up of the construction sector, but exports boomed as well because of the strong growth of the German economy. In line with the international business cycle, qoq GDP growth should decelerate to 0.3% on average during the second half of 2010. In the course of 2011, export growth should pick up again, resulting in average quarterly GDP growth of 0.5% in the second half of the year. On an annual basis, GDP growth should amount to 1.8% in 2010 and 1.7% in 2011.

Belgian exports experienced a substantial drop during the international recession, but strongly recovered as of the second half of 2009, still resulting, however, in an annual decrease of almost 12% in 2009. Quarterly export growth should tail off during the second half of this year but slightly recover in the course of 2011 in the wake of foreign export markets. Backed by a favourable starting point, the annual export growth rate in 2010 (7.8%) should exceed that in 2011 (3.9%) substantially. Belgian exports should continue to grow more slowly than foreign export markets, thus consolidating the loss of market shares.

Due to the decrease in both domestic demand and exports, the import volume fell by well over 11% last year. In 2010 and 2011, imports should rise gradually, thus reflecting recovering economic activity. The current account (balance of payment definition) should become negative in 2010 as a result of the depreciation of the euro and rising oil prices. Next year, the current account deficit should persist at 0.7% of GDP.

In 2009, the indexation of wages and social benefits largely exceeded inflation. Combined with a temporary decrease in personal income tax receipts (because of some tax reductions and faster processing of tax assessments), this resulted in a 3.5% increase in households’ real disposable income, despite a decrease in employment and losses in other income components. Due to a decline in consumer confidence related to the crisis, the savings rate increased to nearly 20%, the highest level since the recession of the early nineties, resulting in a slight decline in private consumption (-0.3%).

The 0.8% drop in real disposable income in 2010 has, among other things, to do with the acceleration in inflation (combined with a much lower indexation of wages and benefits) and the expiration of temporary fiscal
measures. Backed by an increase in employment and in property income, purchasing power should grow by 1.5% in 2011. Households should save a smaller part of their income than in 2009, causing private consumption to increase by 1.6% and 1.4% respectively. Nevertheless, at 17.5%, the savings rate remains above its pre-recession level, as high unemployment curbs the recovery in consumer confidence.

Housing investment was systematically scaled back during recent quarters, leading to a 3% volume decrease in 2009. Supported by the low mortgage rate and the VAT reduction for new buildings and renovation projects for which the planning application was filed before April 2010, the decline in housing construction should come to a halt in the second half of this year but still experience a 3.6% decrease on an annual basis in 2010. A slight recovery (0.6%) is expected for 2011. This evolution is in line with the limited rise in the number of architects’ plans seen from the end of 2009.

Business investment dropped by about 8% in 2009. The industrial capacity utilisation rate reached an all-time low (70%) in 2009Q1, but recently returned to its long-term average (79%) due to the recovery of exports and stock building during the past four quarters. Considering moderate economic activity growth and tight credit conditions, business investment should pick up in the course of 2010, albeit barely sufficiently to compensate for the strong decline in the course of 2009. As a result, business investment should still show slightly negative growth on an annual basis in 2010 (-0.5%). Annual investment growth should become positive from 2011 onwards, but should, overall, remain moderate in comparison with value added growth.

The volume growth in public consumption should remain limited to 1.4% in 2010 and 1.2% in 2011. Public investment follows a more distinct profile, with a quasi-stabilisation this year and a clear acceleration in 2011 (15%) related to local authorities’ investments in the run-up to the 2012 local elections.

A modest increase in employment

Overall, the recent recession has had a smaller impact on domestic employment (annual average, in number of persons) than initially expected. A temporary strong decrease in hourly labour productivity and in average hours worked per person due to, among other things, the temporary unemployment scheme, softened the downward impact of the recession on the number of employed persons. Consequently, the net decrease in employment in 2009 was limited to 17 500 persons (-0.4%). The number of hours worked, however, dropped by 1.8%.

Hourly labour productivity and average working time should catch up in the course of this year and next year. Combined with a modest economic recovery, the net increase in employment should therefore remain limited to 10 100 persons in 2010 and 4 700 in 2011 (0.2% and 0.1% respectively). The employment rate should fall from 64.2% in 2008 to 63.1% in 2011. Considering the evolution of the labour force, the number of unemployed persons (broad administrative definition) should increase by 12 500 units this year and by a further 25 000 units in 2011, pushing up the harmonised Eurostat unemployment rate from 7% in 2008 to 9% in 2011.

Inflation hovers around 2%

During recent years, Belgian headline inflation (as measured by yoy growth of the national index of consumer prices) has primarily been influenced by the evolution of raw materials prices. Therefore, inflation was negative from May until November 2009, following the sizeable drop in oil prices during the second half of 2008. In December 2009, inflation turned positive due to the steady increase in commodity prices. As from May 2010, underlying inflation has also been creeping up and consumer price inflation has risen to above 2%. In the course of next year, underlying inflation should remain on an uptrend. Nevertheless, consumer price inflation should decelerate somewhat because of the quasi-stabilisation of energy prices. On an annual basis, inflation should drop from 2.1% in 2010 to 2% in 2011.

The health index is not affected by the price developments of petrol and diesel (and their moderating effect on inflation in 2011) and should therefore pick up from 1.6% in 2010 to 1.9% in 2011. The pivotal index for public wages and social benefits was crossed in August 2010. In accordance with the monthly forecasts for the health index, the current pivotal index (114.97) should be exceeded in September 2011.

