

Review of Statistics for Economic Policymaking

Submission to the Allsopp Review by

cogentSi

COGENT STRATEGIES INTERNATIONAL LTD
Killylung
Dumfries DG2 0RL

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Introduction

cogentSi, Cogent Strategies International Ltd, is an international strategy company headquartered in Scotland, with bases in Vancouver and London.

We begin this evidence with a brief statement of our credentials and of policy-relevant statistical work on which our comments are based. This is amplified in an appendix.

We then make some remarks on the key role of detail in regional economic policy. It includes remarks on sub-regional estimates, on fine industry differentiation, and a comment on de-emphasising manufacturing. An appendix introduces a short paper indicating the need for urgent action on ABI employment estimates. This was prepared for the SCOTSTAT Board that advises Scotland's Chief Statistician and offers some concrete examples of issues you refer to in your First Report.

The bulk of our submission concerns the great benefits that we believe a formal balanced social accounting framework brings to measuring any economy, most especially a regional one. We would argue this on statistical grounds, on economic grounds, and on policy grounds. We think that using a Social Accounting Matrix is the best way of obtaining high quality estimates, and that it brings with it a need to consider a comprehensive set of variables for each year. Further it invites policy makers to pay attention to other variables which are fundamental to regional balance and prosperity.

Growing out of these points, we call for a re-appraisal of statistical confidentiality as it applies to businesses.

The basis of our comments

cogentSi, Cogent Strategies International Ltd, is an international strategy company headquartered in Scotland, with bases in Vancouver and London. We were founded in 1993 by public servants with responsibilities for economics and for technology policy in development agencies and ministries for Scotland, Lower Saxony and British Columbia.

Over the years our principal (but by no means sole) focus of activity has become the UK, where we have developed a business advising industry and government based on

- developing global competitiveness, primarily through an industrial cluster approach
- measuring regional and local economies in as much detail as possible

The latter is sometimes an input to the cluster work, sometimes as a step in assessing economic impact for appraisal or evaluation purposes, and sometimes a part of research to understand processes of economic growth and development over time, and the performance of local economies.

The distinctive bases of our comments are therefore

- The very detailed use of economic statistics we make ourselves, frequently on behalf of government departments and development agencies
- Extensions, development and modelling work that we undertake to 'measure the parts that official statistics don't reach'
- Our experience working with economic statistics outwith the UK and European systems, notably those compiled by Statistics Canada and its Provincial affiliates

More information on the background to our company and our work as it affects economic policymaking is given in Appendix 1, and we have enclosed with this submission copies of two publications, *The Caledonian Blue Book*, *Scottish National Accounts 1951-96* and the latest *Dumfries and Galloway Economic Audit*. Our website is www.cogentsi.com.

The importance of detail

In our work of economic measurement detail is absolutely crucial. We trace the origins of our general approach to the Cambridge Growth Project of the Nobel Laureate Sir Richard Stone. The Project's objective was

"To study quantitatively, in as great detail as possible, the present structure and future prospects of the British Economy and the possibilities of influencing these prospects by means of economic policy".

We make extensive use of the concept of Social Accounting Matrices developed by Stone, and the conventions of national accounting that have sprung from it.

Detail is also extremely important to our cluster work, because competition usually operates in individual product markets often with identifiable suppliers and customers. We consider that one of the strengths of Michael Porter's work on the Competitive Advantage of Nations derived from the fact that he looked at global markets and comparative advantage in the maximum product detail available from the SITC, over 700 categories of goods.

We therefore believe that the information system for policy making should pursue the maximum detail practicable in the industrial dimension, in the geographic dimension, and in the concepts measured.

Detail in economics and policy

Policy makers often recoil from detail. They think of it as hard to handle, and fear 'not being able to see the wood for the trees'. We would like to make the point that detail is far easier to handle today than hitherto, particularly in the realm of economic policy making. A major reason is the advance in computing power, for both calculation and storage, and the developments in data-handling techniques that follow from it. However, we totally share the wood-and-trees fear, and for this reason are strong advocates (in the next section) of a highly structured approach to handling detail.

Ultimately, we believe that the ability to handle detail will help to reshape economics, and therefore economic policy making. While there will always be a role for the simplifying genius who can cast or recast an aggregative model, practical progress in economics as in other sciences will depend on painstaking analysis: Einstein's perspiration/inspiration adage will apply to us all.

We also think there is some truth in the observation that economists are much more likely to agree on microeconomic issues than macroeconomic ones. As an Oxford economist you will agree with us that this is, however, no more than a general tendency. But nevertheless, at the level of regional economies in particular, we think it is more likely that a policy consensus will emerge if due attention is paid to microeconomic as well as macroeconomic factors, and this necessitates sectoral and sub-regional detail.

