

International comparisons of profitability

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Overview

The ONS First Release, 'Profitability of UK Companies' in November 1999 provided estimates of the profitability of the UK corporate sector. This article looks at the data on profitability which have been made available from other countries. Some of the data are presented here for the first time. The methodology, sources and coverage of the data presented are described and the limitations that this places on its interpretation. The author would like to thank the staff of the statistical offices in those countries who have contributed to this review.

The ONS has collected together estimates of profitability provided by the statistical offices of a number of countries. We have not sought to impose a common detailed definition or to check any of the data provided. For this purpose, profitability is defined as the ratio of profits to capital employed. Profits are defined fairly precisely in international manuals and it is likely that they will be measured reasonably consistently. On the other hand, capital employed is not defined so precisely and there is more scope for variations in the detail of its definition and the methods used to estimate it.

It follows that distinctions between countries can reflect a mixture of real differences in profitability and the results of variations in the calculations. In virtually every case, countries will, however, have estimated profitability consistently over time, so rises and falls will reflect real changes in their economies. The statistics presented here have to be interpreted accordingly.

It is not possible, at the present time, to use the data to make detailed comparisons of competitiveness between countries. This requires a review of all factor inputs, in, for example, a multi factor

productivity analysis. But, what the article is able to do is to look at trends in the strength of other countries' companies as measured by profitability and to compare those trends with the peaks and troughs in the fortunes of UK companies. Some references are also included to a world competitiveness 'scoreboard' which assesses how a country's economic environment sustains companies' competitiveness.

The analysis of profitability in particular key industrial sectors has been started in this review. Manufacturing, service companies and the exploration of oil and gas are sectors presented here for the first time in an international context.

The article sets the scene for a further review of the data, as other countries develop the key components of profitability, in line with internationally agreed guidelines. A future update will publish a wider coverage of countries and a timely and improved assessment of international profitability.

The structure of the article is as follows:

- International rates of return;
- Country coverage;
- The calculation of profitability;
- How profits are calculated;
- How capital is calculated;
- International trends in profitability of companies;
- Analysis of profitability of manufacturing and service companies and of UK and Norwegian Continental Shelf companies, in an international context;
- World competitiveness;
- Conclusions.

International rates of return

Table 1 International comparison of net rates of return of non-financial corporations

	UK	Norway	Japan	Germany	US	Spain	Belgium	Canada	Finland	Netherlands
									<i>per cent</i>	
1991	10.0	12.8	13.3	3.2	7.5	8.7	10.3		4.1	
1992	9.5	12.0	11.8	3.0	7.3	6.5	9.4		5.3	
1993	10.1	12.0	11.4	2.7	7.7	4.3	8.8		7.5	
1994	11.6	12.1	9.7	3.1	8.9	7.6	10.5	8.1	10.2	
1995	12.1	12.9	9.8	3.3	9.3	8.0	11.1	8.1	12.6	4.2
1996	12.9	14.8	10.2	3.2	9.8	8.6	10.7	8.5	12.3	4.2
1997	12.9	14.8	9.3	3.4	9.9	9.0	12.1	8.4	14.8	4.4
1998	12.2			3.7	9.6	9.0		8.4	16.1	4.5

The methodology used in calculating international rates of return (Table 1) is well accepted. Data used are generally based on national accounts' data. Annual rates of return are calculated as the ratio of the operating surplus to capital employed.

In international comparisons, there is always the problem of how to handle different national currencies. The author has shown in Tables 2 and 3, the data for capital and profits denominated in sterling. Thus, yearly changes include not just national changes in profits and capital, but also the effect of different exchange rates. In other international comparisons (for example, by the US Bureau of Labour Statistics), these are shown in both the national currency and a comparable currency. This kind of presentation will be developed, in the next update.

In *Germany*, the calculation is the ratio of the net operating surplus of non-financial corporations to the capital of **all** sectors of the economy. This accounts for the very low profitability for non-financial corporations in Germany.

Profits are the main source of the operating surplus and capital the main source of capital employed.

The trend in profitability in the 1990s is generally one of strength. The net rate of return by UK private non-financial corporations in 1998 was 12.2 per cent. This compares to 12.9 per cent in 1997 and in 1996 which was the highest peak in profitability since 1989. Norway and Finland both reported higher net rates of return in 1997, at 14.8 per cent. Finland's profitability estimates for 1998 stands at 16.1 per cent, the highest recorded internationally in the 1990s.