### Summary of Economic Forecasts

#### Economic forecasts for Belgium by the Federal Planning Bureau

Changes in volume (unless otherwise specified) (cut-off date of forecasts: 13 September 2010)

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<th>2009</th>
<th>2010</th>
<th>2011</th>
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<td>Private consumption</td>
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<td>1.6</td>
<td>1.4</td>
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<td>Public consumption</td>
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<td>0.7</td>
<td>1.4</td>
<td>1.2</td>
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<tr>
<td>Gross fixed capital formation</td>
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<td>-5.5</td>
<td>-1.2</td>
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<td>-2.3</td>
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<td>Exports of goods and services</td>
<td>1.5</td>
<td>-11.6</td>
<td>7.8</td>
<td>3.9</td>
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<tr>
<td>Imports of goods and services</td>
<td>3.1</td>
<td>-11.1</td>
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<td>3.9</td>
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<td>Net-exports (contribution to growth)</td>
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<td>Gross domestic product</td>
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<td>p.m. Gross domestic product - in current prices (bn euro)</td>
<td>344.68</td>
<td>338.85</td>
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<td>Consumer prices: health index</td>
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<td>Real disposable income households</td>
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<td>3.5</td>
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<td>Household savings ratio (as % of disposable income)</td>
<td>16.6</td>
<td>19.5</td>
<td>17.5</td>
<td>17.5</td>
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<td>Domestic employment (change in #000, yearly average)</td>
<td>82.1</td>
<td>-17.5</td>
<td>10.1</td>
<td>4.7</td>
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<td>Unemployment (Eurostat standardised rate, yearly average)</td>
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<td>Current account balance (BoP definition, as % of GDP)</td>
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[1] Other unemployment definitions can be found on page 14

#### Economic forecasts for Belgium by different institutions

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[1] Inflation forecasts based on the evolution of the national index of consumer prices
[2] Inflation forecasts based on the evolution of the harmonised index of consumer prices
Following two robust quarters, US economic growth slowed to 0.4% in 2010Q2 on the back of a surge in imports and a fading contribution of stocks to growth. Together with a drop in the ISM leading indicator for the manufacturing industry and a marked deceleration of private non-farm employment growth (see Graph 2) this raised fears that the US economy might slip back into recession. A better than expected outcome in August along with a sizeable upward revision of previous months’ employment growth eased those fears again. Job growth has remained too weak, however, to reduce the unemployment rate, which has remained stuck at about 9.5% since the start of the year. It is therefore not surprising that consumer confidence is still far below its long-term average as consumers also need to reduce their debt levels. Lower private consumption and a continuing repairing of the banking system will lead to a subpar recovery in the wake of the most severe financial crisis since the 1930s.

In the euro area, economic growth accelerated to 1% in 2010Q2, following 0.3% in the previous quarter. Economic growth was driven by private consumption and investment, especially residential investment which bounced back after an especially cold winter spell that depressed economic activity in the first quarter. Exports accelerated strongly (4.4%), but as imports did so too, net exports did not contribute to growth. Growth divergences within the euro area are huge. While Germany posted its strongest quarterly economic growth rate since reunification (2.2%), Mediterranean countries grew weakly (by 0.2% in Spain and 0.3% in Portugal) or remained mired in recession (-1.8% in Greece).
Although Belgian GDP growth was slightly below the euro area average in 2010Q2 (0.9%), the Belgian GDP business cycle clearly continues to lead that of the euro area (Graph 3). The Belgian economy not only lost less terrain during the recession (-4.1% compared to -4.9% in the euro area), but has grown more rapidly since the recession ended (+2.6% versus 1.9% for the euro area).

This trend is likely to continue in the short term at least, as can be seen in Graph 4. The economic sentiment indicator is based on a weighted average of consumer confidence and confidence indicators for the manufacturing industry, the service, construction and retail trade sector. Its long term average equals 100. Economic sentiment is currently the highest in Germany, Belgium and Sweden, while the euro area average is dragged down by Greece, Ireland, Spain and Portugal.

The overall business cycle indicator for the Belgian economy (Graph 6), which improved strongly in the course of 2009, has improved only marginally since the start of the year to a level slightly above its long-term average. This development mainly reflects a stabilisation of sentiment in manufacturing industry, which has a dominant weight (65%) in the overall indicator, and a levelling off in the business-related services sector (weight of 15%). On the other hand, sentiment in the construction and the trade sectors, which account for 15% and 5% of the synthetic indicator respectively, continued to improve gradually.

The meagre performance of manufacturing industry stems from the fact that an increasing number of company directors are willing to reduce their level of stocks, while the assessment of order books has continued to improve, albeit at a slower pace than in 2009. When splitting these into domestic and foreign order books (Graph 7), it appears that domestic demand has caught up with foreign demand, mainly due to the recent weakening of the latter. These indicators confirm that the expected weakening of economic growth during the second half of this year will be related to exports and inventories, while domestic demand should be more robust. Confidence in the building and the trade sectors improved in line with their order books. The building sector seems to have benefited from the measures taken in the framework of the Belgian recovery plan and from low mortgage rates (see page 12). Sentiment in business-related services is highly correlated to that in manufacturing industry, but generally exhibits a greater amplitude. This has also been the case since the beginning of the current upturn in 2009Q2.
In the latest national accounts for Belgium, published in July, average annual growth in private consumption was revised upwards for 2008 (+0.4%-points) and 2009 (+1.5%-points). As a result, the decline in the private consumption cycle from 2008Q2 to 2009Q3 was much less pronounced than previously estimated. It also appears that private consumption recovered better in Belgium from the recession than in the euro area as a whole. It went down by somewhat more than 1% in both areas during the recession in 2008Q4 and 2009Q1, but the losses incurred were recuperated in Belgium by 2009Q3, while this was still not the case in the euro area in 2010Q2. This also explains why the upturn in the private consumption cycle started earlier in Belgium than in the euro area.

Even taking the upward revision of Belgian private consumption into account, it still grew at a considerably slower pace than households’ real disposable income in 2009 due to a sharp decline in consumer confidence in 2008Q4 and 2009Q1, pushing up the savings rate to its highest level since the mid-nineties. This year, real disposable income is expected to decline due to the lagged reaction of the indexation of wages and social benefits to price developments. In fact, indexation generally exceeds inflation when inflation decelerates, while it is lower than inflation in times of accelerating inflation rates. With inflation going from 4.5% in 2008 to -0.1% in 2009 and to around 2% in 2010, it should not come as a surprise that price developments have had a strong influence on households’ real disposable income since 2008.