Detail also has a fundamental role in bringing the tools of economic analysis to bear on what economic actors actually do. Outside large corporations few managers would easily make the link between 'macroeconomic' variables and their own business. In this context, **we would not agree with the First Report that GVA has less relevance below NUTS2 level**: on the contrary we would say that the idea of 'value added' is of fundamental importance even to the corner shop.

Value added is additive across the economy and as well as its own role as the best summary measure of economic activity it is closely tied to important issues like liquidity and the distribution of income. The differences between the business and national accounting use of the terms are rarely material.

We make this point with as much zeal as we can muster. We have worked on the impact of angling on fragile fisheries in Scotland, of tourism along Hadrian's Wall, and of zoning in Canadian lakeside communities. To do this we have in effect estimated how much of a village's value added comes from the industrial estate, the shops and pub, and how much from the surrounding farms and forests.

We have not done it, but we could see immense value in applying a similar approach even in urban economies which are less self-contained. Starting with GVA, its origins and decomposition, would be an excellent way to begin investigating which activities play what role in Soho, Westminster, Hackney or the Isle of Dogs, and who gets what share of what income? While such investigation would no doubt be intended to lead on to many aspects of social and other policy, starting it with the economic activity measured by GVA would be very powerful.

What we have done, rather less colourfully, is try to use GVA to trace the importance of regional capital availability on high-tech industries in German Länder, Canadian Provinces, American States, South East Asian countries and UK regions. As a very experienced economic forecaster and expert in development in unstructured situations, you will know that there is a need to be eclectic and accept subjective contributions in forming a view on this kind of issue. But it helps in comparing ('benchmarking') to have some quantitative reference points.

We therefore start from a view of recent local GVA in high-tech industries , and from that the returns to capital invested locally, and the cumulated resources of local capitalists. No one who has studied Silicon Valley, Taiwan or Oxford would hastily dismiss the view of business angels and venture capitalists that liquidity as it affects start-up firms is definitely an industry-specific and in part a local phenomenon. Processing information about such things in an economical fashion requires an extant statistical system in which industrial detail is needed.

Geographic detail needed to distinguish markets

We would also point out that in Scotland in particular, the NUTS2 classification must be considered a highly aggregative one, far from detailed

enough even for matters of Scottish-level policy. Scotland is geographically larger and much more heterogeneous than other regions. Even NUTS3 territories often encompass several labour markets.

It is therefore very frustrating that NUTS3 GVA is now available only for three broad sectors – and mystifying that this meagre detail is less up-to-date than the overall total. How can there be a policy perspective on prosperity or productivity when prawn packers, nuclear power plants and newspaper publishers spread over more than half a million hectares are subsumed into a single figure of “industry GVA”?

We therefore urge that **regional GVA should be published in more detail than the current 16 industry groupings, and subregional GVA in substantially more detail than the current 3 groupings.**

Disaggregation for IO tables

We are particularly concerned at the possibility mooted in your First Report that manufacturing detail may be removed from the national input output tables. We fully support the addition of detail in the service sector, but would argue that this should be used to extend the tables overall. An important distinguishing feature of manufacturing industries is that they have very specific inputs. Whilst the inputs and production processes of different service industries may be quite similar to each other (accountants, lawyers, and technical, management or marketing consultants tend to have similar purchase patterns), between manufacturing industries the difference in technologies is usually of the essence: the inputs required for organic chemicals are radically different from those for inorganic ones. To merge these categories would mean serious information loss.

Even the aggregation that there is within manufacturing input output categories creates difficulties. For example the combination of nuclear fuels with oil refining and coal products makes accounting for these industries, and for fuel-dependent industries, difficult.

The new SIC classification, with separation of head offices, will have relevance to this issue, as the different patterns of inputs for different manufacturing industries will become even more distinctive once the fairly similar input patterns for Head Offices are dealt with separately.

Detailed IO tables easier to work with

Both the United States and the Canadian IO tables, even in their published forms, have much more detail than the UK tables.

Some may object that more detailed tables mean more work. We have found with the North American tables, and with forecasting and economic impact models for the UK, that highly disaggregated tables actually pose fewer problems than aggregated ones. This can be, for example, because industries are more homogeneous, because the ‘make’ matrices that link industries to the products they produce are more stable, or because there is a higher proportion of zeroes in the ‘use’ matrix, so that updating techniques

can be applied more precisely. So as an aside, we think that ONS should certainly consider estimating, at least for internal use, tables based on the full four-digit SIC.

ABI employment data

There is, however, one area where detail is currently available but is almost worthless: the ABI employment estimates. The deterioration in the quality of local detailed employment estimates since 1998 is shocking. The obvious errors make a mockery of attempting to measure economic development even at NUTS2 level and cast grave doubt even at NUTS1. They therefore undermine the only economic powers devolved to the Scottish and Welsh Parliaments, and the *raison d'être* of the RDAs.

