

THE MACROECONOMIC IMPLICATIONS OF SWEDEN'S DEPARTURE FROM THE EU

17/08/2018

OVERVIEW

Although the option of leaving the European Union (EU) does not hold majority support amongst the Swedish population, the topic has garnered increasing attention since the Sweden Democrats announced their intention to hold a referendum on membership after the 2018 general election. In this context, the Stockholm Chamber of Commerce (SCC) has commissioned Oxford Economics to undertake an independent assessment of the economic implications of Sweden's departure from the EU ('Swexit').

This report summarises the findings from our analysis. Although the options for Swexit are many and varied we have focused our analysis on a single scenario in which Sweden reverts to WTO Most Favoured Nation (MFN) trading conditions with the rest of the EU (rEU). As part of the scenario, we have also assumed that the government uses its new sovereign powers to restrict immigration and that the country enjoys a fiscal windfall from no longer contributing to the EU budget. Further details on the calibration of the scenario can be found in the appendix at the back of this document.

We have run our scenario against our baseline forecast for Sweden which assumes that it remains a member of the EU. Therefore, we present our headline findings in terms of differences from this baseline case. They can be summarised as follows:

- In the Swexit scenario Sweden's **real GDP declines by 4.0 percent** in real terms compared to our baseline forecast in which Sweden remains a member of the EU.
- In cash terms, this implies that **GDP per household falls by SKR 30,300** compared to baseline, measured in 2017 prices.
- Slower income growth erodes consumer's purchasing power. **Spending per household falls by 3.4 percent** in real terms compared to baseline or **SKR 16,600**, measured in 2017 prices.
- A smaller labour force growth and weaker economic activity feeds into slower jobs growth. As a result, **73,000 fewer people are employed** in the scenario compared to baseline by 2031.
- Although the government gains a fiscal windfall from no longer contributing to the EU budget, this is more than offset by the implications of slower growth. In order to maintain its fiscal position, we estimate that the government would have to **cut expenditure by SKR 11,900 per household**, measured in 2017 prices.

INTRODUCTION

Jan 2022

Assumed formal exit date for Sweden

In our scenario we have assumed that following a referendum in April 2019, the government triggers Article 50 in January 2020, firing the gun on a two-year negotiation period before exit.

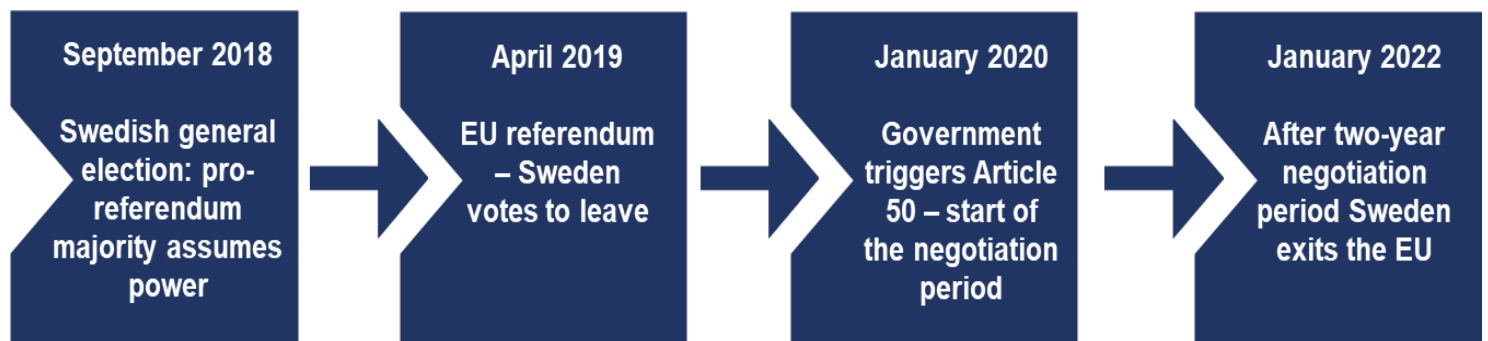
BACKGROUND CONTEXT

Although the option of leaving the European Union (EU) does not hold majority support amongst the Swedish population, the topic has garnered increasing attention since the Sweden Democrats announced their intention to hold a referendum on membership after the 2018 general election. In this context, the Stockholm Chamber of Commerce (SCC) has commissioned Oxford Economics to undertake an independent assessment of the economic implications of Sweden's departure from the EU ('Swexit').

