Outlook and appraisal

Overview

Despite some weakening of the Scottish economy relative to the UK in the first quarter of 2006 the growth of GVA in Scotland remains strong. Growth in the Scottish service sector during the first three months of the year slowed more than in the UK, but construction sector growth in Scotland remained strong and a recovery in manufacturing performance was apparent. However, the improvement in manufacturing does not appear to be evident across all sectors, with engineering sectors performing well, while textiles, footwear & clothing, paper, printing and publishing and the food industry are weaker. Growth continues to be relatively robust in the world economy with the UK also exhibiting a strong performance. GDP

growth is now averaging 2.8% on a per annum basis with the strength of domestic demand and cost push inflationary pressure from high fuel price levels leading the MPC to push interest rates up in August with a further hike to 5% expected in November. Recent Scottish business surveys point to rising confidence in all sectors, above trend growth in orders – for manufacturing and construction – with some input cost pressure and incipient labour shortages. Against that background we now feel able to further raise our GDP growth forecasts for 2006 to 2.2% from 2.1% in our June forecast. Forecast growth is expected to continue at 2.3% in 2007 dropping back to 2.2% in 2008. Scottish growth again parallels improvements in the UK but remains a little weaker overall, but stronger in key sectors such as construction. Net employment change continues with 18,500, 15,600 and 10,900 net new jobs forecast in 2006, 2007 and 2008. Unemployment continues to be broadly stable at around 5.3% on the ILO count.

Following recent debate about the growth of the Scottish economy under devolution and the perceived risk of a 'crowding out' effect on private sector performance of a large and growing public sector, we analyse recent growth performance and model the impact of the 46% real growth in Scottish public spending during devolution. Our analysis suggests that in seeking to explain the significant weakness of private sector growth in Scotland during devolution a very plausible story is that the cause was largely due to the collapse of electronics production and the knock-on demand, or multiplier, effects on high street spending. Nearly, half of the Scottish private sector, embracing financial services, business services & real estate, and other services, actually outperformed the UK private sector during the period. But the scale of the decline of the Scottish incidence of the world ICT recession, the decline in electronics and the dampening effect on the growth of high street spending was more than sufficient to outweigh the strong growth elsewhere in the Scottish service sector. The public sector grew comparably in Scotland and the UK and there would appear to be little justification for the view that weaker Scottish growth since devolution relative to the UK was due to growth of the public sector and the rise in its share of the economy.

A model based analysis of the growth in real Scottish public spending since devolution suggests that the increase is likely to have raised GDP and employment in the Scottish economy. Crowding out does occur in much of the private sector as competitiveness is lowered through higher real wages and intermediate input costs following the stimulus to demand due to the rise in Scottish Executive spending. But the crowding out is insufficient to cancel out the overall boost to demand and output growth caused by the increase in public spending. Hence, Scottish GDP rises by 7.2% overall by 2007. Moreover, the crowding out effect on the Scottish private sector diminishes over time and eventually is removed once supply fully adjusts.

Supply adjusts as real wages increase reducing unemployment, raising the activity rate and stimulating net in-migration into Scotland. Simulations that restrict the migration inflow to zero still produce an increase in GDP and employment to a 5% peak in 2007 due to the lower unemployment, increase in real wages and higher consumption effects of the increased public sector spending. But further analysis is required of the effects of the higher public expenditure on drivers of growth such as entrepreneurship to ascertain whether dynamic crowding out effects affecting the long-term growth performance of the Scottish economy are present.

GDP and Output

Scottish Executive Gross Value Added (GVA) data for the first quarter of this year indicates that while performance was above trend Scottish economic growth weakened relative to UK growth.

During the first quarter of 2006 Scottish GVA at basic prices rose by 0.53% compared to growth of 0.75% in the UK. But, over the year to the first quarter Scottish and UK GVA growth were the same at 1.9%. Despite the weakening in Scotland's quarterly growth performance relative to the UK the economy is still continuing to outperform its quarterly average since 1998 of 0.47%. The UK also began to outperform its quarterly average of 0.66%. In the June Commentary we were heartened Scottish GDP growth had managed to keep up with UK GDP growth as UK economic growth improved from a growth trough in the first quarter of 2005. We noted that normally Scotland has a flatter growth cycle, holding up well in a UK downturn and picking up less well in an upturn. We also conjectured that it remained to be seen whether this relative improvement would persist if growth in the UK economy continued to improve. The evidence from the latest data point suggests that Scotland's performance relative to the UK may be reverting to type as Figure 1 shows.

The June Commentary also noted that the weakening of the service sector during the fourth quarter while growth in UK services strengthened clouded the picture of a buoyant Scottish performance overall. However, as Figure 2 indicates, revisions to the data now suggest that both Scottish and UK services improved their growth in the fourth quarter. But in the first quarter of this year the growth of both Scottish and UK services slowed, with Scottish services slowing more. UK services grew by 0.70% in the quarter, reducing from 1.06% during the last three months of 2005, while Scottish services could only manage growth of 0.36%, down from 0.79% in the fourth quarter. Yet, over the year to the first quarter services grew strongly and comparably by 2.9% in Scotland and the UK. Nevertheless, our earlier concern that Scottish services is weakening, after three successive quarters of strong growth continues. Again further data are awaited. But we would repeat our hope that the continuing comparative strength of the Scottish housing and labour markets would serve to sustain high street spending and strong service sector performance.