We were therefore glad to see that the difficulties that have arisen with ABI are already in your mind, and we enclose at Appendix 2 our own paper to the Scotstat Board and to the Scottish Advisory Committee on Labour Market Statistics. In it we have pressed the Scottish Executive to make its own estimates at least of public sector employment, where an inquiry of limited scope and low cost could secure substantial advances.

It will be clear that our plea for more detail is for detail consistent within itself, and with the wider system of measuring and understanding the national economy. In the next section we turn to the best way to do this.

Towards a full Social Accounting Framework

This section concerns the great benefits that we believe a formal balanced social accounting framework brings to measuring any economy, most especially a regional one.

Benefits of a SAM at national level and elsewhere

Nationally since 1991 the introduction of input output, latterly within the framework of ESA95, has had very substantial statistical benefits in terms of cross-checking estimates, as your First Report sets out.

Working with Stone in the 1970s the Cambridge Growth Project was trying to persuade the Treasury and Government Statistical Service that there should be annual input-output tables. Our impression was that we were viewed, despite Stone's recent knighthood and the global reputation and the track record that would earn him the Nobel Laureate, as an eccentric and pedantic nuisance. But then the Rayner years laid waste the Government Statistical Service, and the errors in the national accounts became explosively embarrassing. Things were taken in hand, and as your First Report points out, since 1991 the annual supply-use balance has become one of the great strengths of British national accounting. The Blue Book could not now be produced without it and, notwithstanding many remaining issues, no-one would consider abandoning it.

It is no accident that Canada, with a consistent series of annual input output tables stretching back 30 years, is considered to have one of the best statistical agencies in the world. PIPES, the Canadian Project to Improve Provincial Economic Statistics, focused on linking Provincial input output tables through inter-Provincial trade estimates. It was central to fiscal policy and has turned out not only to generate useful numbers, but directly to underpin the Canadian constitutional settlement. The rigorous self-checking framework is both a cause and a symptom of the respect in which Statistics Canada is held.

After setting up the UN System of National Accounts (SNA68) based on the Social Accounting Matrix (SAM) concept, Stone was moving on to developing regional accounting. This work had to be suspended when OECD went through one of its periodic funding difficulties (you will be familiar with these!).

We believe that the completion of such a formal SAM framework should be a key target for regional accounting. Progress towards it would be an excellent way of prioritising many of the actions and initiatives that flow from your report.

The lowest common denominator is not enough

We need to deal with the suggestion that a full SAM framework would be more elaborate than policymakers and other users want or need. In this context we noted your First Report's emphasis on the remarkable consensus

behind demand for GVA figures, and we were concerned at the impression it gives that little else was wanted by RDAs. If this is a correct reading between the lines of your report, we would suspect several factors behind it:

- As we argue elsewhere, GVA is essentially additive, so it can be aggregated and disaggregated across localities or industries. It carries much the same meaning across different industries. In these two respects it is much better than one possible alternative, Gross Output or sales.
- It is almost the same as the concept of Value Added used in business (but less close, of course, to the 'VA' in Value Added Tax)
- A single summary number does have value for presentational, pedagogic and targeting purposes. If you want just one number then, for all its limitations, GVA is the number to have.
- There may be a 'coaching effect' similar to that found in sports where the trainer will focus on the single aspect that he believes is constraining performance, in the hope that fixing that will allow progression to the next level.
- Apart from employment, not many more figures with pretensions to comprehensiveness have ever been available

The first three factors carry weight if they encourage the wider and faster use of GVA, and deflated output, but are not a reason for stopping at GVA.

The coaching suggestion may mean that respondents with low expectations of your Review may have been saying 'let's make sure we get at least some improvement'. We would prefer to advise you on the basis that our recommendations will largely be accepted, and therefore to be ambitious.

The last consideration may suggest that the consensus on GVA merely reflects a phenomenon well-known in marketing: that consumers find it hard to conceive why they would want a product they have never had, and even harder to imagine one that has never been produced. But we have our own example of regional statistical demand being woken up by supply.¹

We therefore hope that the consensus you remark behind GVA represents no more than a lowest common denominator, and we are ourselves forcefully convinced of the reasons for a much wider coverage

¹ In 1993 we made first attempts to estimate regional expenditure indicators for science and technology in Scotland and British Columbia (and three regions in other countries), following OECD conventions. In Britain, although some regional employment data was available, CSO was unable to process financial R&D data regionally except at prohibitive cost. Having produced our first Scottish estimates *pro bono publico*, we were twice asked to update them for Scottish Office, until regional detail was added to the officially-produced national estimates.

