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MEASURING GROWTH OF THE SCOTTISH ECONOMY

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ABSTRACT

With the advent of the Council of Economic Advisers (CoEA), this paper takes a timely look at the reliability of the Scottish growth data. It compares growth by industrial sub sector with that seen in the UK as a whole over the post devolution period 1998 to 2006. It finds that there are a number of large, and difficult to explain, discrepancies in these growth rates, particularly in the services sub sectors of ‘Wholesale and Retail’, ‘Hotels and Catering’, ‘Education’ and ‘Health’. The scale of these discrepancies is such that it puts a large question mark alongside the quality of the data by which the CoEA will be asked to judge the state of the Scottish economy. The reliability of the existing data need to be urgently re-examined and corrected if it is wrong, or, if it is right, then different policies might need to follow from these very different UK and Scottish growth patterns.

Introduction

Prior to the Council of Economic Advisers (CoEA) inaugural meeting on the 20th of September the purpose of this paper is to investigate the reliability of the existing growth data in order to see whether it is in a fit state from which to draw firm conclusions on the past performance of the Scottish economy. In order to do this we have reviewed the data published by the Scottish Executive of its Quarterly Estimates of Gross Value Added (GVA) at basic prices by category of output.

Any time period could be looked at with interest but we have concentrated on that which stretches from the last full year of pre-devolution (1998) to the latest full year available (2006). This is for two reasons: firstly, it seems reasonable that the CoEA will be particularly interested in this post devolution performance period. Secondly, because from 1998 onwards Scottish data was collected on a more consistent basis with that for the UK (for example, the use of the expanded Annual Business Inquiry (ABI) became more prevalent then for both the UK and Scotland).

The primary point of comparison for the Scottish data will be with similarly defined Estimates of UK GVA data published in the annual ONS Blue Book. What we are looking for is inconsistencies in the data, leading to differences in growth rates over this period, which are difficult to reconcile. To this end further comparisons will be made with published ABI data for Scotland and the UK, Regional Accounts GVA data, employment data and other relevant sources.²

¹ We wish to thank Brian Ashcroft for his comments and suggestions; however final responsibility for the contents of this article rest solely with the authors.

² There are different sources of data for GVA – the ABI data is collected annually and is based on measuring the output produced by enterprises; the Quarterly Accounts data are based on a range of different sources (which for some sectors – notably in the Public Sector - differ between Scotland and the UK); and the Regional Accounts data are largely based on measuring GVA using predominately income data (rather than output or expenditure data). Thus, different results can be obtained, but the various different sources of data should indicate similar patterns over time.

Comparing Scottish growth rates with those of the UK, or other countries, in order to understand and explain any such differences is a much broader topic, which can only be properly addressed from a position of certainty in relation to the underlying data.

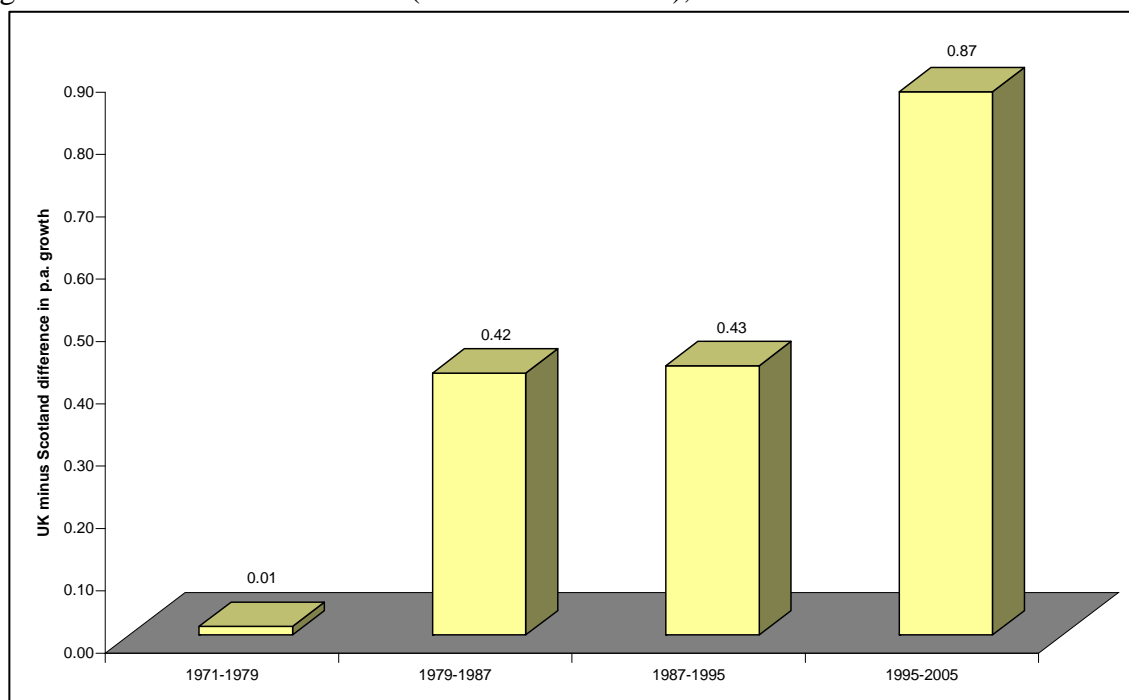
Growth from 1998 to 2006

Table 1 (below) illustrates the basic comparisons for growth over this period, broken down by Industry sub-sectors, using Quarterly Accounts data. At a low level of disaggregation Table 1 illustrates the well known picture of relative growth with Scotland declining faster in the Production Industries than the UK and not growing as quickly as the UK in terms of Services.

The faster decline in Manufacturing has been partly offset by a faster rate of growth in Construction. This leaves slower growth in Services, which now account for almost three-quarters of GVA, as the principal reason for total Scottish growth being only three-quarters of what it was in the UK over this period.