Within Scottish services in the first quarter, financial services (1.8%) and retail & wholesale (1.6%) enjoyed the fastest growth compared to 1.6% and 0.1% respectively in the UK. Real estate & business services grew by 1.1% in both Scotland and the UK during the quarter. Conversely, other services contracted by 2.3% in Scotland with the sector contracting by only 0.9% in the UK. Similarly, hotels & catering contracted by 1.4% in Scotland but exhibited strong growth of 2.3% in the UK. Over the year to the first quarter, the strongest performing Scottish service sectors were real estate & business services (5.7%, cf. UK 4.2%), financial services (5.1%, cf. UK 6.3%), transport, storage & communication (4.2%, cf. UK 3.4%), public admin, health & education (2.1%, cf. UK 2.2%), other services (2%, cf. UK 2.7%), hotels & catering (1.2%, cf. UK 2%), and retail & wholesale (1.1%, cf. UK 0.9%).

With weaker Scottish service sector performance during the first quarter, the narrower gap in overall GDP performance between Scotland and the UK reflected stronger construction growth and manufacturing recovery. Construction grew by 3.6% here compared to 0.9% in the UK and over the year to the first quarter construction activity in Scotland expanded by 3.1% compared to 0.4% in the UK. In addition, manufacturing in Scotland began to show signs of a sustained recovery with two successive quarters of positive, all be it slow, growth – see Figure 3. In the fourth quarter of last year, on revised figures, Scottish manufacturing output was broadly stable, while UK manufacturing production declined by 0.9%. But this followed a fall of 1% in Scottish manufacturing output in the third quarter while UK production rose by 0.16%. In the first three months of 2006 manufacturing production rose by 0.4% in Scotland but the recovery was more muted than in the UK where production rose by 0.9%.

Within manufacturing, electronics production also displayed signs of a recovery in both Scotland and the UK echoing the strength of engineering revealed in some surveys reporting earlier in the year – Figure 4. During January to March, Scottish electronics production grew by 0.23% compared to a stronger performance of 0.96% in UK electronics. Scottish performance across other manufacturing sectors was mixed. Other engineering sectors performed well during the

first quarter, with growth of 5.2% in transport equipment (cf. 3.9% in the UK) and 3.3% in mechanical engineering (cf. 0.7% in the UK). Other manufacturing industries also performed well, growing by 2.2% in the first quarter compared to 0.8% in the UK. However, recent performance elsewhere in manufacturing in Scotland was much weaker. Textiles, footwear, leather and clothing contracted by 2.5% while falling by only 0.7% in the UK. Paper, printing and publishing also cut back GVA by 2.5%, while its UK counterpart grew by 0.8%. The food industry slowed down by 0.4% while exhibiting slight growth of 0.1% in the UK.

Overall, we note that GDP growth in Scotland remains strong and above trend. There are signs of welcome improvement in Scottish manufacturing performance but the improvement does not appear to be evident across all sectors. In addition, the absolute and relative weakening of service sector performance raises concerns about the future course of Scottish growth relative to the UK.

Growth under devolution and the public sector

There has been a developing debate about the performance of the Scottish economy under devolution and the effect of the expansion of the public sector on Scottish growth. Several commentators have expressed concern that the size of the public sector in Scotland is now a drag on growth, while others take a more sanguine view. This debate is well summarised in the recent Hume Institute paper by Zuleeg and Marsh (2006).[1]However, this is a debate in which the evidence is often not well marshalled and there is often more heat than light generated. There is a suspicion that arguments about the effect and role of the public sector often derive more from the ultimate values and political preferences of proponents than from hard analysis and evidence.

It is evident that public spending in Scotland has grown rapidly under devolution. By 2007 the Scottish Executive's Total Managed Expenditure (TME) will have grown by 46%, in real terms, on the 1999 base. Between fiscal year 1999-00 and fiscal year 2003-04 *total* public spending as a share of GDP in Scotland rose from 45% to 51% (UK 37% to 41%). The Scottish Exec's TME as a share of GDP rose from 20% to 25% over same period, while the public sector job share in Scotland remained unchanged at 23% between 1999 and 2003, rising to 23.5% by 2005 (UK 19% to 20%). It is understandable that these changes have led to fears of 'crowding out': the potential negative impact of the growth of the public sector on the economic performance of the private sector in Scotland and by implication on the growth of the economy as a whole.

We believe we can shed some light on these matters by first providing a detailed analysis of the growth performance of the Scottish economy since devolution, and secondly, by modelling the impact of the growth in public spending using a version of the AMOS – A Macro-Micro Model of Scotland – computable general equilibrium (CGE) model, which was developed by colleagues in the Fraser of Allander Institute, in the Department of Economics at the University of Strathclyde.[2]

Growth under devolution

Figure 5 highlights the overall growth of GVA in Scotland and the UK between the start of devolution – taken as 1999q2 – and the most recent data point 2006q1, using the Scottish Executive's and ONS's published GVA data series. The Figure distinguishes the total growth of the economy from the growth of public and private sectors over the period.[3] Over the 27 quarters since the Scottish Parliament took up its powers, the Scottish economy grew by just under 15%. The UK economy grew faster at just over 19%. The growth of the public sector is estimated to have been around 17% in both Scotland and the UK. Removing the growth of the public sector form the total leaves estimated private sector growth of under 14% in Scotland and just under 20% in the UK – a growth gap of just over 6 percentage points in the UK's favour.