Benefits flowing from a SAM

Statistical benefits

You describe in your First Report the use of matrix information for balancing and cross checking at national level. Where information is more sparse, a SAM-based approach also provides a mechanism for filling gaps. For the Regions this would be, on a grander scale, similar to what is now being done on the income accounts: in the absence of Inland Revenue data, information collected on the output side is being used.

Filling gaps was important when in 1997, before the devolution referenda, we produced and published a set of national accounts for Scotland, the Caledonian Blue Book (copies are enclosed with this submission).

To do this we estimated Social Accounting Matrices for every year from 1951 to 1995, drawing on official statistics, the work of pioneering academics, and on our own models. For those years where there were no Scottish Input Output tables available, balancing methods were crucial for making estimates of trade. they also helped make a reasonably coherent distinction between the public and private sector, when companies and assets were all changing hands.

Economic and policy benefits

The SAMs were not just input output tables, but included the remainder of the income accounts, flow of funds and transfers, and year-to-year links to yield balance sheets.

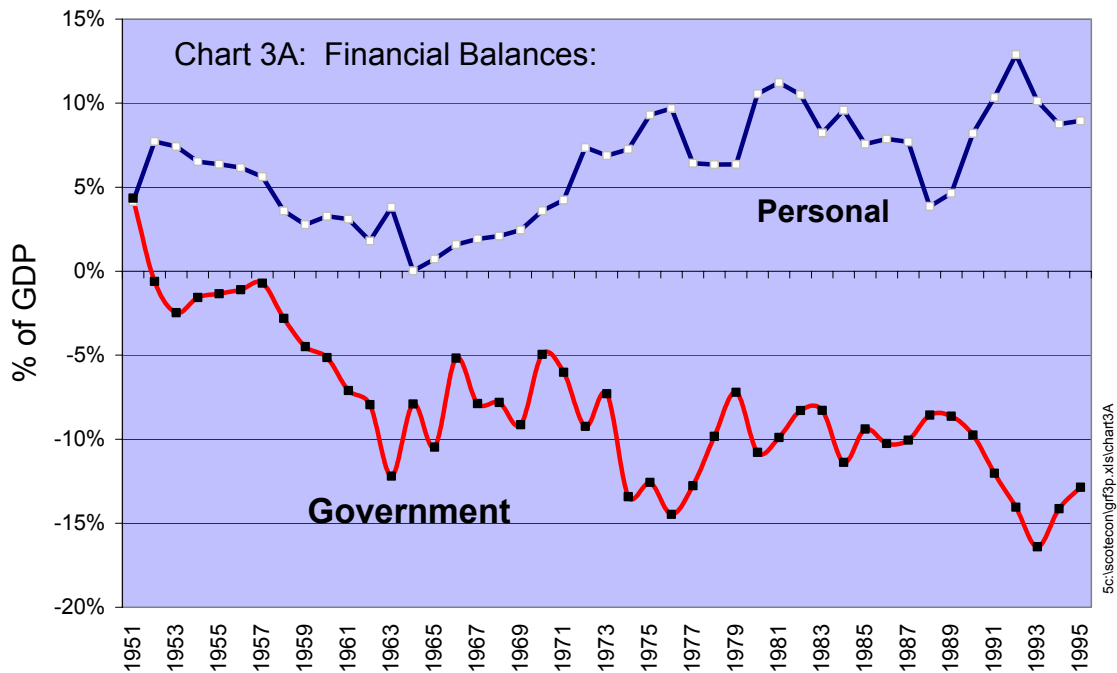
Despite the fragility of these estimates, and the heroic assumptions that had to go into them, they shed fascinating light on major issues of regional economic policy, illustrated below. As part of an official system they would enable policymakers to address regional economies 'in the round'.

Use of the SAM to widen the policy arena

An example is financial balances. You may remember that, when you were Chairman of the St James forecasting Group, our Chairman (at the time the Senior Economist at BNO/Britoil) would make frequent points about the projection of sector financial balances. The Treasury model at that time contained no feedback from these to the rest of the economy, with the consequence that after a few quarters the forecast balances would deteriorate in an explosive fashion. The obvious point was that it would be very foolish to use a model with this property for medium term or longer forecasts. But more material was the point that the property itself indicated structural deficiencies in the model. Sector financial balances logically must add to zero, and any system where they do not do so at plausible orders of magnitude must contain serious flaws.