Coverage

The following countries have contributed profitability data in this research:

Belgium, Canada, Finland, Germany, Ireland, Japan, Netherlands, Norway, Spain, United Kingdom and United States.

Austria was not able to provide comparable data on company profitability. The main reason is that institutional sector accounts are not yet available.

Australia used to publish gross and net rates of return for non-financial corporations, by industry. However, as a consequence of introducing annual benchmarks derived from the annual supply and uses tables for the *UN System of National Accounts* (SNA93), Australia had to suspend publication of gross operating surplus by institutional sector, by industry. Publication should resume in the next year or two. In addition, the capital stock system in Australia has been overhauled to meet SNA93 and many significant improvements are being introduced. Because of the large number of privatisations of public financial and non-financial corporations in Australia over recent years, the private/public split for these two corporate sectors has not been retained in the Perpetual Inventory Method (a model-based approach to calculating capital stock estimates) for the capital stock calculations.

In *Denmark*, time series for operating surplus and capital are available for the years 1966 to 1992 only, but they are based on the old system of national accounts, ESA79. Even then, some further work would be needed to separate out private non-financial corporations and data on inventories are not available. National accounts in Denmark since 1993 are based on the new *European System of Accounts* (ESA95), but data for capital and capital consumption have not yet been compiled according to the new methodology. These changes are important for gross capital formation and will revise significantly the capital data. There are two other problems preventing the calculation of profitability data in Denmark, at the present time. The first is that there is no formal separation of private non-financial corporations from publicly-owned corporations and households. This applies to both the operating surplus and capital. The second is the calculation of inventories, by industry. Calculation of inventories for manufacturing might be possible, but the coverage of service industries would be incomplete.

France is in the process of calculating profitability data consistent with ESA95. They will be published by the end of April 2000. Previous estimates of capital did not include either computer software or mineral exploration costs. The new data will also provide profitability estimates for the service and manufacturing companies.

Ireland calculates operating surplus in the framework of National Accounts, but it does not compile capital and, thus, cannot estimate rates of return. Ireland has, however, provided internationally comparable data for the net operating surplus of all non-financial companies, for manufacturing companies and for service companies. Data were provided for 1990 to 1998. 1998 data are only estimates; source data are not yet available. Net operating surplus is based on Ireland's National Income and Expenditure, June 1999. Alternative sources of profitability for this article have been considered. For example, those published by the United States Bureau of Economic Analysis, in articles in the *Survey of Current Business* on the operations of US companies' abroad. This source has consistently shown high rates of return in Ireland, but these figures should not be taken as representative of all companies in Ireland.

Netherlands supplied data on profitability for 1995 to 1998. In the summer of 2000, historic data from 1987 will be available for most of the data on profitability described in this article.

Sweden's continuing work in adjusting their national accounts to SNA93 principles means that data for the main institutional sectors are not yet ready. Sweden has only information for the total non-financial corporations' sector.

Switzerland is not able, for the time being, to supply data on profitability. The Office Federal de la Statistique is about to finish a comprehensive review of statistical surveys. This review includes the data required to calculate profitability ratios.

Italy has not been able to provide data on profitability.

How profits are calculated

In the *United Kingdom*, gross trading profits include only that part of a company's income which arises from trading activities. It does not include income from investments. Nor does it include earnings from subsidiaries or branches located outside the United Kingdom. Gross trading profits are calculated before payments of dividends, interest and tax. Any changes in the book value of inventories are subtracted from profits. Revaluations are not considered to be part of economic activity, as defined for National Accounts' purposes.

In the estimates of net rates of return, data for net operating surplus are net of depreciation.

The main difference between UK commercial accounting and national accounting is in the treatment of net interest. Commercial accounting shows net interest received as profit. National accounts treat interest flows as property income.

Other countries follow the international guidelines outlined above. There are differences of detail, but they are not significant in terms of the impact on the data.

Table 2 presents the net operating surplus in eight of the eleven countries.