Clearly, the private sector has laboured much more in Scotland during the devolution period than its counterpart in the UK. But it is difficult to argue that this weakness is due to the growth of the public sector in Scotland. The public sector grew comparably in both Scotland and the UK yet private sector growth was much weaker here. It is possible that the scale of the public sector in Scotland, at 22% of overall GVA compared to 18% in the UK, may be above some critical level so that comparable growth crowded out much more private sector activity here than in the UK. But as our CGE analysis discussed below shows this is probably fanciful.

We do not need to look to the growth of the public sector and the complicated and uncertain process of 'crowding out' to see the most probable reason why Scotland's private sector growth was so much weaker during devolution. Figure 6 identifies the growth of GVA in key private sectors since devolution. The sectors account for 97% of private sector GVA and 76% of the economy as a whole. What is interesting in Figure 6 is that 4 sectors - other services, real estate and business services, financial services and construction - accounting for 47% of Scottish private sector GVA, all outperformed their UK counterparts, with other services and financial services considerably outperforming them. The remaining 4 sectors all under perform their UK counterparts. The growth of transport & communication while weaker here was broadly similar at 29% compared to 31% growth in the UK, so it is the weakness of the three other sectors: manufacturing, hotels & catering, and retail & wholesale, that stands out and is worthy of further investigation.

Manufacturing GVA has fallen by more than 12% in Scotland during devolution while UK manufacturing rose by just below 1% over the period. The reason for this should by now be well known. It very largely reflects the collapse of

production in electronics in Scotland due to the worldwide recession in the ICT industry and related structural readjustments. The nature of electronics production in Scotland meant that the industry was hit harder by the recession than electronics in the UK – see this *Commentary* for February of this year. Since devolution, electronics GVA has contracted by 34% in Scotland compared to a fall of 11% in the UK as a whole (which itself is affected by the Scottish contraction). The fall of 34% would have been sufficient to generate a contraction in Scottish manufacturing, which, other things equal, would have amounted to two-thirds of the 12% fall that actually occurred.

It therefore follows that a reasonable narrative is that the large decline in electronics output over the period, with a comparable decline in employment, led to cutbacks and postponements of the expenditure plans of the affected households and this lowered spending in the high street affecting retail & wholesale as well as hotels & catering compared to what otherwise would have been the case. Over the period retail & wholesale and hotels & catering grew by 10% and 7% in Scotland compared to growth of 26% and 25% respectively in the UK. Since retail & wholesale is largely a domestically traded sector - hotels and catering are much less so - there seems to be no other obvious relative development in the Scottish economy during the devolutionary period that could account for the disparity between the sector's performance and its UK counterpart. It could be that Scottish households became more cautious over the period and began to save more but that seems an unlikely explanation for the scale of the performance differences in retail & wholesale between Scotland and the UK.

Figure 7 takes this analysis a stage further and offers the results of several simulations where we substitute the growth and weight of UK sectors for their Scottish counterparts. We take UK growth over the devolution period to be 100. Given that, actual Scottish growth was 20% lower at 80. When the growth of sectors in the UK is substituted for the growth rates of their Scottish counterparts this is sufficient to push overall Scottish growth to 93% of UK growth. But Scottish growth is not pushed to parity with the UK because some Scottish sectors were growing faster than their UK counterparts and the relative importance of each sector differs across the two countries. When the importance of each sector is held to be the same by applying UK sectoral weights to the actual Scottish growth in each sector, overall Scottish growth improves to 87% of the UK but not by much. This implies that Scotland's growth gap with the UK over the period was much less one of a different structure of industry and much more one of different sectoral growth rates. So, replacing the Scottish manufacturing growth rate with its growth in the UK is sufficient in itself to push Scotland's overall growth from 80% to 92% of the UK. Doing the same for retail and wholesale pushes Scottish growth to 90% of the UK. However, when we replace *both* Scottish manufacturing and retail & wholesale growth rates by the growth of their UK counterparts this is sufficient to push overall Scottish growth to 102 i.e. 2% above actual UK growth.

What all this suggests is that in seeking to explain the significant weakness of private sector growth in Scotland during devolution a very plausible story is that the cause was largely due to the collapse of electronics production and the knock-on demand, or multiplier, effects on high street spending. Nearly, half of the Scottish private sector, embracing financial services, business services & real estate, and other services, actually outperformed the UK private sector during the period. But the scale of the decline of the Scottish incidence of the world ICT recession, the decline in electronics and the dampening effect on the growth of high street spending was more than sufficient to outweigh the strong growth elsewhere in the Scottish service sector. The public sector grew comparably in Scotland and the UK and there would appear to be little justification for the view that weaker Scottish growth since devolution relative to the UK was due to growth of the public sector and the rise in its share of the economy.

Impact of growth in public spending under devolution

Our CGE analysis in fact suggests that the rise in public sector spending during devolution is likely to have raised GDP and employment in the Scottish economy.[4] Table 1 provides some of the key results for the central case analysis.