Over the whole economy, the UK growth rate (1998-2006) was 2.7% p.a. while Scotland's was 2.0% p.a. To put this in context, the UK has been outgrowing Scotland since the 1970's, as shown in Figure 1.³ Based on GDP/GVA data, the long-term growth rate over the last 30 years (1976 to 2006) was 2.3% for the UK and 1.8% for Scotland. However, the internationally accepted definition (see OECD and others) by which to judge economic performance is GDP *per capita* growth as it takes into account population changes which can inflate national growth rates. Thus, after more than 30 years of slower growth Scotland's GDP per capita should be much lower than the UK's. The reality is that as recently as the mid 1990's Scotland's GDP per capita was (slightly) higher than that of the UK.

Figure 1: Growth rate differential (UK minus Scotland), 1971-2005



Source: ONS Regional Accounts

³ If we take a longer run growth rate, that includes data from the 1960's, the difference between the UK and Scottish growth rate is much less.

Table 1: GVA by broad sector in Scotland and the UK (based on 2003 = 100)

Industry	2003 weight		1998		2006		growth 98-06% (overall) ^a			growth 98-06% (average p.a.) ^b		
	Sc	UK	Sc	UK	Sc	UK	Sc	UK	Diff ^c	Sc	UK	Diff ^c
TOTAL	1000	1000	91.3	87.5	107.1	108.2	17.3	23.7	6.4	2.0	2.7	0.7
Agriculture etc	18	10	94.9	97.9	100.7	106.2	6.1	8.5	2.4	0.7	1.0	0.3
Production	190	186	110.2	100.5	97.9	98.8	-11.2	-1.7	9.5	-1.5	-0.2	1.3
Mining etc	13	22	98.9	110.2	76.7	76.9	-22.4	-30.2	-7.8	-3.2	-4.5	-1.3
Manufacturing	151	147	112.2	100.5	99.2	102.1	-11.6	1.6	13.2	-1.5	0.2	1.7
Elec, gas, water	26	17	105.7	88.8	101.0	98.1	-4.4	10.5	14.9	-0.6	1.2	1.8
Construction	71	61	91.5	89.7	117.9	106.7	28.9	19.0	-9.9	3.2	2.2	-1.0
Services	720	744	86.2	83.8	108.6	110.8	26.0	32.2	6.2	2.9	3.5	0.6
Wholesale & Retail	115	122	97.9	83.3	106.1	109.6	8.4	31.6	23.2	1.0	3.4	2.4
Hotels & Rest's	38	31	98.9	84.6	100.2	112.1	1.3	32.5	31.2	0.2	3.5	3.4
Transp & Commun's	77	78	80.5	76.2	117.2	111.0	45.6	45.7	0.1	4.7	4.7	0.0
Financ'l Intermed'n	71	79	64.9	79.9	122.5	123.5	88.8	54.6	-34.2	7.9	5.4	-2.5
Real estate & Business	187	244	80.8	79.8	114.4	117.1	41.6	46.7	5.2	4.3	4.7	0.4
Public Admin & Def	72	52	93.5	91.2	104.6	103.3	11.9	13.3	1.4	1.4	1.6	0.2
Education	65	59	85.5	94.4	106.9	101.8	25.0	7.8	-17.2	2.8	0.9	-1.8
Health & Social W	80	72	88.8	84.2	106.4	110.2	19.8	30.9	11.1	2.3	3.4	1.1
Other services	59	53	83.5	91.9	95.4	106	14.3	15.3	1.1	1.7	1.8	0.1
FISIM	-42	-46	68.9	72	126.9	138.3	84.2	92.1	7.9	7.6	8.2	0.5

^a Calculated as arithmetic growth i.e. $100 \times [(Y_{end} - Y_{start}) / Y_{start}]$

^b Calculated as geometric growth i.e. $(100/8) \times \ln(Y_{end} / Y_{start})$

^c UK minus Scotland difference

Source: ONS (2007) and Scottish Executive (2007)

In fact, roughly half of the UK-Scotland growth differential can be explained by higher population growth in the UK than in Scotland. (Between mid 1998 and mid 2006 the UK population rose by 0.44 of a percentage point per year, while that of Scotland only rose by 0.1 of a percentage point per year.) So in the sense that it is changes in individual wealth rather than national wealth (i.e. increases in the Standard of Living rather than more output brought about by more people) that is important then the relevant differential between the UK and Scotland is around 0.35% p.a. (In terms of Figure 1, the differential in growth per capita between 1995-2005 is on average 0.45% p.a., rather than 0.87% p.a., showing that differences in population growth accounted for an average of 0.42% p.a. in favour of the UK). While the remainder of this paper will look at growth rates by industry sub-sector these population rate differentials should be borne in mind in the final analysis and we will briefly return to this point in the final section.

Table 1 shows that for Services as a whole Scotland (2.9% p.a.) grew at four-fifths the rate of the UK (3.5% p.a.). But, rather than a picture of fairly consistent, across-the-board, slightly slower growth, the breakdown of this overall picture for services tells some very different stories industry-by-industry.

Analysis by service sub-sector (1998-2006):

Areas where growth is significantly slower than the UK:

- In the UK, Wholesale and Retail (W+R) grew at about the same rate as Services in total (3.5% p.a.). But in Scotland this sector grew at just 1% p.a. and if the published data is to be believed there was no real terms increase in output in this sector between 1999 and 2005 (while in the UK it grew 25%). This is an industry sector that accounts for some 11.5 per cent of the Scottish economy.
- Hotels and Catering(H+C) grew at exactly the same rate in the UK as Services in total, (3.5% p.a.). But in Scotland this sector barely grew at all (0.16% p.a.). Although the weight of this industry sector is lower, at 3-4% of total GVA, when compared to Wholesale and Retailing the discrepancy in growth rates is larger.
- Health and Social Work in Scotland (2.3% p.a.) grew at only two-thirds the rate observed in the UK (3.4% p.a.)

In total these sectors account for 23.3% of Scottish GVA.