Car sales are not expected to reach the record levels of the years 2006-2008, but stimulated by the biennial motor show held in Brussels at the beginning of the year, they should perform much better than in 2009. Consumer confidence has been improving since 2009Q2 due to increasing optimism regarding the labour market, while the assessment of the general economic situation has roughly stabilised since 2009Q4. These indicators, which are summarised in the FPB leading indicator, point to a clear acceleration in consumption growth in 2010, leading to a decline in the savings rate.
While the latest peak in the Belgian and the euro area investment cycle was reached at almost the same time as the peak in the GDP cycle (i.e. 2007Q4-2008Q1), the trough in the investment cycle seems to lag that of the GDP cycle. While GDP cycles have been increasing since 2009Q4, investment cycles only bottomed out during the first half of this year.

According to the latest national accounts, Belgian business investment growth slowed down significantly from the first half of 2008 onwards and was negative from 2008Q3 until 2009Q3. By 2010Q2, it increased by 0.9% as compared to the level of 2009Q3. This is a rather poor performance compared to GDP, which went up by 1.4% during the same period. In 2009 business investment was on average 8.1% lower than in 2008. This brought about a decline in the investment rate (business investment as a percentage of GDP at current prices) from 14.4% in 2008 to 13.5% in 2009.

The meagre performance of business investment during the beginning of the current business cycle upturn seems mainly attributable to the very low rates of capacity utilisation reached at the trough of the cycle (70% in 2009Q1). During the course of 2009, utilisation rates remained well below their historical average, implying that output increases would not immediately lead to a rise in the capital stock. The tightening of financing conditions during this period intensified downward pressures on investment. Only by 2010Q2 did capacity utilisation reach its thirty-year average of 79%. It can thus be expected that business investment will again act as an accelerator and underpin economic activity during the coming quarters. This is confirmed by the assessment of order books in the investment goods industry (Table 3), which improved markedly during 2010Q3. Nonetheless, in line with the development of the FPB leading indicator, annual average business investment growth in 2010 is expected to be negative due to the unfavourable starting point, leading to a further decline in the investment rate.

### Table 3 - Business investment indicators

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<tbody>
<tr>
<td>Synthetic indicator</td>
<td>-6.7</td>
<td>-25.5</td>
<td></td>
<td>-16.0</td>
<td>-11.7</td>
<td>-7.1</td>
<td>-3.3</td>
<td>-8.7</td>
<td>-7.5</td>
<td>-3.0</td>
<td>-3.2</td>
<td>-3.8</td>
<td></td>
</tr>
<tr>
<td>Order book appraisal</td>
<td>1.0</td>
<td>-46.0</td>
<td></td>
<td>-48.3</td>
<td>-47.3</td>
<td>-40.7</td>
<td>-27.7</td>
<td>-38.0</td>
<td>-42.0</td>
<td>-30.0</td>
<td>-29.0</td>
<td>-24.0</td>
<td></td>
</tr>
<tr>
<td>Demand forecasts</td>
<td>-3.7</td>
<td>-28.0</td>
<td></td>
<td>-15.3</td>
<td>-5.3</td>
<td>5.0</td>
<td>5.0</td>
<td>0.0</td>
<td>7.0</td>
<td>0.0</td>
<td>10.0</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>Investment survey [1]</td>
<td>1.1</td>
<td>-20.4</td>
<td>11.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Capacity utilisation rate (s.a.) (%)</td>
<td>80.6</td>
<td>72.5</td>
<td></td>
<td>74.3</td>
<td>77.2</td>
<td>78.8</td>
<td></td>
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</tbody>
</table>

| [1] Change (%) compared to same period previous year; [2] Qualitative data |

Source: NBB
RECENT ECONOMIC DEVELOPMENTS

Graph 14 - Housing investment growth and leading indicator

Belgian residential investment started to contract in the course of 2008. This decline intensified in the course of 2009 (qoq growth rates between -0.6% and -1.6%) and went on during the first half of 2010 in spite of the business cycle upturn. Nevertheless, this correction remains relatively benign compared to the countries with the most pronounced downturns in the housing market (Ireland, Spain, the United States and the United Kingdom).

Housing investment is expected to bottom out in the second half of this year, supported by the temporary VAT reduction for new buildings and renovation projects for which the planning application was filed before April 2010. Moreover the mortgage rate has declined considerably (from 5% and 4.6% on average in 2008 and 2009 to 4% by mid-2010) but, unlike Belgian sovereign bond rates, has not posted a record low yet.

The downturn in housing investment is also seen in the FPB leading indicator, which went down between the beginning of 2007 and the beginning of 2010. Most of the indicator’s components reached a trough in the first half of 2009 (indicators from the architects’ survey) or the second half of 2009 (total amount of mortgage applications). They generally lead the development of housing investment cycle by about four quarters, implying a pick-up in the residential investment growth cycle later this year.

Graph 15 - Mortgage rate (%)

Stock building

Graph 16 - Stock building indicators

Stock building contributed negatively to economic growth by about 1%-point in 2009. Nevertheless, the amount of inventories itself did not fall, but its increase decelerated considerably during 2008Q4 and 2009Q1 (as inventory changes are part of GDP it is their momentum that matters for GDP growth). As the economic upturn gained strength in the course of 2009, the share of company directors willing to raise their level of stocks increased considerably. Since the beginning of 2010, that share has become somewhat smaller, but remains bigger than the share that intend to lower their level of inventories. Consequently, stocks are expected to contribute positively to economic growth this year.
Both the Belgian and the European export cycle have rebounded vigorously since reaching a trough in 2009Q3. Export growth in the euro area was very strong in 2010Q2, which was primarily due to a surge in German exports (+8.2% qoq). In fact, German exports currently benefit from Germany’s excellent cost competitiveness position (owing to sustained wage moderation), its attractive export product mix (capital goods, for which demand is strong) and its beneficial geographical orientation (more exports to faster growing regions such as Asia and Eastern Europe than the euro area as a whole).