In the case of Scotland, our estimated accounts plotted the history of an 'oversized' government deficit (the red line below). That deficit has been

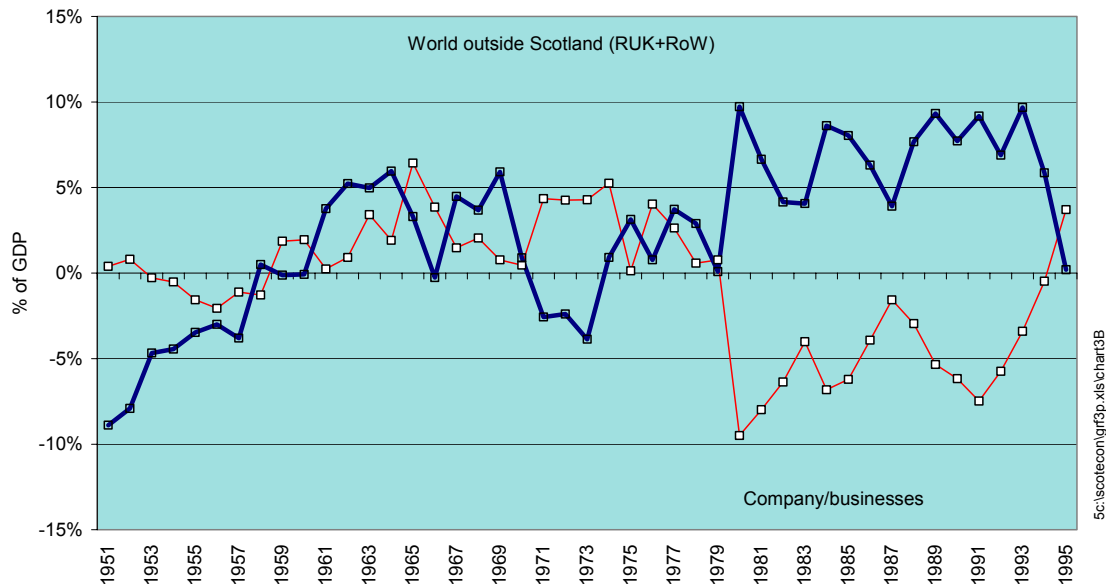
much discussed in various fora including both the Parliaments, academic papers addressing the Barnett Formula, and editorials in the London Evening Standard. But what 'GERS', the official estimates of the deficit prepared by the Scottish Executive, do is simply measure it from public sector data. What a SAM approach covering all sectors did was to force attention not just on the deficit, but on its counterparts in other sectors. This suggested that higher-than-average Scottish savings had been broadly sufficient to fund the deficit.



The SAM approach also allowed us to look consistently at the other sectors. When, as in the graph below, we turned to the corporate sector and the 'World outwith Scotland' the analysis showed how quickly business sector financial deficits had appeared in the early 1980s recession. These were funded from the rest of the world and the rest of the UK.

This series therefore demonstrates through economic statistics the pressures for Scottish firms to be taken over by firms headquartered elsewhere, and offers a quantification of those pressures. This was considered a very important issue of Scottish policy at the time.

Chart 3B: Financial Balances: Companies & World Outside Scotland



We do not know what happened after 1995, because our work to update the figures and produce a new Caledonian Blue Book has been on hold while the problem with the regional accounts has been sorted out. But there is a hint in the chart above that in the mid 1990s the boot was moving back onto the other foot. We might surmise that while in the 1980s strenuous efforts were being made to keep Scottish banks, media companies and breweries 'independent', in the late 1990s the banks, breweries and broadcasters were all acquiring English competitors.

These matters are the essence of economic policy, and highly relevant to the imbalances which arise when all regions share a common currency. They go far beyond the 'devolved powers' of 'economic development' available to the Scottish Parliament, Ministers and Executive. They therefore go very much further than the discretion allowed to Regional Development Agencies in England. But in Scotland they are at the root of the question whether Scotland is a viable regional economy within the UK, or the legitimate constitutional issue of how it would survive as an independent national economy.

From a UK perspective understanding financial balances between regions would make a major contribution to many areas of policy. We would expect that the Bank of England would be able to make good use of proper estimates. It might also be able to contribute data, and if so this could add greatly through SAM balancing to the rigour of all the regional accounts.

And financial balances is just one direction in which social accounting can lead. The Scottish Executive and our friends at Strathclyde University have also looked in detail at sources of income and income distribution, and we ourselves have tracked the flow of funds geographically, socially and sectorally in the Highland economy, where history tells us it can be very important indeed. If regional accounting is going to let us look at issues like inclusion as well as productivity and performance, it needs to go beyond GVA.

Inter-regional trade

As your First Report indicates, the main obstacle to expenditure accounting, and therefore to completing the bulk of a SAM, is the lack of reliable estimates of inter-regional trade

Using survey and administrative data to fill this main gap on the expenditure side would have substantial benefits in its own right. In particular it would give great comfort to the national policymakers that their views of regional economies are consistent.

Inter-Provincial trade was successfully addressed under the Program to Improve Provincial Economic Statistics in Canada. The Scottish Executive undertakes an Origins Survey in Scotland, as a key step in compiling the Scottish Input Output Tables. It is clear that purchasers do not find it easy denoting the origins of their purchases, but nevertheless the results were useful.