Areas where growth is significantly faster than in the UK:

- Over the entire period 1998-2006, Financial Intermediation in Scotland grew almost 90%, nearly twice as fast as the next best sub sector (Transport and Communications), and considerably faster than the UK's 55%. This is an area where Scotland's strengths are known but the discrepancy in growth rates still seems unduly large.
- Education grew 3 times as fast in Scotland (2.8% p.a.) as for the UK (0.9% p.a.) as a whole, which seems unusual given the underlying demographic changes (the population of education age (5-24) fell in Scotland, -13,000, but rose in the UK, +525,000, between 1998 and 2005).

In total these industry sub sectors account for 13.6% of Scottish GVA.

In all the other service sub-sectors the relative growth rates are broadly similar; that is for Transport and Communications, Real Estate and Business (a sector now almost as large as the whole of Production Industries), Public Administration, and Other services.

Methodological differences between Scotland and the UK GVA data

As a first step to understanding these very different growth patterns it is worthwhile checking the respective quarterly UK and Scottish data sources for inconsistencies.

In terms of Wholesale and Retail the data sources are identical between the UK and Scotland, consisting of information from the MIDSS (ONS Monthly Inquiry into the Distribution and Services Sector) and the RSI (ONS Retail Sales Inquiry).

In terms of Hotels and Catering the data sources are also identical between the UK and Scotland, consisting largely of turnover from VAT returns to Customs and Excise.

However, for Education and Health, the Scottish data are largely taken from employment sources while the UK data is principally taken from the index of output for public sector and non-profit institutions serving households for Education (largely based on pupil numbers, including an examination linked annual quality adjustment, and turnover for post school bodies) and the index of government health services non-marketed output for Health (largely based on a list (1700) of treatments and operations for in and out patients, weighted by expenditure).

This leaves us still in the dark over the reasons for the differential growth rates for W+R and H+C but with a possible explanation for Education and Health differentials. Scottish Executive statisticians are currently working on making the Scottish methodology for the government led services, including Health and Education, to be more consistent with the UK in time for the October 2007 GVA publication.

Other evidence

In order to check whether these very different post devolution growth rates are supported by alternative data trends, we first turn to information that is available in the Annual Business Inquiry (ABI). As described by the ONS, the ABI is the major data input for the *marketable output sectors* of the economy, in the production of Input-Output tables (for both the UK and Scotland), and in setting the annual level of the UK and Scotland Gross Domestic Product for marketable output. Its main strength as a data source for GVA is that it is based on data collected directly from enterprises on their outputs (and costs). However, the ABI does not cover the whole economy as it omits the public sector, most of financial intermediation and part of agriculture; thus data on these omitted sectors is added to the ABI data to obtain the basic information needed to calculate GDP at the national and regional level.⁴

⁴ It is also produced with a considerable time-lag (e.g. 2005 data only became available in May 2007); thus the QA series for GVA is based on alternative sources which are collected and processed for use in producing the latest figures.

When we compare the growth rates obtained using ABI and the GVA Quarterly Accounts (QA) data for certain sectors there seem to be some major differences in the results obtained. Table 2 shows that for the sectors chosen, there is little agreement between the relative growth rates of Scotland and the UK when using the ABI and QA data⁵; for example, using the ABI data, growth was overall some 23.8% *higher* for the UK in Construction (or on average 1.9% p.a.) but using the QA data growth would appear to have been overall 9.9% *lower* (or on average 1% p.a. lower) in the UK. Similar major discrepancies exist for the other sectors shown.

Table 2: Growth rate differentials (UK minus Scotland), 1998-2005(6)

Sector (1992 SIC)	% p.a. ^a		% overall ^b	
	ABI ^c	QA ^d	ABI ^c	QA ^d
Construction (45)	1.9	-1.0	23.8	-9.9
Wholesale inc. motors (50-51)	5.5	2.1	39.0	19.1
Retail trade (52)	0.0	3.2	-0.3	31.9
<i>Wholesale & retail (50-52)</i>	<i>3.2</i>	<i>2.6</i>	<i>26.0</i>	<i>23.2</i>
Hotels and restaurants (55)	0.7	3.4	7.0	31.2
Real estate ^e & business services (70-74)	-1.2	0.4	-15.9	5.2

^a Calculated as geometric growth i.e. $(100/n) \times \ln(Y_{\text{end}}/Y_{\text{start}})$

^b Calculated as arithmetic growth i.e. $100 \times [(Y_{\text{end}} - Y_{\text{start}})/Y_{\text{start}}]$

^c Refers to 1998-2005.

^d Refers to 1998-2006.

^e ABI data does not include imputed rents from owner-occupation

Source: ABI and GVA Quarterly Accounts (Scotland and UK)

Figure 2(a)-(e) illustrate these differences in more detail. These show the year-on-year differences in growth rates for the 5 sub-sectors presented in Table 2, using the QA and ABI data sources.