Table 2 International comparison of net operating surplus

£ billion

	UK	Norway	Japan	Germany	US	Belgium	Ireland	Netherlands
1991	67.1	13.1	307.7	107.4	228.1	8.2	4.8	
1992	63.7	13.3	301.2	109.4	226.3	8.5	5.1	
1993	68.6	14.7	399.1	112.7	293.7	9.0	5.8	
1994	83.2	15.1	365.1	132.6	348.0	11.3	6.3	
1995	92.5	18.2	392.4	158.6	374.8	13.6	8.4	32.2
1996	106.5	21.9	367.2	152.1	416.0	12.7	9.5	32.4
1997	114.3	20.2	303.4	137.9	421.9	12.4	10.3	29.5
1998	114.2			149.5	418.8		11.5	30.5

per cent of GDP

1991	10	20	16	11	7	7	16	
1997	15	22	12	11	9	8	23	13
1998	15			12	8		25	13

Table 2 also presents net operating surplus as a proportion of GDP. Clearly, Ireland's net operating surplus, for example, will be much smaller than the UK's, because GDP is so much smaller. The same point applies to the capital data in **Table 3**.

Net operating surplus as a proportion of GDP has increased, between 1991 and 1997/1998 in all countries, except Japan.

The measure of profits in *Belgium* is calculated indirectly from the value added, less compensation of employees and other operating expenses. It is equivalent to earnings before taxes, depreciation and amortisation.

In *Canada*, the profitability calculations are not yet based on international guidelines under SNA93. The data reproduced in this article are the median return on capital for corporations with more than C\$5 million in annual revenues. The source of the data is *Volume 1, Financial Indicators for Canadian Business*, released by Statistics Canada.

Statistics Finland do not currently publish data on net rates of return, but have produced provisional data for this article and will be considering their future publication. The data are provisional only for 1990-1998, because revised data back to 1975 on the ESA95 basis are not yet available.

Ireland has deducted stock appreciation from gross operating surplus to be consistent with the ESA95 definition of net operating surplus. This ensures that the effects of price changes on the level of stocks are eliminated.

The *Netherlands* break down operating surplus into public (i.e. owned/controlled by government) and private corporations (i.e. including non-public, non-profit institutions with market production and foreign-controlled, non-financial corporations), separately. But, the breakdown by manufacturing and services is for private and public corporations, together. Separate information for operations on the Continental Shelf are not available; data on mining and quarrying as a total only are available.

Norway includes the income of self-employed income which in the UK is included in the household sector, rather than the corporate sector. Net operating surplus is calculated residually, from supply and uses tables, rather than from surveys or tax return information as in the United Kingdom. Net operating surplus is published.

The data for profits of non-financial firms in *Spain* are collected by the Banco de Espana and collated on an annual database. 5,700 firms reported in 1998. These firms represent more than 35 per cent of the total activity in the non-financial sector, as measured by the gross value added at factor cost. Profitability is measured indirectly as the return before taxes on net assets (total assets, net of non-financial liabilities).

The *United States* calculate net operating surplus as 'property income'. Corporate profits before taxes are the main component, with adjustments for the appreciation of inventories and capital consumption, plus net interest.

How capital employed is calculated

Estimates of capital in **Table 3** are the measure of fixed assets and the value of inventories. This includes the value at replacement cost of all fixed assets at the end of a calendar year. The coverage is all tangible assets and intangible assets which have been produced and are themselves repeatedly or continuously used in the processes of production for more than a year.

Tangible assets include buildings, plant and machinery. Intangible assets include computer software and mineral exploration costs. For UK Continental Shelf companies, capital assets include mineral exploration costs and oil rigs. But not the oil and gas reserves which are classified as non-produced assets.

Inventories include raw materials and fuel which are used up in production. Levels are calculated at book values.

Capital consumption is derived from capital and covers the depreciation of fixed assets over their service lives. Estimates of net capital are net of accumulated capital consumption; i.e. they are a measure of the written down replacement costs of fixed assets.

Most of the data on capital in **Table 3** are compiled using the Perpetual Inventory Method. The principles behind the methodology in this model-based approach can be summarised as accumulating capital expenditures year by year and deducting assets when they are deemed to have completed their expected lives. The variables used for service lives by capital type will vary country by country. They will be influenced by the business cycle and by technological change.