ASSUMED TIMELINE OF EVENTS

The potential path to Swexit remains very unclear. There is no firm indication on when a referendum might take place and, as has been illustrated by the UK's experience, the timing of departure milestones is highly uncertain. In order to calibrate our scenario, we have had to make a number of assumptions on the potential timeline of events as illustrated in Fig. 1. These would see Sweden formally exit the EU in January 2022.

Fig. 1: Timeline of departure milestones



HEADLINE FINDINGS

Our modelling approach has been designed to assess the long-term structural implications of Swexit on the domestic economy. Therefore, we report our results in terms of the impact 10 years after Sweden's assumed formal exit point i.e. 2031. This is measured by comparing the level of economic activity in our scenario to our current baseline forecast in which Sweden is assumed to remain a member of the EU.

-4.0%

Loss of Sweden's real GDP compared to baseline

In our Swexit scenario Sweden's real GDP is 4.0% lower than baseline by 2031. This equates to a fall of SKR 30,300 per household, measured in 2017 prices

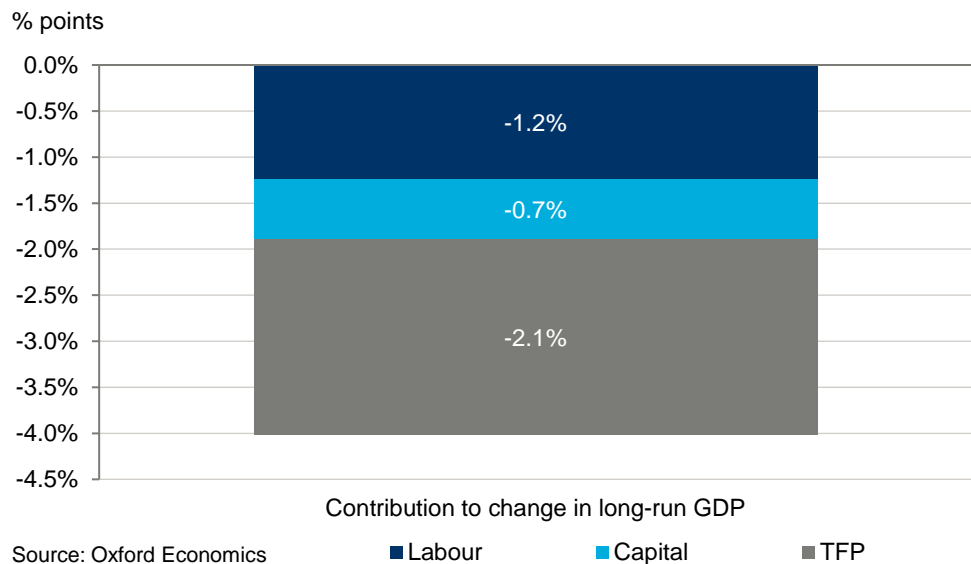
Impact on economic output

In our modelling framework the long-run or trend rate of economic growth in Sweden is determined by three factors: growth in the supply of labour; growth in the supply of capital; and changes in the efficiency with which those inputs are transformed into output (or GDP), a process described as Total Factor Productivity (TFP). In the Swexit scenario, the long-run growth rate of Sweden is negatively affected by all three factors as follows:

- The shift to an MFN relationship with rEU results in Sweden becoming less open to trade, with knock-on consequences for inward FDI. Both factors (reduced trade and FDI) lead to lower TFP growth;
- Slower growth in inward migration reduces the size of the working age population compared to baseline. As a result, labour force growth slows compared to baseline; and
- Slower growth in TFP and the labour supply disincentivise investment as the return on capital spending falls and slower employment growth reduces the need to invest to equip new hires.