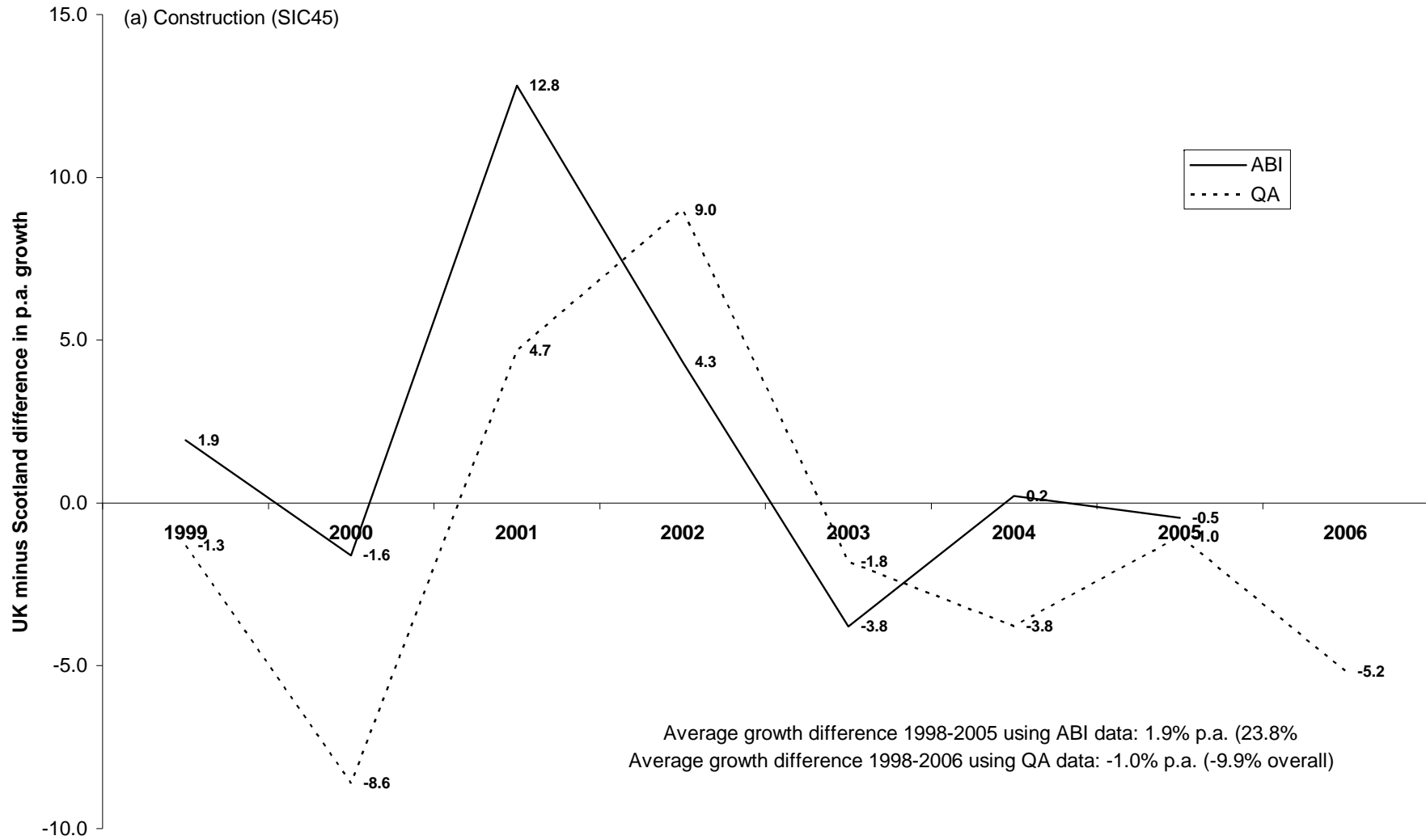
For Construction, the two series have similar patterns (albeit with an apparent lag in the QA data) but the ABI data shows a mostly positive differential in favour of the UK, while the QA data has mostly annual growth differences in favour of Scotland.

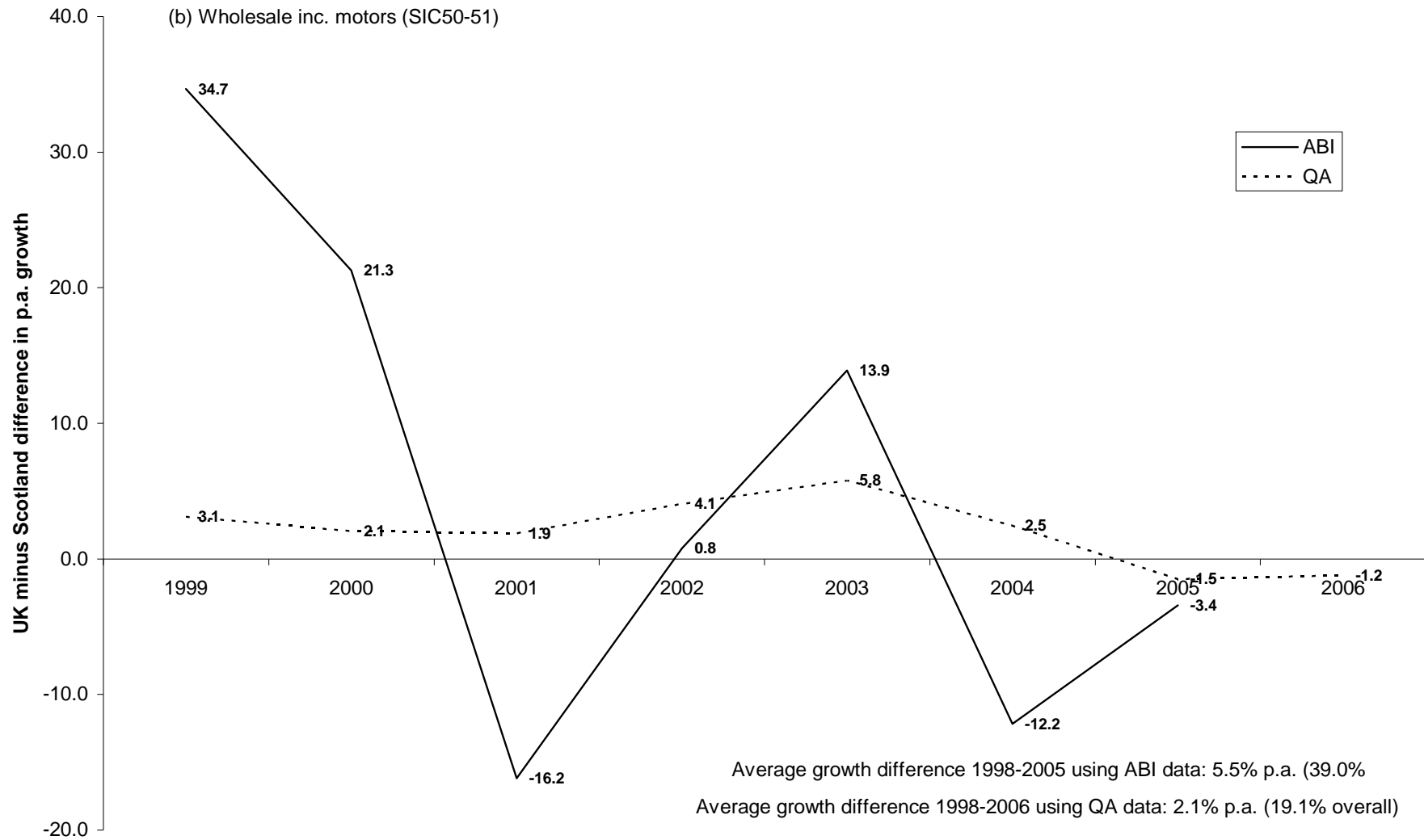
The patterns for the Wholesale sector are very different; the ABI data shows significant volatility but the QA data mostly shows steady higher relative growth year-on-year in the UK.