Table 3 International comparison of capital

£ billion

	UK	Norway	Japan	Germany	US	Belgium	Netherlands
1991	672.3	102.8	2316.3	3348.1	3075.7	80.1	
1992	673.0	111.5	2559.2	3677.6	3099.2	89.9	
1993	682.4	122.2	3505.5	4205.9	3892.9	102.3	
1994	714.9	124.9	3760.0	4315.8	4030.7	107.3	
1995	764.5	141.1	4014.4	4858.4	4122.0	122.0	765.2
1996	824.9	147.4	3603.9	4779.9	4349.0	118.0	771.3
1997	882.4	136.0	3257.3	4038.2	4347.9	102.2	664.0
1998	938.7			4016.3	4457.0		677.9

Capital in *Belgium* is the acquisition value of fixed tangible and intangible assets, before amortisation and an estimate of inventories of raw materials and merchandise. Fixed assets include plant, machinery and equipment, furniture and vehicles, leased goods and grounds and real estate. Intangible assets include computer software and research and development costs, patents and licenses, but not goodwill. Net capital is the net book value (i.e. without the amortisation in the current and previous year) of tangible and intangible assets.

Finland has used the Perpetual Inventory Method for compiling capital and straight-line depreciation.

In *Germany*, net capital is derived from net investment in buildings and machinery. Net capital is derived from the accumulation of investments, after allowing for the cumulated consumption of fixed capital. Please note that the capital of **all** sectors of the economy has been used in the calculation of profitability of non-financial corporations. This accounts for the low profitability ratios in Germany.

In *Japan*, the value of net fixed capital and inventories are recorded at replacement cost. Capital consumption is valued at book value. Capital does not presently include intangible assets such as software. This will be included later in 2000, when Japan intends to implement the SNA93 guidelines. Capital and capital consumption are not available by industrial breakdown.

The *Netherlands* does have data on capital for non-financial corporations, but the data have not been sub-divided by the institutional sectors of private non-financial and public corporations. The main difficulties in classification are in transport and in other services. Data for net operating surplus and net capital of manufacturing and service companies are calculated for all public and private corporations in these sectors

In *Norway*, capital includes only fixed assets. The value of inventories has not yet been estimated. Service lives are assumed to be 50-60 years for buildings and 15-25 years for machinery and equipment. Net capital stocks are published.

In the *United States*, capital is the current cost value for non-financial corporations of the net stock of structures and equipment, plus the replacement cost value of inventories. The denominator in the US calculation of profitability is called 'reproducible tangible wealth'.

Trends in international company profitability

The peaks and troughs in profitability for the United Kingdom and United States are reasonably consistent in the last three decades (Chart 1).

The four peaks in the *United Kingdom* and the *United States* were in 1972, 1984/85, 1988/89 and 1996/97. In *Japan*, the two peaks which stand out were in 1970 and 1986.

In 1989, the *United Kingdom* recorded the highest peak at 13.4 per cent. One reason for this was the slower growth in capital in the 1980s, than in the 1990s. This raised the calculated level of profitability to a higher peak in the 1980s. In the *United States*, the highest peak was in 1997, after pre-tax profits had increased, on average, by 12 per cent in the five years to 1997. This was driven by the strength in profitability of the manufacturing industries. Although the rate of return of 9.6 per cent in 1998 was lower than in 1997 and in 1996, it was higher than in any other year since 1969. The average rate of return in the 1990s to 1998 was 8.7 per cent which compares with 7.5 per cent in the 1980s and 8.0 per cent in the 1970s.

In *Japan*, in the early 1970s rates of return of between 16 per cent and 22 per cent were recorded by non-financial corporations. But, companies in Japan could not maintain their profitability ratios in

the second half of the 1970s. There was an expansion in activity in the 1980s. The peak in profitability, at 15.5 per cent in 1986 has not been repeated since. Profitability fell in virtually every year since 1986 and in 1997 stood at 9.3 per cent, the lowest recorded since 1974.