Following four quarters of negative growth, Belgian exports recovered strongly from 2009Q3 onwards in the wake of the noticeable acceleration of world trade. The moderation in the pace of world trade growth so far this year also translated into weaker Belgian export growth. This evolution is likely to continue in the second half of the year, but annual export growth is nevertheless expected to reach about 10% this year due to the favourable starting point. The slowdown in export growth in the course of 2010 implies a much less favourable carry-over into 2011.

Belgium’s major exports product categories encompass chemicals (33%), food (9%), machine and transport equipment (22%), and manufactured goods (27%). Of these, only chemicals have recovered the ground lost during the global recession. As can be expected, the share of Belgian exports going to fast-growing countries such as India and China has performed best since the end of the recession, but they only represent a small part of total exports (1.7% and 2.3% respectively).

The huge improvement seen in Belgium’s foreign balances in 2009 seems to have to come to an end this year as import volume growth is catching up with export volume growth under the influence of an acceleration of domestic demand. Moreover the increase in oil prices since 2009Q2 and the more recent depreciation of the euro has resulted in a deterioration of the terms of trade. Consequently, the current account is expected to be slightly negative in 2010.
Labour market

Table 5 - Labour market indicators

<table>
<thead>
<tr>
<th>Year</th>
<th>2008</th>
<th>2009</th>
<th>2009Q3</th>
<th>2009Q4</th>
<th>2010Q1</th>
<th>2010Q2</th>
<th>2010Q3</th>
<th>2010Q4</th>
<th>2010Q5</th>
<th>2010Q6</th>
<th>2010Q7</th>
<th>2010Q8</th>
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<tbody>
<tr>
<td>Unemployment [1][2]</td>
<td>600.7</td>
<td>645.7</td>
<td>652.6</td>
<td>659.0</td>
<td>660.5</td>
<td>655.0</td>
<td>658.4</td>
<td>654.4</td>
<td>655.4</td>
<td>655.3</td>
<td>658.1</td>
<td>656.5</td>
</tr>
<tr>
<td>Unemployment rate [2][3]</td>
<td>11.7%</td>
<td>12.5%</td>
<td>12.7%</td>
<td>12.8%</td>
<td>12.8%</td>
<td>12.6%</td>
<td>12.7%</td>
<td>12.6%</td>
<td>12.6%</td>
<td>12.6%</td>
<td>12.7%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Unemployment rate-Eurostat [3][4]</td>
<td>7.0%</td>
<td>7.9%</td>
<td>8.1%</td>
<td>8.1%</td>
<td>8.4%</td>
<td>8.5%</td>
<td>8.4%</td>
<td>8.5%</td>
<td>8.5%</td>
<td>8.6%</td>
<td>8.7%</td>
<td>8.7%</td>
</tr>
</tbody>
</table>

[1] Level in thousands, s.a.; [2] Broad administrative definition; [3] In % of labour force, s.a. [4] Recent figures are based on administrative data and may be subject to revision

Private sector employment growth resumed significantly during the first quarter of this year (+0.3%), with broad administrative unemployment nearly stabilising after five quarters of substantial increases. Average working time, however, still remained at a historically low level. It has been confirmed now that this was largely due to one-off factors (adverse weather conditions) that also had a negative impact on activity growth in that quarter.

The second quarter witnessed a vigorous renewal of growth in both private sector activity and average working time, which was partly due to the disappearance of these one-off factors. Moreover, the number of people in the “temporary unemployment scheme” decreased drastically, notably in the manufacturing industries. However, both average working time and hourly productivity are still far below their long-run historical trend and are expected to catch up further, which may weigh on job creation in the quarters to come.

Employment growth is estimated to have increased at approximately the same rate in the second quarter as in the first (+0.3%), spurred on by further strong increases in the number of people that work in the government-subsidised voucher programme for domestic-type services and by strong recovery in jobs catered for by temporary employment offices. Once again, employment growth has outstripped previous expectations, but its evolution is clearly in line with the significant decrease in broad administrative unemployment in 2010Q2. The upward revision for employment merely implies that labour force growth has been affected less than previously expected. The broad administrative unemployment rate dropped from 12.8% to 12.6% in the second quarter. Its rate of decrease seems, however, to have lost momentum during recent months, casting some doubt on the sustainability of the pace at which the labour market is recovering from the economic crisis.
In reaction to year-on-year growth rates of oil prices expressed in euro going up from -46% on average during the first half of 2009 to +65% in April 2010, Belgian consumer price inflation has risen from -1.6% in July 2009 to more than 2% from May 2010 onwards. Since May, oil prices have roughly stabilised, bringing the contribution of petrol and diesel prices to inflation gradually down. As this was more than compensated for by a higher contribution of electricity and natural gas prices, inflation has continued to increase somewhat. Overall, energy prices have mainly determined recent inflation developments, but they also explain the largest part of the differential between Belgian and euro area inflation.

Underlying inflation reached a low in April 2010 and has gone up by more than 0.3%-points since then. This increase came about somewhat earlier than expected and is the main reason for the recent upward revisions of inflation forecasts. It mainly reflects the feeding through of higher commodity prices into prices of processed products.

Average annual inflation should amount to 2.1% this year and 2.0% next year. The health index is expected to increase by 1.6% and 1.9% respectively. The current pivotal index (114.97) should be crossed in September 2011. Consequently, social benefits and public wages should be raised by 2% in October and November 2011, respectively.
RECENT ECONOMIC DEVELOPMENTS

The Federal Reserve had been uncomfortable with the low level of core inflation for some time. With economic growth slowing down more than expected in 2010Q2, it has reinstated its bias towards monetary easing. This has triggered speculation that the Fed would embark on another round of buying US treasuries to push interest rates (ultimately charged to consumers and business) as low as possible.