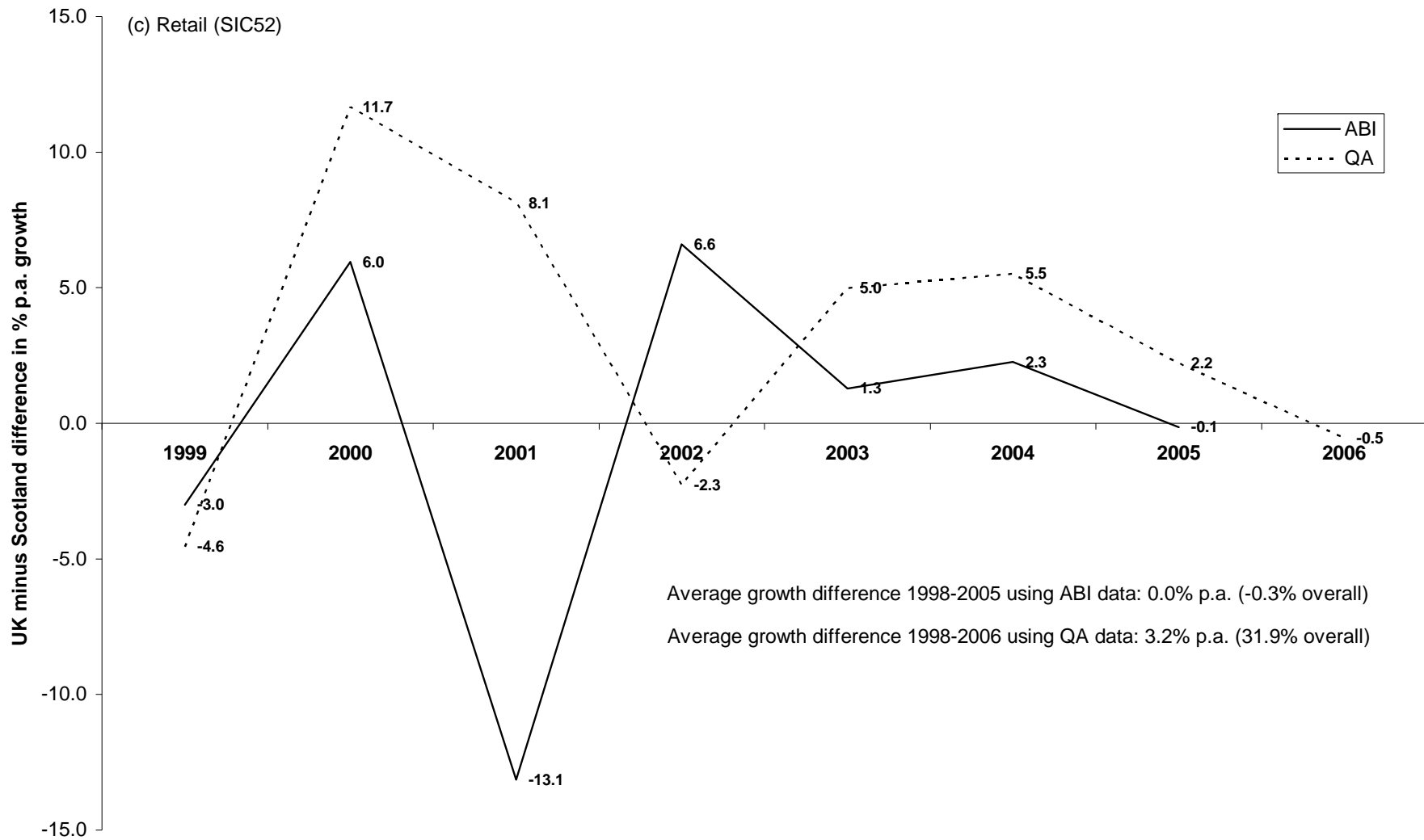
In the Retail sector, the net nearly zero difference between Scottish and UK growth rates between 1998-2005 based on ABI data was the large differential of over 13% higher growth in Scotland between 2000-2001, which cancelled out higher growth in favour of the UK in other years. In contrast, the QA data has the UK with (often substantially) higher growth in most years.