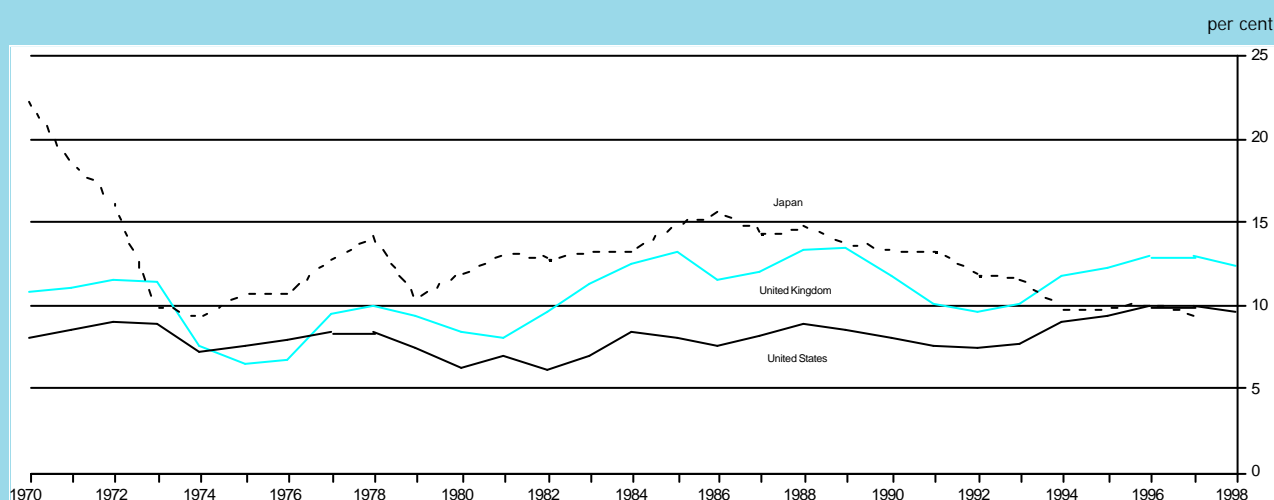
The main reason has been the increase in capital since 1986. Capital of non-financial companies has increased, on average, by 5 per cent a year, since 1987. The net operating surplus of these companies rose between 1986 and 1997 by only 5 per cent in current prices.

In *Belgium*, like the UK, the highest peak was in the 1988/89 boom and was driven by growth in profits of both the manufacturing and service companies. Thereafter, profitability declined until 1993. This was largely due to the manufacturing sector. At 8.8 per cent in 1993, the net rate of return for all companies was 5.4 percentage points below the level recorded in 1988. The manufacturing and service sectors have driven the recovery in profitability in the second half of the 1990s, to a rate of return of 12.1 per cent in 1997.

The return on capital by companies in *Canada* was in a very narrow range of 8.1 per cent to 8.5 per cent in 1994 to 1998. This narrow range is not dissimilar to companies operating in the United States. And, a recent peak (similar to the United States) in 1996 was also a peak in the profitability of companies in the manufacturing industry.

Chart 1

Profitability of non-financial corporations in the United Kingdom, United States and Japan



Finland has a very similar profile of profitability to the UK in the 1990s. There was a trough in 1991/92 of between 4.1 per cent to 5.3 per cent. And, a steady improvement was recorded, to 16.1 per cent in 1998. In 1998, the manufacturing and service sectors recorded similar returns on capital.

For *Germany*, the peak in profitability in the 1990s was in 1998, when a rate of return of 3.7 per cent was earned. Germany's rates of return have, in the 1990s, been in a narrow range of 2.7 per cent to 3.7 per cent.

The peak in profitability between 1995 and 1998 in the *Netherlands* was in 1998. The range is narrow, from 4.2 per cent to 4.5 per cent.

For *Norway*, the highest peak was in 1996/97, at 14.8 per cent. This resulted from average growth of profits of 14 per cent in these two years and average growth in net capital of only 6 per cent.

Results of non-financial firms in *Spain* confirm the highest peak occurred in 1989 (similar to the United Kingdom) and a recent trough in 1993 (one year later than in the United Kingdom). Since 1993,