We have some idea of what UK trade matrices might look like. We have used the Scottish results, in conjunction with the UK input output tables, to estimate inter-regional trade within the UK. We used a gravity modelling approach on these bilateral flows, an approach which we originally implemented with full multilateral matrices of inter-Provincial trade in Canada. That approach relates inter regional flows of a product to the total demand for that product at the destination, the total production of the product at the source and (negatively) to the distance between source and destination. One important finding was that the distance coefficients estimated from Scottish-Rest of UK trade were broadly similar to the coefficients for similar commodities in Canada.

But of even more interest was the fact that when we built inter-regional trade models for the UK regions the balanced estimates were influenced far more strongly by the production and use figures for each region than they were by the (obviously more controversial) distance coefficients.

This implies that the Purchases Inquiry would be of great value in estimating inter-regional trade. That would be particularly so if some origin detail were

requested. It also reinforces the point we make above about retaining detail within manufacturing industry.

One final point here is that in order to release resources for a major overhaul of its system for economic statistics, the Scottish Executive does not plan to carry out the Origins Survey this year or next. We would suggest that because the survey can serve as a pilot and learning mechanism for similar surveys in other regions it would be appropriate for Central Government to make additional resources available, in cash or in kind, so that the survey can take place and the whole UK can draw benefit from this experiment.

State government

One further advantage of a SAM is that it would ease the accounting for government institutions between the UK and local government level. As far as we are aware the breakdown of the government sector in the UK's National Accounting system does not yet comply with the European System of Accounts 1995 para 2.72, even though the Scottish arrangements quite specifically meet the definition of a 'State government'.

Confidentiality

A great deal of economic information is suppressed, often under Harold Wilson's *Statistics of Trade Act 1947*.

We think that there are important arguments both of principle and practicality why the Act should be amended so that much more can be published than it is now.

Arguments of principle

One of the arguments of principle is philosophical, almost ethical. While a company is plainly created in order to embody a legal personality, we do not think it self-evident that it has a moral personality. Unlike individuals a business, especially a limited liability company, has in our view no intrinsic right to privacy. If society chooses to organise itself by means of commercial institutions, we do not see why they have a greater moral right to secrecy than would, say, government itself under a different system of economic organisation.

We would therefore see the publication of broad details of operations, such as employee numbers and (after a lag) sales and investment on a regional basis, as an extension, for society as a whole, of the reporting that the Companies Acts and accounting standards require to be furnished for the benefit of potential investors. This is particularly so for large and multinational companies, which are the companies that normally trigger the algorithm for suppressing publication. In this context we also point out that an average British region is approximately the same size as a Scandinavian country.

The theoretical models that put forward competitive markets as the 'ideal' system of economic organisation, such as those of perfect markets, are based on the premise of free and perfect information.

Related to this is the irony that the criteria for disclosure of economic statistics work out in arithmetic terms remarkably similar to those for referral to the competition authorities – but of course with opposite effect.

This in effect leads to another point of principle: economic organisation at the time of the 1947 Act was still, to a significant extent, locally and nationally based. There was a case not to expose the fragile flowers of economic growth to the scouring wind of statistical disclosure. But today localities have mainly the sturdy branches of large enterprises. For understandable and sometimes justifiable reasons large businesses dominate global markets. If we are to find a fair and efficient balance between these powerful organisations and our own social institutions we need information. Excessive secrecy serves no-one.

Example: energy consumption

For us, these issues of principle came into focus fifteen years ago when statistics of Scottish energy consumption, which had been available for many years by dint of compiling the records of public corporations, were suppressed on the grounds that *it was intended to privatise* British Gas and the commercial confidence of the buyers would be at risk. Stating it brutally, the public was denied knowledge of what it and its publicly-responsible agents were doing, today so that some future private entity could trade on public and competitor ignorance to appropriate consumer surplus more effectively.

Lack of information leads to market failures: in this case lack of commentary on energy balances has contributed to UK-wide capacity problems in generation, capacity shortage in the interconnector which joins Scottish power networks to the English one, and to difficulties and delays in accessing the very large renewable energy resources represented by Scotland's wind and waves.

Example: Scottish overseas exports

A more recent example arises in the question of Scottish overseas exports. For more than forty years the Scottish Council Development and Industry, SCDI, has been surveying Scottish manufacturers to ascertain their exports. With the creation of Scottish Enterprise it extended its survey and compiled regional (what you would call sub regional) estimates for Local Enterprise Company (LEC) areas. All these results were published, after a decent lag, in considerable industrial detail. In many cases it was easily possible to identify the exports of an individual company or plant but, we are given to understand, companies did not withhold figures on this basis, nor did any firm complain after the event.