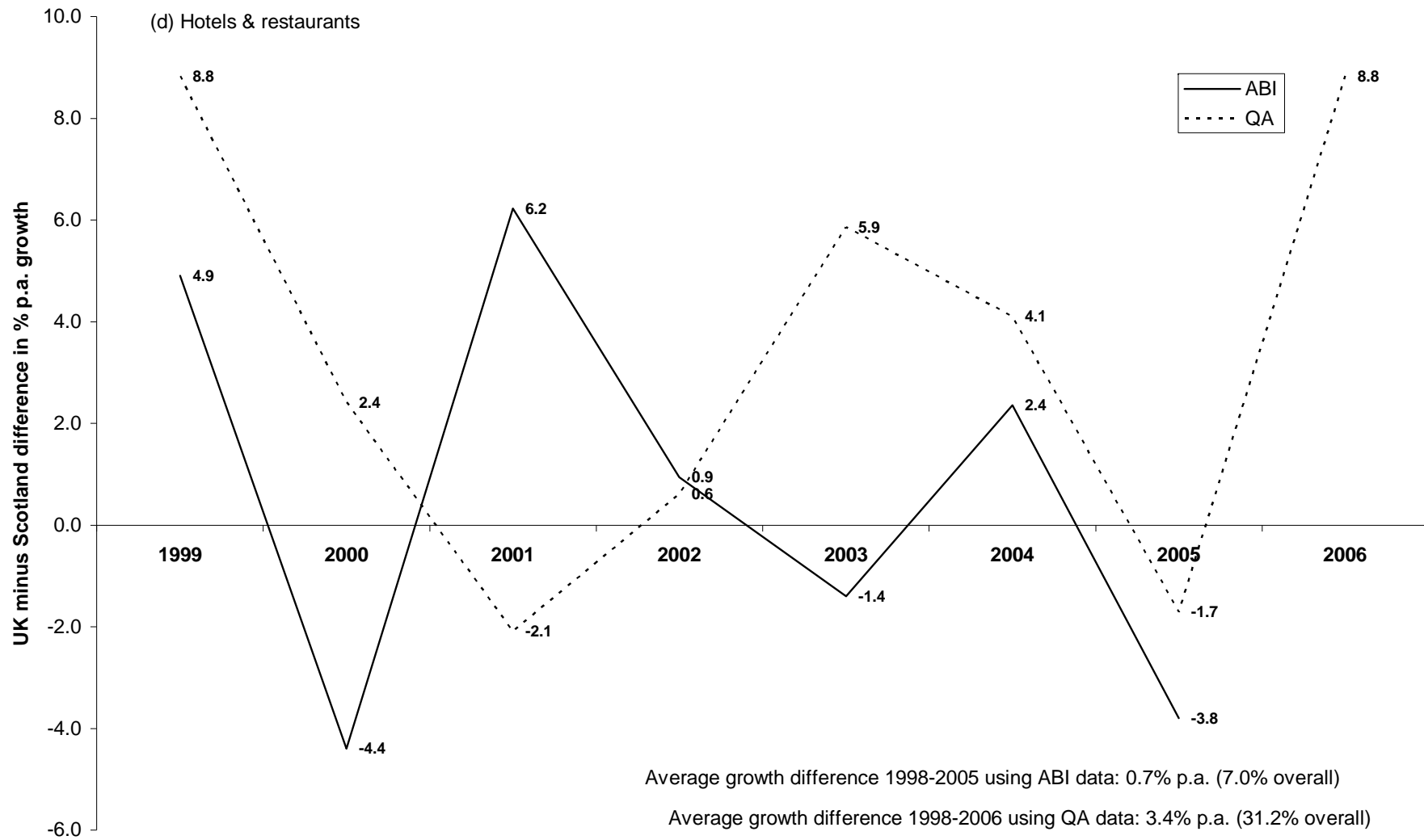
⁵ Although when we combine the Wholesale and Retail sectors we obtain similar results using the two data sources.

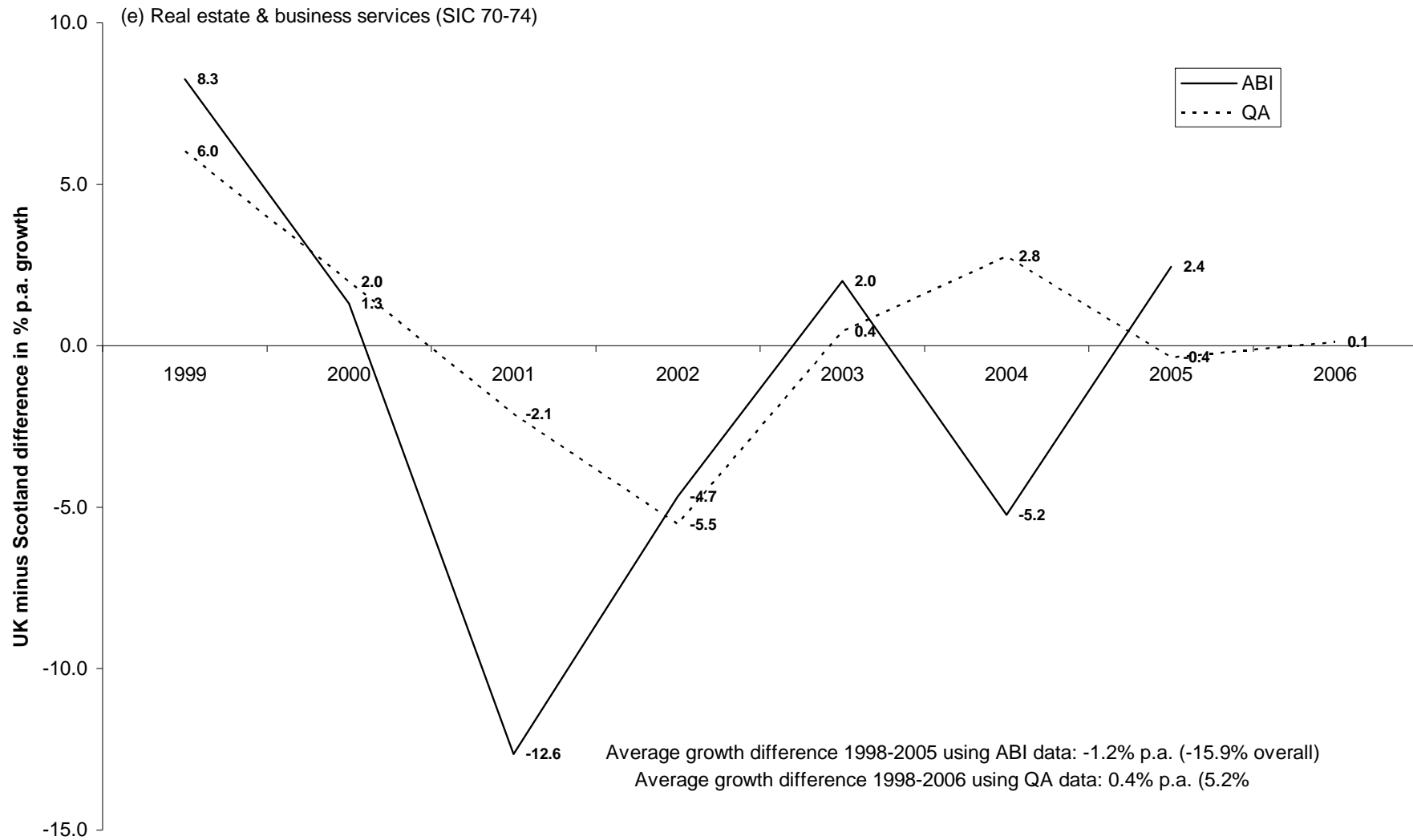
Figure 2: Growth rate differences 1999-2005(6), UK minus Scotland (ABI and QA data)