Table 1: CGE analysis of Scottish Executive TME change 1999 – 2007

	2007	2020	2049
%			
GDP	7.2	11.2	14.0
Employment	8.6	12.7	15.3
Real wages	3.2	0.6	0.1
Investment (GFCF)	3.5	6.9	9.0
Exports	-4.7	-2.1	-0.5
Imports	11.1	10.8	10.7

Crowding out does occur in much of the private sector as competitiveness is lowered through higher real wages and intermediate input costs following the stimulus to demand due to the 46% rise in Scottish Executive spending. But the crowding out is insufficient to cancel out the overall boost to demand and output growth caused by the rise in public spending. Hence, Scottish GDP rises by 7.2% overall by 2007. Moreover, the crowding out effects on the Scottish private sector diminish over time and eventually are removed once supply fully adjusts. Supply adjusts as real

wages increase reducing unemployment, raising the activity rate and stimulating net in-migration into Scotland. Sensitivity analysis is undertaken to check the robustness of the central case impacts to our assumptions about key variables. In view of the importance of migration, we changed the speed of the migration elasticities to medium, low and zero. In the no migration case, Scottish GDP and employment still rise – for GDP to a 5% peak in 2007 - due to lower unemployment, increased real wages and higher consumption. There is a permanent crowding out effect on most private sectors as loss of competitiveness is sustained, but this is not sufficient to produce a negative GDP growth rate.

The AMOS model is sophisticated simulation model of the Scottish economy with a fully specified supply side, incorporating capacity constraints and endogenous wage and price competitiveness effects. The version of the model used is based around a social accounting matrix for Scotland for 1998, which provides a separate set of accounts for key agents in the economy including government, households, industries and the external sector, identifying the income flows within and between each group. Key relations are parameterised from estimates based on actual Scottish, or UK regional data.
However, the model does not allow for any supply creating effects of the additional public sector spending e.g. via education spending. Nor does it allow for changes that might produce *dynamic crowding out* or, indeed, *crowding in* effects that concern the drivers of growth, for example, the impact on entrepreneurship, innovation, skill formation etc. that would affect the longer-term performance of the economy. If there is to be a sustained crowding out impact of a large and rising public sector since devolution then a negative impact on entrepreneurship appears the most likely possibility. A public sector wage premium consequent upon the growth in public spending, even if temporary, may attract workers away from more risky entrepreneurial activities such as starting new firms. But, positive effects through increased direct and indirect demand links, particularly to local service firms, are also possible. We are undertaking research on these matters in both Scotland and the UK regions but as yet do not have conclusive results.

Outlook

Growth continues to be relatively strong in the world economy despite some slowing of growth in the US (see *the World Economy* section). Growth in Japan and China remains strong while the Euro area is now exhibiting a clear strengthening of economic activity. This is clearly indicated by the strengthening of the growth of manufacturing activity in recent consecutive quarters. Domestic demand growth is picking up overall in the Euro area but concerns remain about the strength of domestic demand in Germany particularly consumption. Oil prices continued to rise during the most recent quarter but peaked at $78 in August and have now fallen back to $60 more recently. This means that oil prices are still 22% above prices at the start of 2006 and are adding to inflationary pressures. Although there is little evidence that rising fuel costs are feeding through into wage bargains in any significant way.

Forecasts for the US economy have been revised upwards, with growth of 3.6% anticipated this year and 3.1% in 2007. There has been some weakening in US growth since the first quarter of 2006 but growth overall remains strong. The earlier signs that Japan was beginning to exhibit strong growth have been sustained with GDP expected to grow by 3.1% in 2006 and 2.6% in 2007. Strengthening domestic demand in the Euro is now being reflected in growth forecasts with GDP growth projected to move back to trend rising by 2.1% in 2006 and 1.9% in 2007 compared to an outturn of 1.4% in 2005. World trade remains strong and GDP growth in the overall OECD area is predicted to reach 3.1% this year and 2.8% next.

The UK economy is performing strongly, particularly in a European context. The latest consensus of independent forecasters as reported by the UK Treasury projects GDP growth of 2.6% this year and 2.4% in 2007 compared to an outturn of 1.9% in 2005. Some inflationary pressures are present, with house price growth buoyant but the growth of average earnings is well within expected bounds. The MPC pushed interest rate up 25 basis points to 4.75% in August and the consensus is that the incipient inflationary pressure will lead to a further increase to 5% in November. The latest GDP growth data for the third quarter reveal growth of 0.7% for the fourth consecutive quarter, raising the annual rate to 2.8%, which is either on, or close to, trend.

Against the background of strong UK economic growth, the Scottish economy is also performing well. The latest Scottish Chambers' Business Survey (SCBS) for the third quarter 2006 conducted by this Institute reported rising business confidence in all sectors. Orders were rising above trend in manufacturing and construction, and raw material, but not labour, cost pressures were increasingly reported along with some apparent skill shortages. We now expect that the growth of GDP in Scotland will also strengthen (see *Forecasts of the Scottish Economy*) in 2006 and 2007 in parallel with the rise in UK growth.

Accordingly, we now feel able to further raise our GDP growth forecasts for 2006 to 2.2% from 2.1% in our June forecast. Forecast growth is expected to continue at 2.3% in 2007 dropping back to 2.2% in 2008. Scottish growth again parallels improvements in the UK but remains a little weaker overall, but stronger in key sectors such as construction. Net employment change continues with 18,500, 15,600 and 10,900 net new jobs forecast in 2006, 2007 and 2008. Unemployment continues to be broadly stable at around 5.3% on the ILO count.