The LECs, while originally set up as 'independent' companies are almost wholly reliant on public funding. As official Scottish statistics improved after devolution, the official surveys began to cover exports. Concerns were raised (we have never been able to find out by whom) that public resources were being devoted to generating duplicate information on exports. When HM Customs and Excise joined the game with its UK regional exports figures this became triplicate.

The first attempt at resolving this, to put the survey out to tender indirectly, was a disaster. There were difficulties in administering the tender process, difficulties of inserting an extra layer of survey management, and a loss of focus when other issues were introduced that would be better pursued by separate means. These and other factors contributed to substantial delays. We have heard that the Scottish Council, which won the tender, lost some staff because of the uncertainty and had to reallocate others because of that and the delays. Eventually after further delays which were no fault of the Scottish Council, Scottish totals and some results were published, but for many LECs only 'highlights' and an overall total.

The second attempt was taken in house by the Scottish Executive, which was probably an improvement in terms of survey penetration and certainly in terms of punctual publication. But because it is now an official survey, even though it was not carried out under the Statistics of Trade Act, the detailed results have all been suppressed. LECs can access individual company returns where permission has been granted, but they do not have the research resources to use them for policy purpose, and there are no statistics that can be released for analysis by academics, consultants or others. A valuable resource for policymaking has been lost.

Arguments of practicality

When it comes to practical matters the most important argument to be addressed on confidentiality is the question of real damage. Would economic welfare be reduced, or unreasonably redistributed, if restrictions on publication were relaxed and/or if suppression of particular items could be eased as it becomes older?

From our own experience working in and for industry it is hard to see how, in today's flexible and changing economy, release of two-year-old employment figures could be materially damaging to an employer's interests.

The same might not be said for financial data where, for example, details of the profitability of different sites might be valuable to a competitor or potential takeover predator. In this case we would argue for a moratorium of, say, four years.

The second argument is the question of perceived damage: it might be that response rates would fall if employers feared publication, even when that fear was not based on real costs to them.

We believe that provided that publication – except for employment figures – remains 'statistical' there would be little effect on compliance, if any. A certain amount of debate could be expected as the question of the form filling burden would arise again, but as your First Report points out, resistance to forms normally relates to non-statistical inquiries.

Amendment to the Statistics of Trade Act 1947

Our conclusion, therefore, is that the disclosure rules applied under the Statistics of Trade Act are no longer appropriate for a modern economy or an open society. We believe that the Act should be amended to exclude suppression of certain information, notably employment numbers, and to place time limits on the confidentiality offered for other information.

Appendix: Background to cogentsi's statistical work

CogentSI, Cogent Strategies International Ltd, is an international strategy company headquartered in Scotland, with bases in Vancouver and London.

We believe we have made useful contributions to effective economic policy in the UK, from a national to a very local level. In 150 projects these range from a study for the DTI 'Business Clusters in the UK' which underwrote the Competitiveness White Paper, to 'Picking Runners', a strategy exercise for Inverness in 1994 which helped the town reorient its economy after a major setback and contributed significantly to exceptional growth over the subsequent decade, including achievement of City status.

Some recent examples involving regional or subregional disaggregation within the UK are listed below. In all of these sectoral disaggregation has been taken to a finer level than the 123 input output categories.

- Tourism Satellite Accounts for North East England (for DCMS and ONE North East)
- Economic impact and multipliers for angling in seven sub regions of Scotland (for SEERAD)
- Competitiveness of Advanced Manufacturing in South East England (for SEEDA)
- Regional impact of oil and gas employment (for UKOOA)
- Income, public spending and social welfare in the Highlands (for Highland Council)
- Appraisal models for renewable energy projects (for Scottish Executive and HIE)
- Accounting for the growth of Inverness (for Inverness and Nairn Enterprise)
- Cluster structures and strategy in the NorthWest economy (for NWDA)
- The economic impact of UK forestry (for Forestry Commission)
- The economic impact of hunting with dogs (for the Burns Inquiry)

Our work in Canada, and resulting interaction with Statistics Canada, has been very formative. Our largest project to date concerned the diffusion of new technologies into traditional industries in the Western provinces. This included extensive modelling of interprovincial trade flows and use of national and Provincial input output tables. We have done several studies of community economies, in the context of their industrial clusters and demographic change. Two of us are on the steering group of the Canadian Government's research programme into clusters and innovation.

Key Personnel

Individuals closely involved in our economic measurement work include

Professor Hervey Gibson, our Chairman. He was formerly Head of Economics at Scottish Enterprise and the Scottish Development Agency, and before that the Senior Economist for the British National Oil Corporation and Britoil. Before that he was Director of the User Service for the Cambridge Growth Project, in which capacity he was responsible for setting up Cambridge Econometrics and was its first Managing Director. He is a Professor (now Visiting) at the Caledonian Business School and represents Economic Statistics on SCOTSTAT, the devolved Scottish Executive's advisory board on statistical matters.