The patterns of growth shown for the Hotels and restaurants sector in Figure 2(d) are very different, both in terms of upswings and downswings, as well as whether the differential was in favour of Scotland or the UK.

Lastly, for Real estate and Business services, the main reason for the differences between the ABI and QA results in Table 2 was a nearly 13% higher relative growth in ABI in Scotland between 2000-2001.

In summary, these charts show considerable differences between the ABI and QA data sources, to the extent that they suggest contradictory growth paths for Scotland and the UK during the 1998-2005(6) period.

Looking beyond the ABI, Table 3 shows growth rates for industry sub-sectors in terms of the Regional Accounts (GVA) data and employment (employee jobs by industry) data, as well as GVA growth from Table 1.

Table 3 Growth rate^a differentials (UK minus Scotland), 1998-2004(6)^b

Industry	GVA Quarterly Accounts	Regional Accounts	Employees in employment
TOTAL	6.4	4.7^c	-1.4
Agriculture etc	2.4	-4.6	-17.3
Production	9.5	4.0	4.0
Mining etc	-7.8	9.5	-
Manufacturing	13.2	3.4	4.5
Elec, gas, water	14.9	-4.5	-
Construction	-9.9	11.2	-2.9
Services	6.2	2.1	-2.1
Wholesale & Retail	23.2	0.6	5.8
Hotels & Rest's	31.2	19.2	8.7
Transp & Commun's	0.1	0.6	3.8
Financ'l Intermed'n	-34.2	-21.9	-24.9
Real estate & Business	5.2	6.0	-12.5
Public Admin & Def	1.4	-2.1	-0.9
Education	-17.2	1.0	6.5
Health & Social W	11.1	-3.2	-13.5
Other services	1.1	-3.7	2.8
FISIM	7.9	37.8	-

^a Calculated as arithmetic growth i.e. $100 \times [(Y_{end} - Y_{start}) / Y_{start}]$

^b GVA and employment 1998-2006, Regional Accounts 1998-2004

^c Excludes 'extra-regio' payments not allocated by ONS. If this is included in the UK total, the growth differential is 5.1%

Source: ONS and Scottish Executive

Concentrating on the main areas where Scotland and the UK growth rates diverge we find:

- The Regional Accounts (RA) data for the Wholesale and Retail sector suggest that growth in Scotland has been on a par with the UK, while the employment data shows faster growth for the UK than for Scotland but perhaps not to an extent that explains the large GVA growth differential obtained when using QA information. (Note, the ABI data for the Wholesale and Retail sector is more in line with the QA figure, although as shown above this is to ignore the large differences between the two sets of data when we consider changes *within* the sector (see Table 2).)
- For Hotels and Catering the RA data might be seen as consistent with the GVA data (but both are higher than the figure obtained using ABI data); while the employment growth differential is also in the UK's favour the rise in Scottish employment of over 7% contrasts with an output rise of only 1% (1998-2006).
- In terms of Financial Intermediation (Banks, Building Societies, Insurance, Pension Funds etc) the alternative data generally supports the GVA picture. In particular, the employment data shows a very large increase in Scotland since 1998 (+24,000) and in comparison to the UK (+39,000, or only +15,000 excluding Scotland)
- In Education the data moves from suggesting similar growth rates (RA), to a higher UK relative growth rate (based on employment) and finally to a much higher Scottish growth rate (based on GVA).
- In Health the RA data again suggests broadly similar growth rates (with a slight bias towards Scotland), the employment growth differential for Scotland is over 13 % higher, but the GVA growth differential obtained using the QA data is over 11% higher in favour of the UK.

A recent report by the Bank of Scotland (Press Release 05.08.07) also looked at relative UK and Scotland growth trends using GVA and employment data. It found smaller discrepancies in relative growth rates than here but this was due to the more aggregated nature of the industry sectors being looked at. For example, by combining Government services (Public Admin, Education and Health) together the large Health and Education differentials disappear as they largely offset each other.

It is only by looking at the most disaggregated level available that the very different growth patterns properly emerge.

Recent revisions across specific sub-sectors – ‘Retail’ and ‘Hotels and Catering’ sub-sectors

The Hotels and Catering (H+C) Sector

The H+C sector gives a good illustration of how drastically the relative growth stories for Scotland and the UK have changed through data revisions over recent years. Back in 2003, at the time of the original McLaren article, Scotland was a relative success story growing by 13%, 1995-2002Q3, while the UK declined by 4%. However things soon changed. First the UK figures were revised up so that by the 2003 Blue Book (BB) UK growth for 1995-2002 became 17.4% (due to a significant improvement in methodology, whereby there was a move to measuring turnover), since when it has been revised up even further to 22.9%. At the same time, the Scottish growth rate was

gradually whittled down to under 8%, just over a third of the UK rate. Post 2002 the Scottish performance has remained flat while the UK sector continued to grow leading to the massive post devolution differential (1.3% vs 32.5%).