The ECB is still providing liquidity to the European banking system at unlimited amounts (albeit for a maximum period of 3 months instead of 1 year as before). With economic growth accelerating, it would like to take away gradually this unlimited provisioning of short-term loans, but is hampered in doing so. This is because banks in Portugal, Ireland, Greece and Spain have become very dependent on ECB lending (61% of overall lending, while these countries account for only 18% of the euro area’s GDP) as these countries’ banks’ access to money markets is largely cut off.

From the above, it is clear that interest rate hikes by neither the Fed nor the ECB are foreseen in the near future.

The cooling of the US economy and the possibility of a new round of quantitative easing has resulted in a further substantial decline in US long-term interest rates. Long-term interest rates in the euro area have declined as well, but to a lesser extent than in the US. It makes more sense to look at individual euro area member countries’ long-term interest rates as the divergence between them has widened again. German rates plunged to a new all-time low in August, while the spreads between the rates of Greece, Portugal and Ireland with German rates continued to rise. For Belgium the spread with Germany rose slightly to about 80 basis points in September.
The euro had been on a losing streak against the dollar since the beginning of the year because of rising worries about the state of public finances in some member countries and the possibility of a sovereign default. Although these worries have not disappeared, the euro started to gain ground against the dollar from July onwards as economic growth weakened in the US while it strengthened considerably in the euro area. This increased the possibility that the ECB would start tightening monetary policy earlier than the Federal Reserve. Moreover, markets anticipate a new round of quantitative easing by the Fed, undermining the dollar further.

This should not be taken as a sign of confidence in the euro as continued worries about the fragility of the banking system in the euro area (and particularly its undercapitalisation) have led to a continuous depreciation of the euro against, e.g., the Swedish krona and the Swiss franc. In the case of Sweden, the currency was also strengthened by a second interest rate hike since the end of the recession.

The Bank of Japan unilaterally decided to intervene in currency markets in September to weaken the value of the yen against the dollar. Over the last two years the yen had appreciated by almost 30% against the dollar (unwinding of the yen carry-trade) and the authorities feared it might hamper exports, on which Japanese economic growth depends heavily.

For the first time in nine months, the nominal effective euro exchange rate appreciated in July. This still leaves the effective exchange rate some 10% below the level prevailing at the end of last year and continues to be a boon for euro area exports.
The recovery in tax collection, noticeable from the end of 2009 onwards, accelerated sharply in 2010Q2. Most, but not all, tax categories contributed to this positive evolution, reflecting to some extent the business cycle profile but also administrative shifts in the tax collection calendar.

The strong increase in PAYE personal income tax collection (Graph 30) is mainly due to a shift in tax collection in 2009 that was caused by the possibility (from the December 2008 stimulus package) of temporary deferral by employers of withholding taxes on wages. Besides this administrative effect, PAYE is closely related to the evolution of employment, which increased in the first half of 2010.

The first due date for prepayments by businesses and the self-employed in (April) 2010 remained disappointing. However, figures for the second due date (July) show a strong yoy increase of about 20%. The notional interest deduction introduced in 2006 may cause an over-reaction of corporate income tax to the cycle, both in downturns and in upturns, leading to greater uncertainty about the evolution of income.

Growth in indirect taxes accelerated in 2010Q1 and remained very strong in 2010Q2. This was due to a decrease in VAT refunds (related to a delayed reaction to export developments), while gross revenue benefited from the business cycle upturn. However, an increase in refunds is expected as from the autumn, slowing down net revenue growth. The sectors that contributed most to the increase in VAT revenue in the first semester of 2010 are manufacturing, wholesale and retail trade, and scientific and technical activities.

Registration duties have benefited as from the beginning of 2010 from the recovery of the real estate market in both real and nominal terms (price increases being especially noted in the Brussels region). Customs duties are progressing considerably, in line with the evolution of world trade. Taxes on interest payments were still declining in 2010Q2 due to lower interest rates and household’s preference for precautionary saving in untaxed savings accounts.
The "NIME Outlook for the World Economy" provides readers with a new scenario for the major areas of the world economy from 2010 through to 2018. In this revised scenario, the world economy should recover gradually from the global downturn and should return to robust medium-term growth rates.

The world economy was hit hard by the onset of what was initially perceived as a purely financial crisis. However, the global financial crisis had its origins in a number of deep-rooted macroeconomic imbalances. One of the reasons behind the global financial crisis was excessively lax monetary policy in the United States, leading to a boom in the provision of credit, which helped to finance a boom in US housing markets. Another cause resided in structural world-wide current account imbalances, linked to fast consumption growth and low saving rates in the US, allowing high investments, high exports and slowly rising private consumption in emerging market countries.

When the financial crisis broke out in full in September 2008, governments around the world propped up the ailing major financial institutions. Governments also devised large fiscal stabilisation plans with a view to limiting the scale of the widespread economic downturn. In the US, the American Recovery and Reinvestment Act of 2009 provided support through a combination of public expenditures and tax cuts, the majority brunt of which was to be implemented in 2009 and 2010. In the European Union, the European Commission drafted an Economic Recovery Plan blueprint, which suggested that the Union’s national governments put in place the fiscal stimulus required.

Monetary policy also reacted swiftly to underpin the financial sector as central banks rapidly lowered their policy target rates and put in place programmes of quantitative easing or credit easing. Conventional policy measures provided financial institutions with the low short-term interest rates necessary for their liquidity needs. The unconventional programmes of quantitative and credit easing then also allowed financial institutions to unload a part of their impaired assets onto central bank balance sheets.

It appears that monetary policy, the fiscal stimulus plans and the boost from automatic fiscal stabilisers managed to limit the scale of the downturn in real GDP and employment levels. The downturn is also thought to have been limited in OECD countries due to the unexpected resilience of GDP growth in emerging market economies such as China, India and Brazil.