The main concerns for Scotland are whether the service sector can shake off its recent comparative sluggishness and whether manufacturing can continue on its rising trend by improving its export performance. In addition, the

forecast assumes that the main risks to the world, UK and Scottish economies from the large current account imbalances (US deficit and German/Japanese and Chinese surpluses) and incipient inflationary pressures from high fuel prices can be contained.

Brian Ashcroft
23 October 2006

Endnotes:

[1]Marsh R and Zuleeg F (2006) *The Scottish Public Sector: Does Size Matter?* The David Hume Institute, Edinburgh.

[2] Harrigan, F, McGregor, P G, Dourmashkin, H, Perman, R, Swales, J K, and Yin Y P (1991) 'AMOS: a macro-micro model of Scotland' *Economic Modelling*, 10, pp. 424-79. For the specific version of the model used see Ferguson, L., Learmonth, D., McGregor, P.G., Swales, J.K. and Turner, K. (2003), "The impact of the Barnett formula on the Scottish economy: a general equilibrium analysis", Strathclyde Discussion Papers in Economics, No. 03-04 http://www.strath.ac.uk/media/media_34462_en.pdf

[3]The public sector is taken to be the public administration, health and education and health sector. This is not a fully accurate measure of public sector production, since some private sector activity is included and a very small portion of public production is included in other sectors. There is no specific breakdown for public sector GVA as there is for public sector employment.

[4]See G Allan, B Ashcroft, and M Plotnikova *Public Spending and Devolution: crowding out, or crowding in?* Hume Institute seminar, 10 October 2006. A forthcoming working paper by the authors published by the Centre for Public Policy for the Regions (CPPR) will publish these results in full.

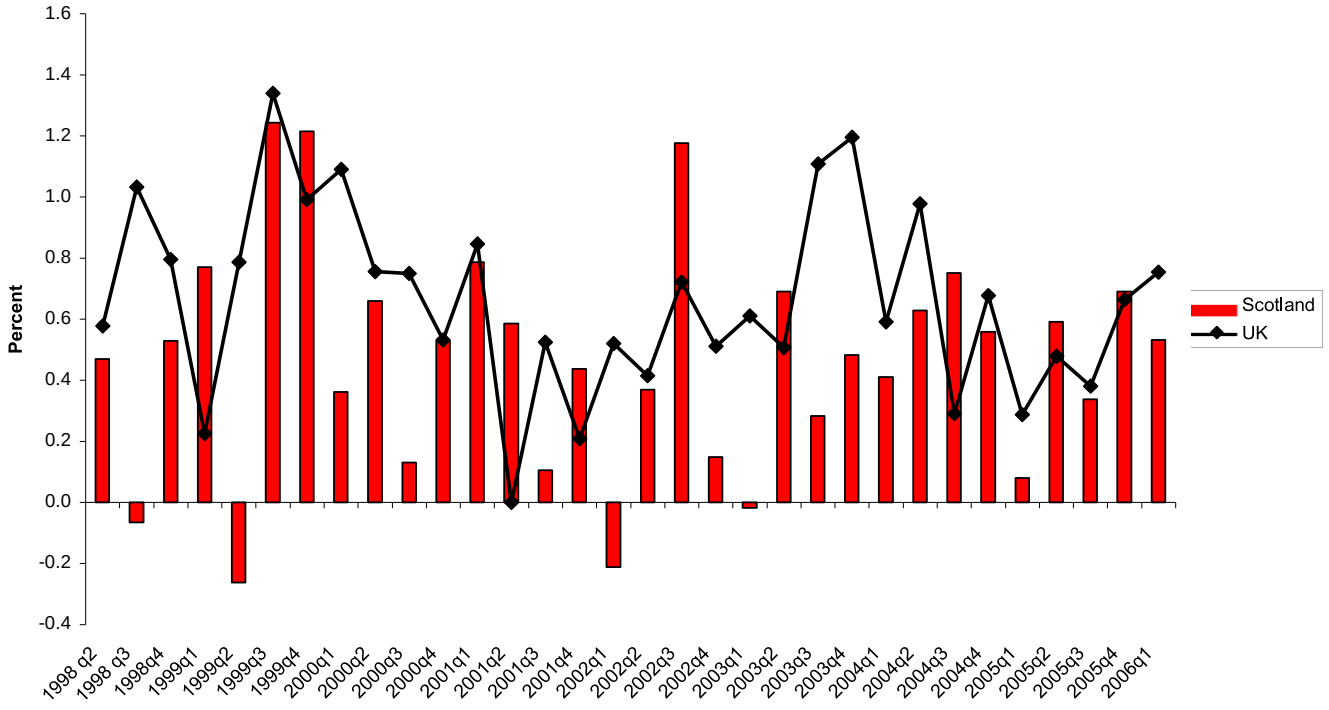


Figure 2: Scottish and UK Services GVA Growth at constant basic prices 1998q2 to 2006q1