Mhairi Begg, our Managing Director. She was previously the resident economist in the Strategy Team of Scottish Enterprise Dumfries and Galloway. As well as her management responsibilities she is actively engaged in the research side of our work and is a member of the Scottish Executive's Advisory Group on Labour Market Statistics

Dr Tim Padmore, a Director. He was previously Head of Policy at a number of British Columbian Ministries, including Finance and Technology, and before that Business Editor of the Vancouver Sun, Western Canada's main broadsheet newspaper. Before that he developed and ran a macroeconomic model of Canada at the University of British Columbia.

Linsay Grant, Senior Consultant. Linsay joined Cogentsi in 1994 and now runs our London office. She has also worked as the resident economist for two of the Scottish Enterprise Local Enterprise Companies and been Shell's economist for its North Sea assets.

Appendix: Annual Business Inquiry employment data (ABI1)

This paper was discussed at the Scotstat Board in January 2004

The Annual Business Inquiry (Part 1) is the principal source of employment information in industrial and geographical detail.

The results for 2002 were published by ONS in December 2003. They indicated that between 2001 and 2002

- Total employment in Dumfries and Galloway had fallen from 59,033 to 52,762
- Employment in Primary Education in the Highlands and Islands had increased from 2,602 to 6,133, as part of an 8,921 person (25 per cent) increase in public service employment across the region

These erratic changes are far from isolated. For example, the 2002 results were the first since 1998 to show any employment in the Fire Service in the Highlands and Islands, and employment in law and order has reportedly fallen from 1,488 in 1991 through 172 in 1998 to 44 in 2002.

We have appended by way of example some extracts from the Highlands and Islands figures. (The appendix, not included here, is for those in the Government Statistical Service or in possession of an appropriate Licence from the Chancellor of the Exchequer)

Since the ABI replaced the Annual Employment Survey, AES, in 1998 the figures have become noticeably more erratic – although this is not necessarily an indication that AES figures were more reliable, simply smoother.

There was an inevitable discontinuity with the old system. The Annual Employment Survey, pre-1999, was essentially based on one-form-per-site, while the ABI is based on one form per employer. The systems ran in parallel in 1998, giving rise to intriguing discrepancies. Teething problems were to be expected with the new system. Many users have tried to be patient, in the hope that the errors would be corrected. Now we have had five years of the new system and the anomalies continue.

1. It is NOT an adequate response to say that the figures were not intended to be used at this level of detail, and should be aggregated (either geographically or industrially) for presentation. That might be fair if the errors were small and random, or became apparent only on a fine geographic breakdown. In principle the ABI is supposed to provide information down to post code and ward level.
2. But the errors are very large, and obviously systematic. They persist even for the NUTS2 area shown, one of only four covering all of Scotland. 'Highlands and Islands' represents a broad swathe of

- Scotland, incorporating four entire Unitary Authorities and parts of three. More importantly, the results quoted here are as close as non-ONS personnel can get to the building blocks of the entire national system of employment statistics.
3. The geography of LECs and Local Economic Forums has been chosen on policy grounds as the geographical level at which the Executive's devolved powers for economic development can be operationalised. It is a minimum requirement that we should know with reasonable accuracy the number of jobs and the activities (industries) in which people work at this level. It makes a mockery of all our development efforts if neither the baseline nor changes can be assessed.
 4. It is NOT an adequate response to say that the erratic figures are a consequence of reducing form-filling. One can appreciate the complexities in 'modelling down' from a return supplied by a large national employer, such as a chain retailer. But for the example the bulk of the employment illustrated – especially the public services – the area must cover the bulk of jobs at reporting employers, so it should be a question primarily of adding up. And good modelling down techniques should produce *more* stable, not less stable, figures.
 5. The most glaring errors tend to be in the public services, where there is even less excuse for problems. Here, the employer should be uniquely placed to understand the issues and fill in forms correctly. Public sector employers are in a position to respond sympathetically to enquiries from ONS, and many not only have significant resources for reporting but also resources that are specifically trained in statistical matters and understand the uses to which good employment figures can be put. And with publicly funded jobs there is no case for commercial secrecy either preventing publication or hindering investigation.
 6. Even the crudest quality control techniques – scanning for outliers in levels or changes at Unitary Authority level, for example – would have picked up many of the figures highlighted.

Recommendations

1. The Executive should investigate the ABI1 and the steps needed to provide robust employment estimates to the four-digit SIC level, at least for UA and LEC geographies
2. The work should be undertaken quickly, before the data is further obscured by the change to the new SIC.

Mhairi Begg

Hervey Gibson

19 January 2004