In early 2010, policy remained supportive on all fronts: fiscal, monetary and financial. Regarding fiscal policy, the time has come to look at the effects that stabilisation plans have had, both in terms of their support to the economy and also in terms of their effects on countries’ budget deficits and debts and the unavoidable “exit strategies”.

This NEO provides a medium-term scenario for economic growth, with detailed outlooks for the major areas of the world economy over the period 2010-2018. The projection indicates that governments could manage to withdraw public support from the economy gradually. Over the medium term, public deficits will not rise to become completely unmanageable; neither will they be reined in. In this scenario, deficits would be persistent and non-explosive, but accompanied by rising public debt stocks. Real GDP growth is projected to rise to robust rates in the medium term while public spending will be reduced.


The role of the productivity growth and of its components in the Belgian competitiveness

In order to provide a complementary light to the traditional competitiveness analysis, which is based on the evolution of relative export market shares and the current account balance, we analyse here the evolution of unit labour costs, considering productivity developments in addition to wage growth as determinants of the international position of the economy. The analysis compares Belgian performance at the industry level to that of Germany, France and the Netherlands using the EUKLEMS database. The period covered is 1996-2007, starting with the adoption in Belgium of the law on safeguarding competitiveness that limits hourly wage increases to growth recorded in the three neighbouring countries. As the relative weakness of productivity growth explains the main part of the deterioration in Belgian competitiveness, we develop the analysis further by decomposing labour productivity growth into three components: capital deepening, labour composition effect and TFP, which
RECENT PUBLICATIONS

The recent crisis in the EU has underlined unsustainable divergences in competitiveness evolutions between Member States. Few countries have mechanisms for preventing competitiveness deterioration. Belgium is one of these since it adopted in 1996 a law limiting hourly wage increases to the growth in its three neighbouring countries. But is this law sufficient to avoid competitiveness deterioration or are there other relevant aspects to be monitored? We consider here the evolution of unit labour costs (ULC), measured as the hourly wage divided by hourly productivity, as an indicator of competitiveness development.

The results show a cumulative deterioration, over the period 1996-2007, of Belgian market economy competitiveness by 6.1% compared with the weighted average of the three neighbouring countries. Germany is the only country with an improvement in the ULC in the market economy over the period considered, essentially due to relatively weak growth in the hourly wage. This evolution is linked to the large fall in productivity levels following the unification of Germany. A large part of the deterioration of Belgian competitiveness is due to the relative weakness of productivity growth (a gap of -3.3% compared with the weighted average). ULC deterioration is observed and quasi equal in manufacturing (8.2%) and in market services (8.1%)\(^1\). Again, these relative weaknesses are mainly explained by divergent productivity evolutions, with a cumulative productivity growth gap of -5.8% compared with the weighted average in manufacturing and a gap of -3.9% in market services.

The relatively disappointing performances in manufacturing are particularly due to a few economically important industries having recorded the lowest productivity growth rates among the comparison countries. These industries are Chemicals, Non-metallic fabrication and the Motor vehicles industry. In Market services, Belgium recorded the lowest productivity growth rates in Trade, Hotels and restaurants and Transport and communication. Even with this unfavourable productivity evolution, productivity levels remain relatively high in Belgium, confirming the traditional view of a highly-productive country. However, this overall positive picture hides progressive changes in productivity leadership at industry level among the four countries studied. Between 1996 and 2007, Belgium lost its leadership position in Rubber and plastics, Non-metallic fabrication, ICT industry, Motor vehicles industry in manufacturing and in Trade and Transport and communication in market services. In 2007, Chemicals, Motor vehicles industry and Transport and communication recorded the lowest productivity levels among the countries studied.

**Decomposition of productivity growth**

In order to identify which component of the productivity growth is related to these disappointing performances, we apply here the growth accounting framework to labour productivity growth. Labour productivity growth can be decomposed into three factors: the increase in capital per hour worked, called capital deepening; the change in the characteristics (qualification, gender, age) of the labour force, called the labour composition effect (LCE); and the growth of total factor productivity (TFP) obtained as the residual component of this decomposition. The TFP contribution measures how efficiently the main factors of production – labour and capital - are combined in the production process and is linked to technical progress and organisational changes. The comparison of the three components of labour productivity growth between Belgium and the three neighbouring countries allow two important developments to be underlined.

First, for the market economy, capital deepening in Belgium is much higher than capital deepening observed in the three other countries, with a positive gap between Belgium and the weighted average of the three countries reaching 5.3% over 1996-2007. This is also the case for manufacturing, with a differential of 8.3%, and for market services, with a gap of 3.9%.

Second, the TFP contribution is particularly weak in Belgium in comparison with Germany, France and the Netherlands. For the market economy, the TFP contribution differential between Belgium and the weighted average of three countries reached -9.3% over 1996-2007. The same is true for manufacturing, with a gap of -13.4%, and for market services, with a gap of -9.7%.

This decomposition also allows three groups of industries in manufacturing to be identified: bad performers, weak performers and good performers. The bad performers are characterised by very low productivity growth, explained by a decrease in TFP. This group contains Chemicals, Non-metallic fabrication and Motor vehicles. The second group includes two industries, Textiles and Optical, electrical and electronic equipment,

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1. In the working papers, the market economy includes manufacturing, market services and other industries, which includes Agriculture, Fishing, Forestry, Extractive industries, Water, electricity and gas suppliers and Construction.
which recorded low productivity growth. This evolution is due to a positive TFP contribution, although remaining, however, below that observed in the three other countries. The other manufacturing industries are included in the good performers group, which exhibited the strongest productivity growth. This growth was sustained either by relatively large capital deepening coupled with relatively weak TFP (Food industry and Pulp, paper and publishing) or by relatively weak capital deepening coupled with relatively strong TFP (Wood industry, Rubber and plastics, Basic metals, Machinery). Only one industry in this group, Other manufacturing, recorded strong growth of both capital deepening and TFP.