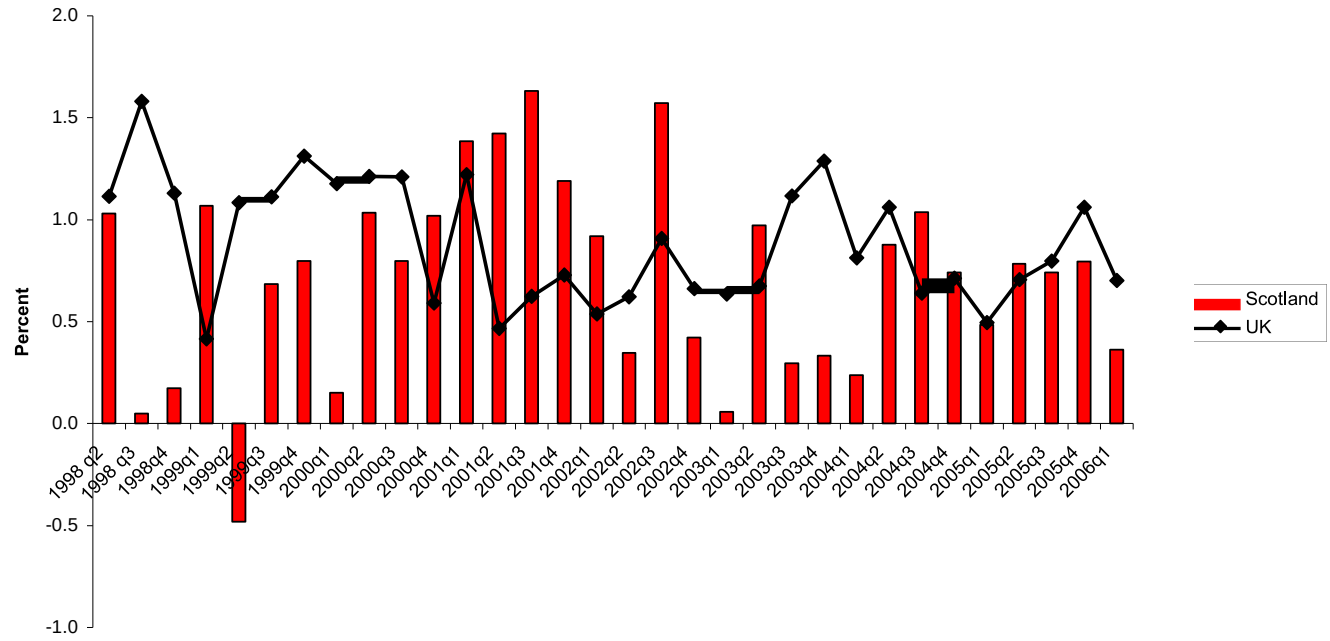


Figure 3: Scottish and UK Manufacturing GVA Growth at constant basic prices 1998q2 to 2006q1