Combined these three factors reduce Sweden's long-run annual growth rate to 1.0 percent in the Swexit scenario between 2022 – 2031 compared to our baseline forecast of 1.4 percent. As a result, real GDP in Sweden is 4.0 percent lower in 2031 in the Swexit scenario compared to in our baseline forecast where Sweden remains in the EU. Fig. 2 breaks down this effect in terms of the three structural factors described above.

Fig. 2: Breakdown of contribution to long-run impact on Sweden's real GDP



Impact on the labour market

Our baseline forecast is premised on average net migration of 30,700 per year during the scenario horizon. How net migration might change as a result of Swexit is uncertain but two factors suggest that the impact is likely to be negative. On the demand side, Swexit will result in slower productivity growth limiting real wage growth and hence making Sweden a less attractive option for economic migrants. On the supply side, the government would have greater powers to restrict inward migration on EEA nationals.

In the Swexit scenario, net migration is assumed to approximately halve to an average annual rate of 15,800 during the forecast horizon. As a result, in the scenario, the growth rate of both the population of working age and the labour force slows compares to our baseline case.

73,000

Fewer jobs supported in Sweden in 2031 compared to baseline

Slower labour force and economic growth in the Swexit scenario means employment growth virtually stagnates. As a result, the economy supports 73,000 fewer jobs in 2031 compared to our baseline forecast

Fewer workers and slower GDP growth both contribute to weaker job creation in the Swexit scenario. In our baseline forecast employment is projected to grow at 0.16 percent per year during the scenario horizon, a rate which drops to virtually zero in the Swexit scenario. As a result, the Swedish economy supports 73,000 fewer jobs in 2031 compared to baseline a decline of 1.4 percent.

SKR 11,900

Cut in public spending per household compared to baseline

Despite the fiscal windfall from no longer contributing to the EU budget, slower growth and poorer demographics naturally worsen Sweden's fiscal position forcing the government to cut spending to maintain fiscal balance

Impact on the government's finances

One positive feature of Swexit is that it would mean that Sweden would no longer have to contribute to the EU budget, freeing up fiscal resources to finance investment in public services or tax cuts. As a relatively high-income member, Sweden has consistently been a net contributor to the EU budget, a pattern can be expected to continue going forward. In total, we forecast that Sweden's net contribution during the scenario horizon would total €51.3 billion. Despite an assumed 'divorce bill' of €24.3 billion this still yields a fiscal dividend of €27.0 billion equivalent to 0.4 percent of GDP over the scenario horizon.

However, as described, in the Swexit scenario Sweden suffers slower growth whilst reduced net migration worsens the country's demographic profile. Combined these factors more than offset the windfall from no longer contributing to the EU budget. Therefore, the government would need to tighten fiscal policy to maintain its budgetary position consistent with our baseline forecast. By 2031, we estimate that spending would need to be cut by 3.6 percent, in real terms, consistent with a reduction in current and capital expenditure of SKR 11,900 per household, measured in 2017 prices.¹

Fig. 3: Summary of headline findings

Variable	Units	% change compared to baseline	Absolute change compared to baseline
GDP	SKR millions, 2017 prices	-4.0%	-235,300
Consumer spending	SKR millions, 2017 prices	-4.6%	-120,300
Employment	Jobs	-1.4%	-73,000
Real GDP per household	SKR, 2017 prices	-2.7%	-30,300
Consumer spending per household	SKR, 2017 prices	-3.4%	-16,600
Government spending per household	SKR, 2017 prices	-3.6%	-11,900