In Market services, Financial activities are the only industry to belong to the group of good performers, with strong growth of both capital deepening and TFP. All other market services performed very badly in terms of productivity growth in comparison with the three neighbouring countries. In these services, the capital deepening and labour composition effect were relatively high but insufficient to compensate for the negative TFP contribution.

Finally, capital deepening can be decomposed into a quantity aspect that takes into account only the increase in physical assets per hour worked and a quality aspect that takes into account the composition of the stock in terms of assets with different levels of productivity. In comparison with the three neighbouring countries, the contribution of the quantity aspect of the capital deepening was stronger in Belgium mainly in manufacturing while the contribution of the quality aspect was relatively greater in market services.


Modelling Short Sea Shipping and Bus-Tram-Metro in the PLANET model

A new version of the PLANET model was developed that endogenises the evolution of short sea shipping (SSS) for international freight transport and splits public transport into three distinct transport modes: bus, tram and metro. These new developments will allow enlargement of the analytical capabilities of the model when assessing the impact of transport policy measures.

The PLANET model is a model of the Belgian Federal PLANNing Bureau that models the relationship between the Economy and Transport. The main features and modular structure of the PLANET model are described extensively in Working Paper 10-08. In the past two years, the model has been used to produce medium- and long-term projections of transport demand in Belgium, both for passenger and freight transport (e.g. Working Paper 12-08, Planning Paper 107) and to simulate the effects and perform cost-benefit analyses of transport policy measures (e.g. Working Paper 14-09).

The PLANET model is not intended to remain a “static” policy tool; the goal is to make it evolve over time so as to enlarge its analytical capabilities. In this context, a Car Stock module has been recently integrated into PLANET that calculates the size and composition of the car stock. This module will allow better capture of the impact of changes in fixed and variable taxes levied on cars. This new module is described in Working Paper 2-10.

This Working Paper deals with another extension of PLANET, that is to say the explicit modelling of short sea shipping as an alternative transport mode to road, rail and inland waterways for the international transport of goods, on the one hand, and the modelling of bus, tram and metro as independent passenger transport modes, on the other hand. The paper deals only with methodological issues; the effect of the extension on the long-term transport outlook will be described in a later publication.

In the previous version of the model, the evolution of maritime (short and deep sea shipping), air and pipeline transport was defined exogenously. It was therefore assumed that maritime, air and pipeline transport activities were not affected by policy measures on the other modes and vice versa. However, as short sea shipping is a possible substitute for international road, rail and inland navigation, it was decided to model it endogenously. In contrast, the development of deep sea shipping, air and pipeline transport remains exogenous.

As to bus, tram and metro, the previous version of PLANET considered these three modes as one single aggregated transport mode, referred to as BTM. By doing so, tram and metro were penalised in the same way as buses by an increase in road traffic flows even though they are not or are only partly affected by congestion on the roads. The splitting of BTM into three distinct modes allows a bias against tram and metro to be prevented.

The Federal Planning Bureau took part, in collaboration with the German institute DIW Berlin, in a technical assistance project financed by the European Commission aimed at developing different modelling approaches for the economy of Lesotho, a small country landlocked within the territory of South Africa. In the context of this project a macro-econometric model was elaborated. This Working Paper describes the main characteristics and the behavioural equations of this model and discusses a baseline simulation and an alternative scenario aimed at reducing up to 2012 the expected public deficit.

As a single model is not capable of adequately capturing, modelling and processing all the information required by policy-makers, the philosophy of the project was to develop complementary tools that can be used for different applications. Accordingly, a Financial Programming Framework and a CGE model were elaborated by other partners in the project. The strategy behind the development of the macro-econometric model relies on its complementarities with the Financial Programming Framework, which is an integrated system of spreadsheets.

The economy of Lesotho has gone through a number of major structural changes over the past twenty years. Firstly, the Lesotho Highlands Water Project (LHWP) pushed up infrastructure investment in the nineties with the building of two dams to transfer water to South Africa. Secondly, export-oriented industries emerged over the last decade due to the opening of several diamond mines and the implementation of the US African Growth and Opportunity Act offering duty and quota-free access to the US market. While benefiting from these positive shocks, Lesotho is also facing a continuous decline in net primary incomes from abroad as the number of citizens working in South Africa is gradually decreasing. Finally, as a member of the Southern African Customs Union (SACU), Lesotho receives its share of the revenue pool of custom duties. As this is the main source of income for the government (SACU revenues amounted to around 50% of government revenues over the last ten years), their evolution has an important influence on economic growth through public spending.

Due to the important influence of these supply-side shocks, the Lesotho economy does not satisfy the traditional view that aggregate demand is the main determinant of growth in the short run. These shocks also impede the identification of stable long-term relationships over the available sample. Therefore, the behavioural equations do not rely on error correction mechanisms, but on simple linear specifications estimated in growth rates. Variables reflecting the shocks (exports, investment related to the LHWP, net primary incomes from abroad and SACU revenues) are exogenous in the model.

The macro-econometric model contains about 130 equations that can be split up into 15 behavioural equations, 70 accounting identities and 45 “technical” equations. Expenditure components of GDP are determined by their traditional explanatory variables (private consumption by disposable income of households, private investment by value added, etc.). To ensure compatibility with the Financial Programming Framework, the main industries in Lesotho are also modelled. Traditionally, industries are linked to expenditures through an input-output table, but as this is not available for the economy of Lesotho, stochastic relationships between value added of an industry and the relevant components of final demand are estimated. Export-oriented industries are linked to their respective export categories, while value added of industries oriented towards the domestic market depends on consumption and investment. To ensure consistency between supply and demand, it is assumed that any excess demand is satisfied by imports, implying that imports are calculated as a residual.