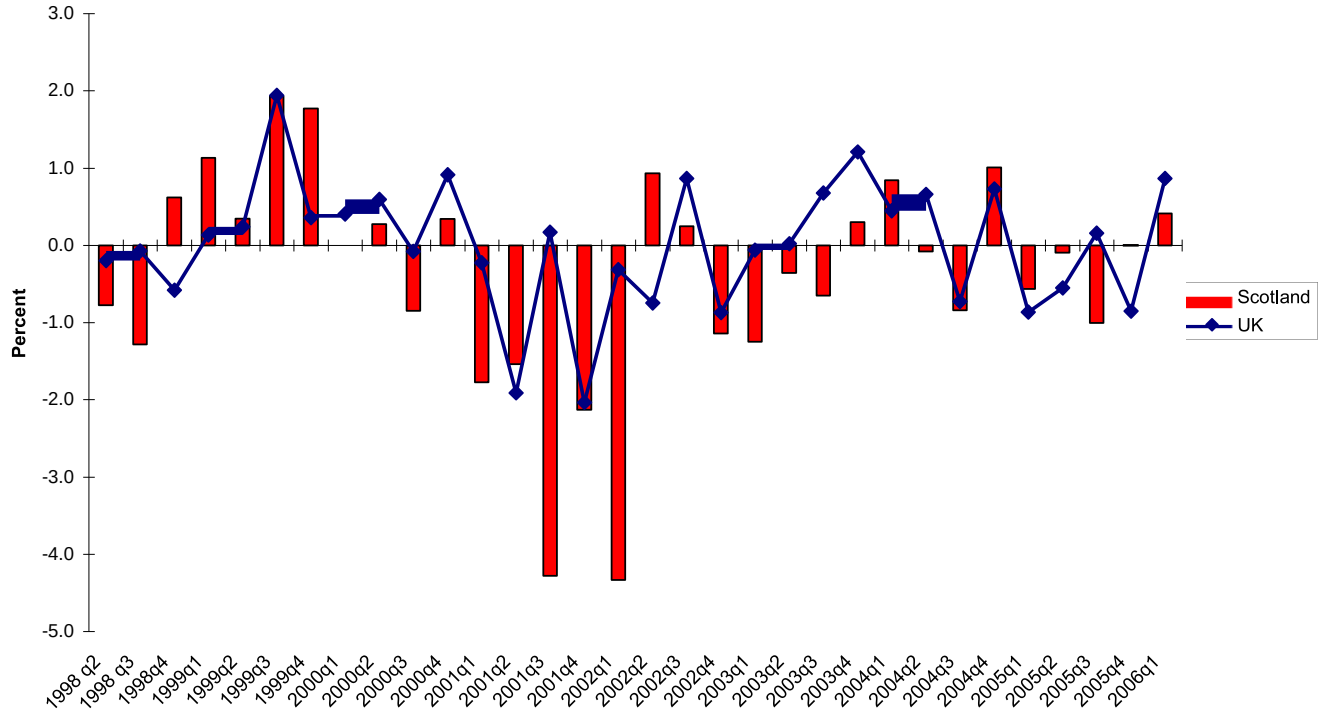
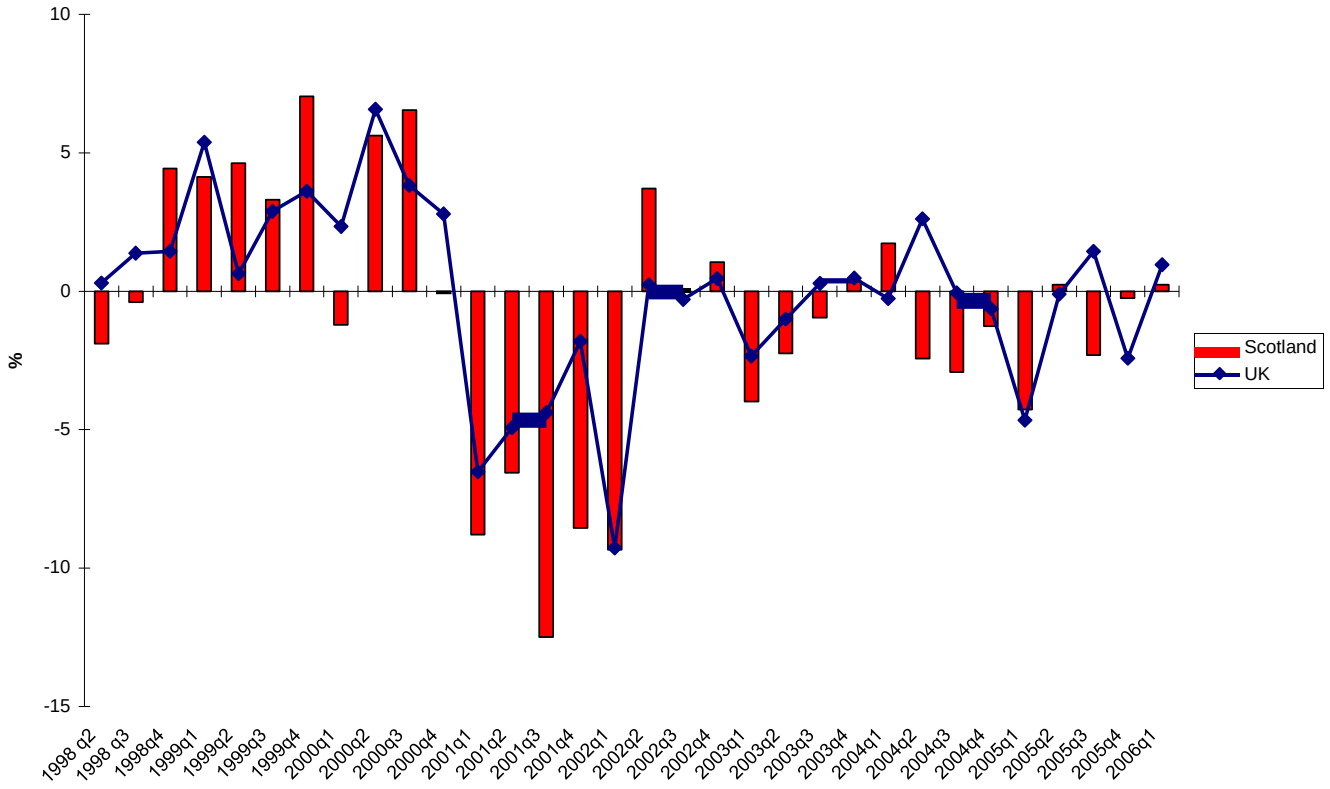