The Retail Sector

As recently as the Scottish Economic Report of June 2006 the Scottish Executive have been reporting positively on “*a considerable increase in retail expenditure... Between 1998 and 2005, retail GVA rose by 23.7 per cent*”. However, that was before the data revisions of October 2006 when the retail sector growth was substantially revised (due to the previous use of an erroneous deflator). Now the growth between 1998 and 2006 stands at 11.7% and, even more worrying, between 1999 and 2005 there was a recorded fall in output of 2%. It also would now appear to contradict the Scottish Retail Consortium/Royal Bank of Scotland monthly reports which indicate that “*retail sales have been positive over the course of the past few years*”.

In contrast to this picture the UK Retail sector has been booming, up 33% (1999-2005) during the same period when Scottish Retail output allegedly fell by 2%.

In another commentary from the March 2004 Scottish Economic Report the Scottish Executive noted that “*One particular part of the services sector in Scotland that we are able to track regularly, absolutely and relative to the UK as a whole is the retail sector. That is good news, because the retail sector is a key indicator of the health of consumer demand generally, and crucial to both economic prosperity and employment prospects.*” It then went on to praise the past and present performance of the sector. Obviously this story is no longer true. The performance of the Retail sector has been abject and instead of growing faster than the economy as a whole has acted as a drag on it.

IN SUMMARY

To summarise the above analysis:

- the existing Scottish growth data, based on GVA by industry, exhibits some very odd trends relative to the UK
- it remains unclear how much of these differences might be due to different data sources and methodologies
- it is difficult to reconcile the contrasting trends with other growth related trends

All this leaves us in the uncomfortable position of doubting important elements of the principal growth indicator for Scotland.

WHY IS THIS IMPORTANT?

The above analysis points to two very different explanations for the results found. First, if the Scottish (and possibly the UK) data is in error then it is failing to show the

true picture of economic growth in Scotland. Clearly if this is the case then the situation needs to be remedied as a matter of urgency and more reliable data compiled. If we cannot rely on the existing data, and as some of the anomalies are very large, then we cannot say with much confidence how the Scottish economy has been performing recently or perhaps at all historically. This puts a big question mark over the current debate on Scotland's "slower" growth rate in comparison to the UK and other countries.

Second, if the data turns out to be accurate there are still some very serious questions that need to be addressed such as: (i) how to reconcile the GVA data with other data sources, which seem to tell a different story; (ii) how to explain some of the huge differentials in trends between Scotland and the UK industry sub-sectors; and (iii) how to begin to understand the implications for UK and Scottish government policy of these differing trends. If true, then the current data suggests that rather than being similar in make-up and growth to the UK economy, but just a bit slower all round, in fact the Scottish economy is growing in a very different way to the UK, particularly within the dominant Services sector. The consumer and leisure boom that is commonly seen to have been a significant element in helping drive modern developed economies is not happening in Scotland and it is mainly the Financial sector that is saving Scotland from growing at a much slower rate than the UK as a whole.

Of course the final result might be a mixture of problems with the underlying data sources used and different trends occurring in Scotland. If it is, or if the first turns out to be the main cause (i.e. data errors) then there is a good chance that Scotland's growth rate will be revised up as the majority of these differentials show Scotland growing at a surprisingly slower rate than the UK.

If this possibility is combined with the adjustment needed to move from GDP growth to the more relevant GDP per capita growth then there might result a significant change in the terms of the current debate on Scottish growth. For example, if we both adjust for relative population changes and assume Scottish growth in the Wholesale and Retail and Hotels and Catering sectors is on a par with the UK, then the post devolution growth differential would disappear.

The advantage of having a Council of Economic Advisers, which one of these authors has long argued for (see McLaren 2007), is that they can now act as a new and strong influence in demanding a better explanation of the existing economic data. This may also necessitate making the case for greater capacity in terms of both collecting and interpreting the data. Given the difficulty in reconciling or explaining the industry sub-sector trends shown in this paper it seems an essential first step for the CoEA to ensure that the growth data is fit for purpose before drawing any firm policy conclusions with respect to bolstering the performance of the Scottish economy.

Annex 1 - The view in 2003

In 2003 McLaren reviewed Scottish and UK growth by industrial sector over the period 1995 and 2002Q3.

Table 4 below shows the differences in data between the findings then and what the latest data shows for roughly the same period (1995 to 2002).

Table 4: Overall growth 1995-2002

Industry	2003 data		1995-2002Q3		2007 data		1995-2002	
	Sc	UK	Sc	UK	Sc	UK	Sc	UK
TOTAL	13	19	16	22				
Agric etc	0	-7	5	7				
Production								
Mining etc	9	-3	10	0				
Manufacturing	-6	-1	0	2				
Elec, gas, water	5	16	7	21				
Construction	6	23	8	14				
Services	22	29	22	30				
Wholesale & Retail	31	34	7	27				
Hotels & Rest's	13	-4	8	23				
Transp & Commun's	36	47	45	64				
Financ'l Intermed'n	57	28	67	43				
Real estate & Business	31	41	34	44				
Public Admin & Def	8	2	8	0				
Education	12	9	17	8				
Health & Social W	-6	25	8	21				
Other services	42	30	25	23				
FISIM	-	-	57	66				

Source: ONS and Scottish Executive (both 2003 and 2007)

There are very similar growth rates for the services sector as a whole but the composition of this growth has changed noticeably between the two periods. This has been caused by significant revisions to both Scottish (e.g. W+R) and UK (e.g. H+R) data. For example,

- the aforementioned revisions to the retail sector have resulted in a huge growth differential emerging in relation to W+R
- again as discussed above, in 2003 the Scottish H+C sector was noticeably outperforming the UK sector but now that position has been reversed
- the divergence in Education growth has widened in Scotland's favour
- the divergence in Health growth narrowed, but this seems to be largely due to the smoothing over of the previous 7% year on year Scottish output fall from 1997-98, which always seemed anomalous.

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