REGIONAL ANALYSIS

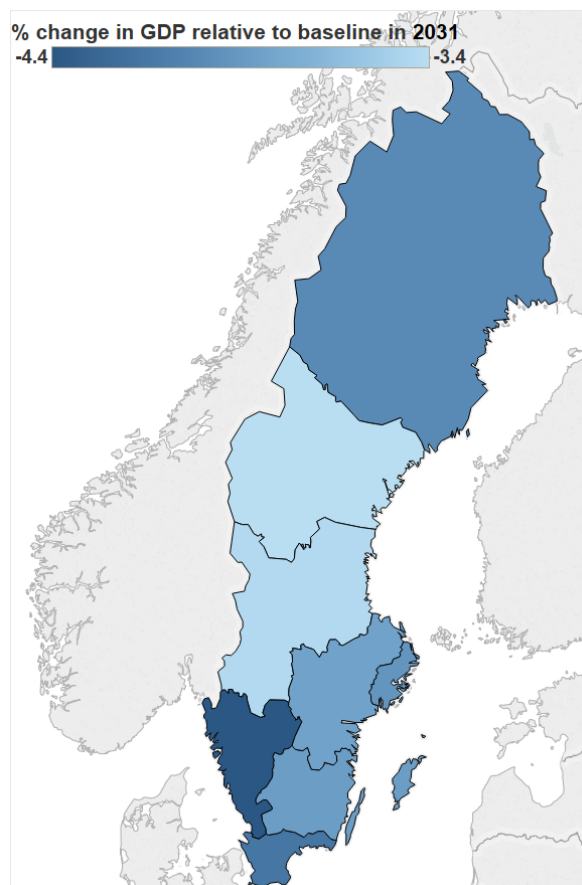
Our scenario analysis was carried out using a macroeconomic model of the national economy. How the effects play out regionally is an important policy question but is highly uncertain. One of the central themes of our analysis is that this type of Swexit scenario would induce significant structural change in the Swedish economy. Sectoral effects are likely to be uneven with implications for regional economies.

¹ Government spending here refers to government consumption used to fund day-to-day operations in public services and government investment. It therefore excludes other elements of public spending most notably transfer payments. To provide a sense of scale, these two items accounted for 61 percent of total government spending in calendar year 2017.

The global model uses a demand-side approach to simulate how changes in final expenditure (consumer spending, government consumption, investment, exports etc.) feeds through to demand for the output of different sectors. We have applied differences in the change in output in each sector in the Swexit scenario to each national area's forecast composition of GDP in 2031 to assess variation in regional vulnerability. We would caution that this type of approach is indicative and that a more granular assessment of the sectoral implications would yield further insights.

The analysis suggests that the scenario would have reasonably even regional effects. The estimated proportionate decline in real GDP in each region compared to baseline falls within a relatively narrow range as shown in Fig. 4. In general, the effects are slightly more severe in Southern national areas and less so in the North (with the exception of Ovre Norrland).

Fig. 4: Overview of regional vulnerability to Swexit scenario



METHODOLOGICAL APPENDIX

This chapter describes our methodology which builds on the approach applied in our independent analysis of the macroeconomic consequences of Brexit used in the run-up to the UK referendum. The chapter is divided into two main subsections. First, we outline our approach to scenario calibration i.e. deriving the changes to inputs such as TFP and demographics. Second, we describe the global model and its theoretical underpinnings.

SCENARIO CALIBRATION

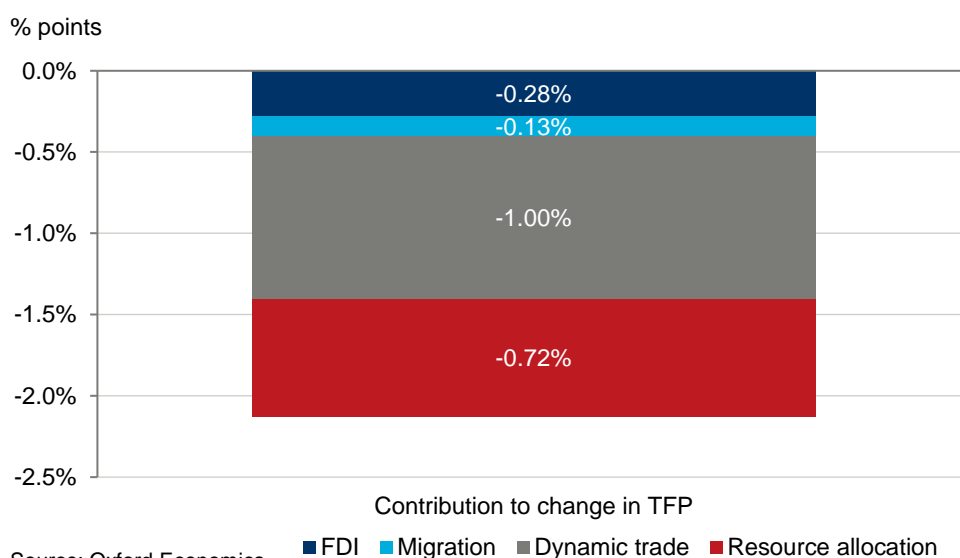
This section describes our approach to scenario calibration split between three areas: changes in inward FDI and TFP; changes to net migration and demographics; and quantifying the fiscal windfall from no longer contributing to the EU budget.