Figure 4: Scottish and UK Electronics GVA Volume Growth 1998q2 - 2006q1



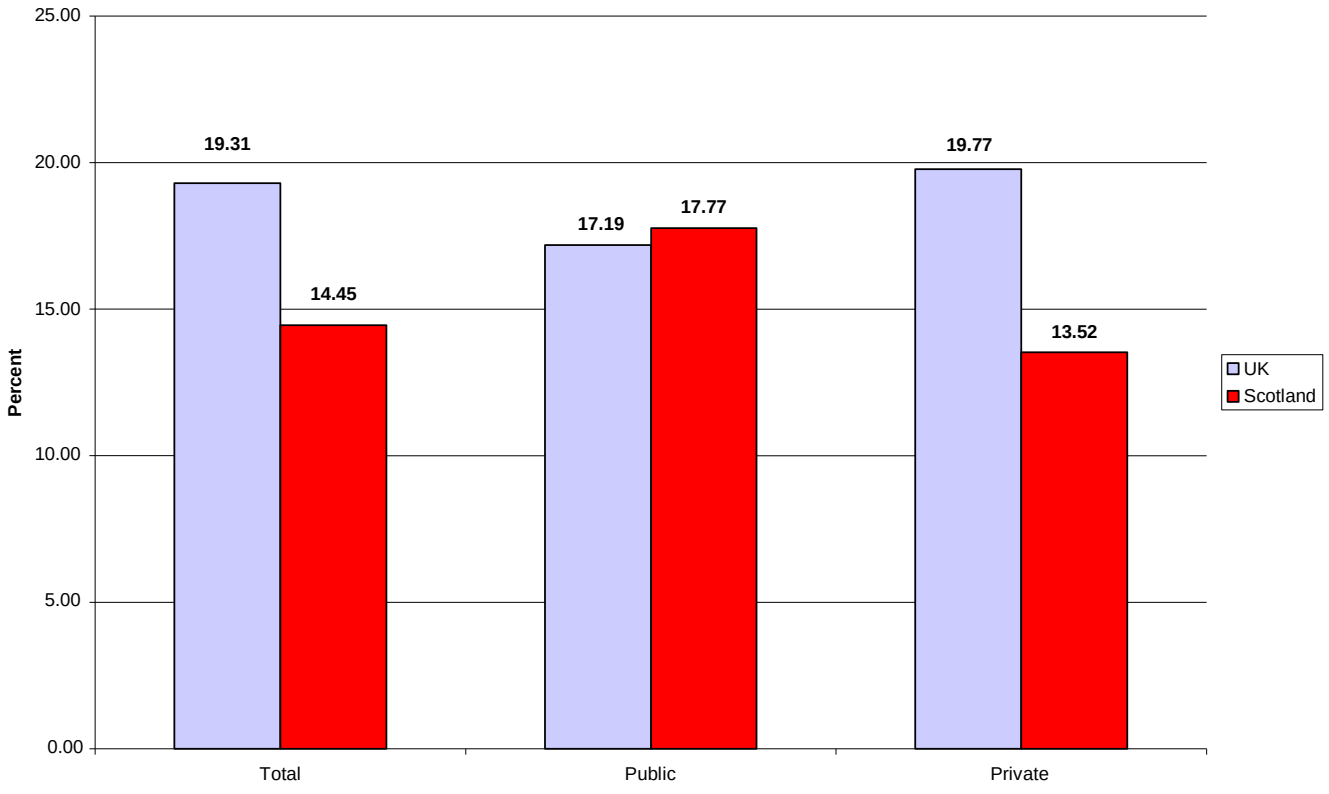


Figure 6: Scottish GVA Growth in Key Private Sectors under Devolution, 1999q2 to 2006q1

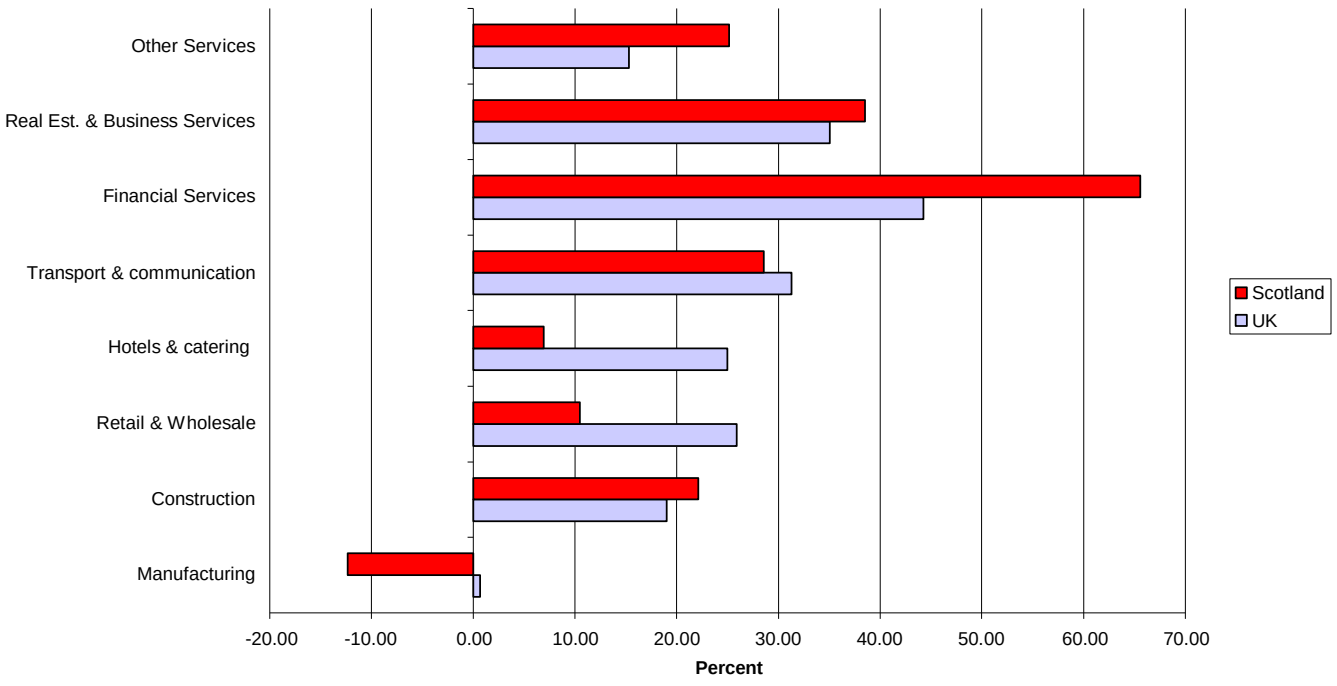


Figure 7: Scottish GVA Growth under Devolution 1999q2 to 2006q1 - Simulations
UK Growth = 100