As information on price-setting behaviour and sufficiently detailed series on wage and non-wage costs in Lesotho are currently not available, the price block is quite rudimentary. Although most deflators depend on price developments in South Africa, the deflator of services acts as a tension indicator as it is positively correlated to the growth of value added.

The modelling approach of the income side of the economy reconciles existing data limitations and the need to allow second-round effects to play a role in the model. Employment data are not available in the national accounts of Lesotho, so primary incomes cannot be modelled bottom-up. As a rule of thumb, the share of wages and mixed income in value added of the industries in the model is assumed to remain constant in projection. Tax revenues are assumed to develop in line with their macroeconomic taxable bases.

This paper falls within the framework of debates and reflection on the efficiency of the public sector. Evaluation of this efficiency assumes a conflict between effectiveness, in terms of services produced, and the resources employed. This paper examines the question of resources, focusing on an aspect that is essential to the size of the public sector - i.e. employment - without examining the question of effectiveness. In concrete terms, this paper aims to analyse the structure and evolution of public sector employment in Belgium. In 2009, the general government sector employed 828 000 people, which represents 18.7% of total employment in Belgium.

Up to almost 90% of employment in the general government sector is in administration (392 000 jobs in 2009) and state education activities (344 000 jobs). The sub-sector of the communities and regions comprises the greatest share of employment in the government sector (44%), followed by the local authorities (35%). Entity 2 therefore comprises 80% of the sector and entity 1 comprises 20% (the federal authorities 17% and social security 4%). The federal authorities and the local authorities employ about 70% of their staff in the “administration” branch. The communities and regions employ 76% of their staff in education.

Between 1995 and 2009, employment in the general government sector increased to 100 000 units. Within the federal authorities, employment remained stable, with the increase taking place in local authorities (+58 000), the communities and regions (+38 000) as well as in social security (+5 000). Entity 2 therefore contributed 95% of this increase. In terms of activity, employment increased above all in the “administration” branch (+72 000) and in state education (+35 000) while it went down strongly in Defence (-13 000).

In the “administration” branch, employment increased over the whole period in all sub-sectors but primarily within local authorities (+41 000). In 2009, entity 1 represented 33% of employment in the “administration” branch (the federal authorities 25% and social security 8%) and entity 2 represented 67% (the local authorities 52% and the communities and regions 15%).

Examination of the “administration” branch according to function reveals that in 2008, “general services” represented the greatest share (37%) followed by “public order and safety” (22%). Between 1995 and 2008, employment increased primarily in “public order and safety” (14 000 additional staff at the federal level and 8 000 in local authorities). Employment also increased in the relatively poorly represented functions, which indicates in particular a trend towards new needs, for example the “recreation, culture and religion” function, where employment increased by 8 000 units in local authorities (in particular the development of sports and cultural centres). In the context of new needs at the federal level, employment increased in social protection and health with, for example, the creation of the Federal Agency for the Safety of the Food Chain (FASFC) at the beginning of the 2000s following the dioxin crisis; on the contrary, employment went down by 4 000 units in the general services of the FPS Finance. Within the communities and regions, the significant increase in the “economic affairs” function (+6 000) could reflect the wish to strengthen the powers transferred from the federal level to the regions since 1989, as in the areas of the economy, agriculture and external trade. In the social security funds, employment has especially increased in health (+3 000), in the mutual compulsory insurance funds.

In terms of evolution by employment status, even if permanent positions remained in the majority in the general government sector in 2008 (57%), this share had declined (63% in 1997). Examination of the distribution of government sector employment according to age group indicates that the share of employees aged over 50 represented about 30% in 2008 as against 21% for employees in the whole of the economy.

Elsewhere, we have focused on a wider concept of public employment: the “public domain” – a notion developed by the OECD – which can include subcontracting services, and health and social security services that are financed by the State but provided by the market sector. The “public domain” comprised 1 299 000 jobs in 2008 and so represented 29% of jobs in the whole of the Belgian economy. When considering the “public domain” in terms of final consumption expenditure by function, health represents the largest share, i.e. 30%.

ABBREVIATIONS

Abbreviations for names of institutions used in this publication

BIS
Bank for International Settlements

CPB
Netherlands Bureau for Economic Policy Analysis

CRB/CCE
Centrale Raad voor het Bedrijfsleven / Conseil Central de l’Economie

DG SB
FPS Economy - Directorate-General Statistics Belgium

EC
European Commission

ECB
European Central Bank

EU
European Union

FEBIAC
Fédération Belge des Industries de l’Automobile et du Cycle "réunies"

FPB
Federal Planning Bureau

FPS Economy
Federal Public Service Economy, S.M.E.s, Self-employed and Energy

FPS Employment
Federal Public Service Employment, Labour and Social Dialogue

FPS Finance
Federal Public Service Finance

IMF
International Monetary Fund

INR/ICN
Instituut voor de Nationale Rekeningen / Institut des Comptes Nationaux

IRES
Université Catholique de Louvain - Institut de Recherches Economiques et Sociales

NBB
National Bank of Belgium

OECD
Organisation for Economic Cooperation and Development

RSZ/ONSS
Rijksdienst voor Sociale Zekerheid / Office national de la Sécurité Sociale

RVA/ONEM
Rijksdienst voor Arbeidsvoorziening / Office national de l’Emploi

Other Abbreviations

BoP
Balance of Payments

CPI
Consumer Price Index

EUR
Euro

GDP
Gross Domestic Product

JPY
Japanese yen

LHS
Left-hand scale

OLO
Linear obligations

qqq
Quarter-on-quarter, present quarter compared to previous quarter of s.a. series

RHS
Right-hand scale

s.a.
Seasonally adjusted

t/t-4
Present quarter compared to the corresponding quarter of the previous year

t/t-12
Present month compared to the corresponding month of the previous year

UKP
United Kingdom pound

USD
United States dollar

VAT
Value Added Tax

yoy
Year-on-year, i.e. t/t-4 (for quarters) or t/t-12 (for months)