Impact on TFP and FDI

The estimated change in TFP is derived from four channels: Foreign Direct Investment (FDI); migration; dynamic effects from changes in trade openness; and static effects from trade openness related to the efficiency of resource allocation. The sensitivity of TFP growth to each of these factors was estimated via an econometric model using panel data for OECD economies. A more detailed overview of this econometric work can be found in the methodological appendix to our independent assessment of Brexit.

Fig. 5 illustrates how these four factors contributed to the estimated 2.1 percentage point decline in TFP. The majority of this loss (around 80 percent) can be attributed to trade effects (both static and dynamic) with the remainder mainly linked to reduced inflows of FDI as a result of higher trade barriers.

Fig. 5: Breakdown of estimated change in TFP in Swexit scenario compared to baseline



Impact on net migration

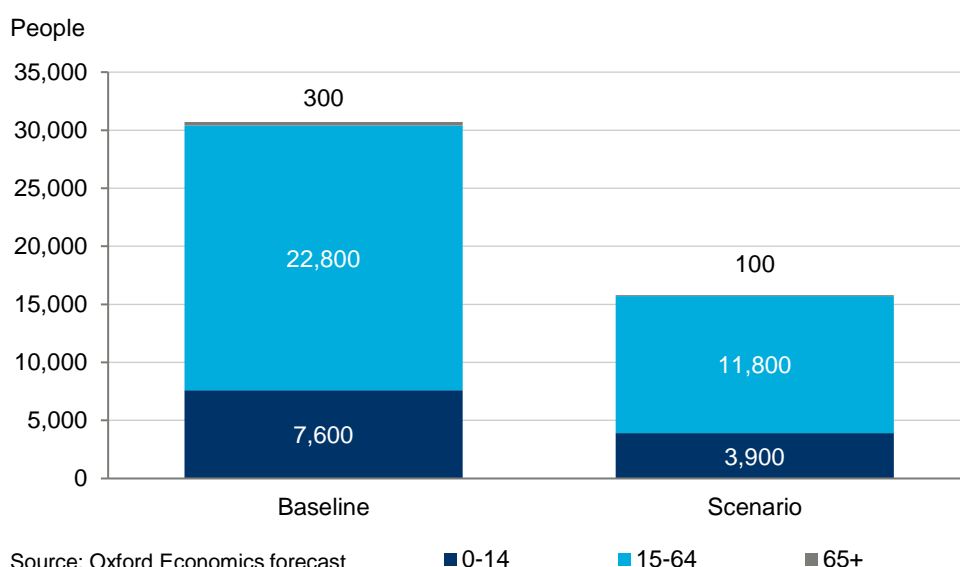
There is reason to think that the Swexit scenario would have an impact on net migration flows into Sweden via two channels. First, slower TFP growth (outlined above) should lead to slower growth in real earnings making Sweden a relatively less attractive destination for economic migrants all else

equal. Second, leaving the EU would mean that Sweden would no longer be part of the Schengen area and would have the power to restrict arrivals from areas which currently operate via free movement.

The size of these effects is uncertain but it is reasonable to assume that both would lead to a reduction in net migration compared to the status quo. Our current baseline forecast is underpinned by an assumption that net migration will average 30,700 during the period 2022 – 2031, with the majority of additional arrival of working age as shown in Fig. 6.

We applied a uniform shock of close to 50 percent to these arrivals during each year of the scenario. This figure was based on a hard Brexit scenario run previously in which the government was assumed to impose an aggressive clampdown on arrivals. This was calibrated based on the historic composition of UK arrivals from the EU with disproportionately severe shocks assumed to affect low-skilled workers and job seekers. Lower net migration was then modelled by an exogenous shock to Sweden's forecast population levels.

Fig. 6: Breakdown of net migration flows to Sweden by age band, 2022 – 2031



Size of fiscal dividend

To assess the size of the fiscal dividend we have considered the windfall obtained by Sweden no longer making a contribution to the EU budget and the potential size of a 'divorce bill' to cover outstanding liabilities.

The value of Sweden's budgetary contributions during the scenario horizon is unknown at this point. Sweden's net contribution since 2007 has averaged 0.43 percent of GDP. We have assumed this pattern is continued during the scenario horizon, implying a cumulative fiscal gain of €51.3 billion in nominal terms.

The size of the 'divorce bill' is much harder to predict given the lack of precedent. Although some features of the UK settlement have been agreed as part of the current Brexit negotiations several areas items remain unresolved. We have assumed that Sweden is obliged to pay 2.8 percent of the EU's outstanding liabilities as measured as part of the Brexit negotiations (€455.8 billion).² This share is based on Sweden's share of total EU budget contributions over the past five years. On top of this,

² <http://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-8039>

the UK is also required to maintain its regular budgetary contributions up to the end of the next budget.

MACROECONOMIC MODELLING APPROACH

The scenario was run using Oxford Economics' Global Economic Model (GEM). The GEM is the most widely used commercial macroeconomic model in the world. 80 of the largest economies (which together account for over 95 percent of global GDP) are covered in depth by individual country models, with the remainder accounted for by regional blocs. Most of the core behavioural equations are specified in an Error Correction Model (ECM) format, so that a variable's predicted long-run growth rate is specified as a function of a trend relationship but this can deviate in the short-run due to cyclical factors.

Below we have provided a brief description of the theoretical underpinnings of the GEM focusing on aspects most relevant to the simulation of variables reported in this study. Further information can be found in the Global Economic Model Overview document which can be downloaded [here](#).

Supply side

The structure of each of the country models is based on the income-expenditure accounting framework. However, the models have a coherent treatment of aggregate supply. In the long run, each of the economies behaves like the classic one sector economy under Cobb-Douglas technology. Countries have a natural growth rate, which is determined by its capital stock, labour supply adjusted for human capital, and TFP. Output cycles around a deterministic trend, so the level of potential output at any point in time can be defined, along with a corresponding natural rate of unemployment.

Firms are assumed to set prices given output and the capital stock, but the labour market is characterized by imperfect competition. Firms bargain with workers over wages but choose the optimal level of employment. Under this construct, countries with higher real wages demonstrate higher long-run unemployment, while countries with more rigid real wages demonstrate higher unemployment relative to the natural rate.

Aggregate Demand

Private consumption is modelled as a function of real incomes, real financial wealth, real interest rates and inflation. Investment equations are underpinned by Tobin's Q Ratio, such that the investment rate is determined by the return relative to the opportunity cost, adjusted for taxes and allowances. Countries are assumed to be "infinitely small", in the sense that exports are determined by aggregate demand and a country cannot ultimately determine its own terms of trade. Consequently, exports are a function of world demand and the real exchange rate, and the world trade matrix ensures adding-up consistency across countries. Imports are determined by real domestic demand and competitiveness.

GDP and Employment by Sector

In addition to the income-expenditure approach, the Global Economic Model includes a break-down of value added and employment by sector. Consistency between the income-expenditure and value-added approaches to output is ensured by scaling value added in each sector up or down to obtain expenditure-based value added as the sum of value added in the sectors.

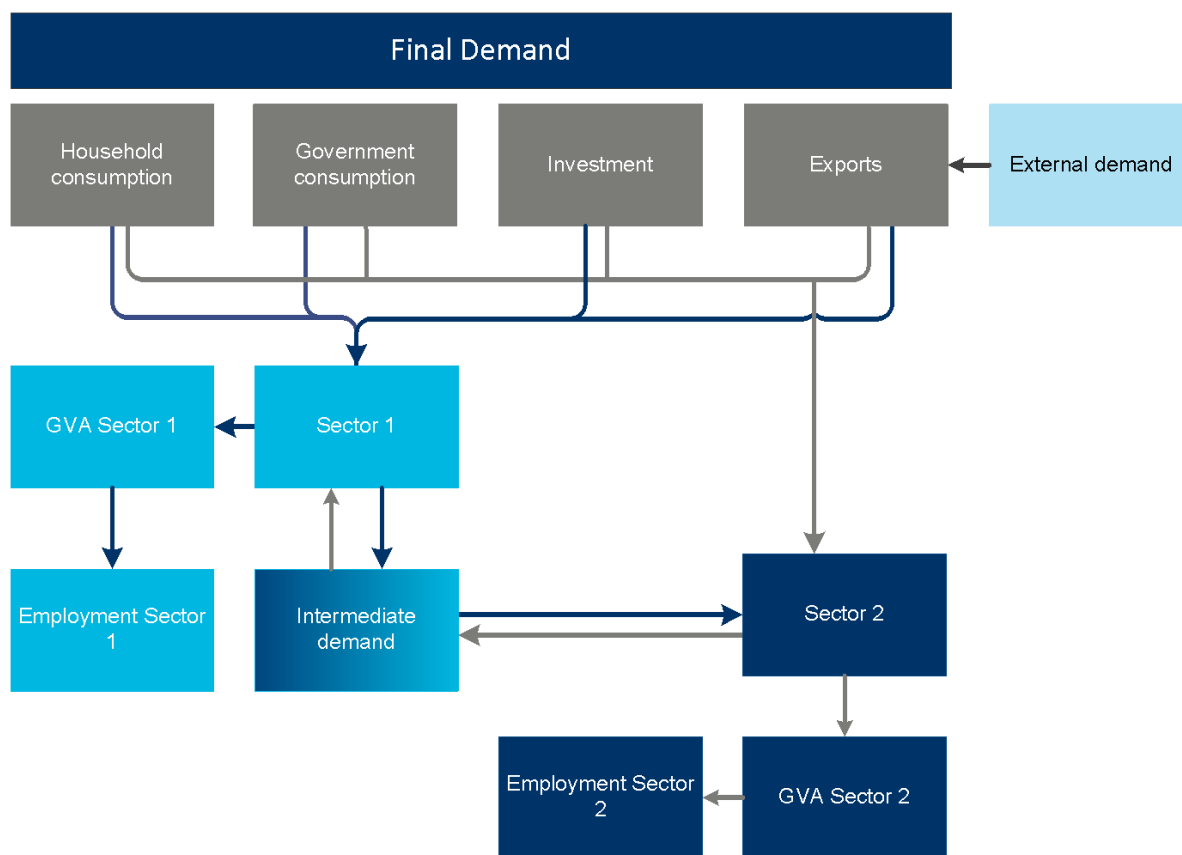
The sector breakdown reflects the input-output structure of each economy. For each sector total demand is calculated as a weighted average of value added in other sectors and final expenditure, with the weights taken from input-output tables. We then use total demand to estimate the value added for that respective sector since in the long run (everything else equal) value added and demand must grow in line with each other. Value added is also affected by competitiveness

(measured by relative unit labour costs) to a degree that reflects the international openness of each sector.

Employment by sector is derived from value added in that sector and sector-specific productivity trends. As in the case of value added, consistency between the total employment forecast and employment in all sectors is achieved by scaling the sector employment variables up or down.

The breakdown of value added and employment by sector depends on data availability and varies by country. For instance, for the European Union it consists of 14 sectors – agriculture and forestry, extraction, manufacturing, utilities, construction, distribution services, hotels and catering, transport and communications, financial services, business services, public administration, education, health and other services. Several additional sectors such as entertainment, arts and recreation and real estate are also included for the United States. The breakdown for Asia is less detailed.

Fig. 7. Interaction between Intermediate and Final Demand



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