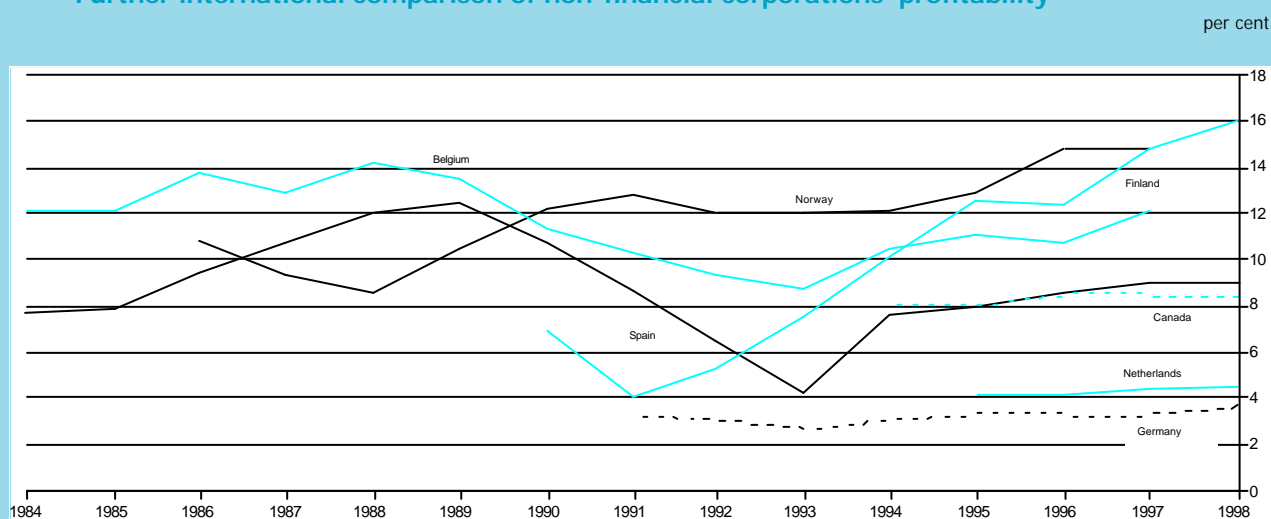
profitability has recovered and in 1998 the return on net assets was 9.0 per cent, 4.7 percentage points higher than in 1993. In the third quarter of 1999 (using data from a higher population of companies-7,500-in a quarterly database), the ratio had risen further, to 10.3 per cent.

For *Belgium, Finland, Germany, Norway, Spain, the United Kingdom* and the *United States*, the most recent trough in profitability came at the end of the 1990/92 recession. For *Japan*, there has been a steady decline in rates of return in the 1990s.

In the 1990/92 recession, the net rate of return on capital was 9.5 per cent in the *United Kingdom* and 12 per cent in *Norway*, 3.4 percentage points and 2.8 percentage points, respectively, below the peaks in 1996/97. In the *United States*, the net rate of return was 7.3 per cent in 1992, 2.6 percentage points below the peak in 1996/97. In *Germany* and *Belgium*, the net rate of return was 2.7 per cent and 8.8 per cent, respectively in 1993, 1 percentage point and 3.3 percentage points, respectively below the recent peaks. For *Finland*, the net rate of return was 4.1 per cent in 1991, 12.0 percentage points below the peak in 1998.

Chart 2

Further international comparison of non-financial corporations' profitability



Analysis of manufacturing companies' profitability in the international context

Chart 3 set out a comparison of manufacturing companies' profitability in Belgium, Canada, Finland, Netherlands, Norway and Spain. **Chart 4** compares manufacturing companies' profitability in the United Kingdom and the United States.

In *Norway*, and in the *United Kingdom*, manufacturing companies' rates of return has improved since 1991. This improvement has been supported by the modest growth in net capital stock. Net rates of return were between 10.5 per cent to 11 per cent in 1997. This was in line with the return of 10.3 per cent recorded by manufacturing companies in *Spain*. Manufacturing companies in *Belgium*, *Finland* and the *Netherlands*, and the *United States*, all recorded higher rates in this year.

In *Belgium*, the improvement in profitability in the 1990s was from a trough in 1993. The recovery in 1994 was dramatic; an increase of over 75 per cent in the net operating surplus of manufacturing companies. At 18.8 per cent in 1997, it was over 10 percentage points higher than in 1993. But, as a percentage share of corporate profits, the manufacturing companies' contribution fell to one-third in 1997, from 43 per cent in 1984.

In *Canada*, profitability of the manufacturing sector is generally higher than the service companies. But, the range of return on capital is also narrower, at 9.0 per cent to 9.4 per cent, between 1994 to 1998.

In *Finland*, the improvement in manufacturing profitability was also from 1991. The return on capital in that year was 3.4 per cent. In 1998, it was 16.2 per cent.

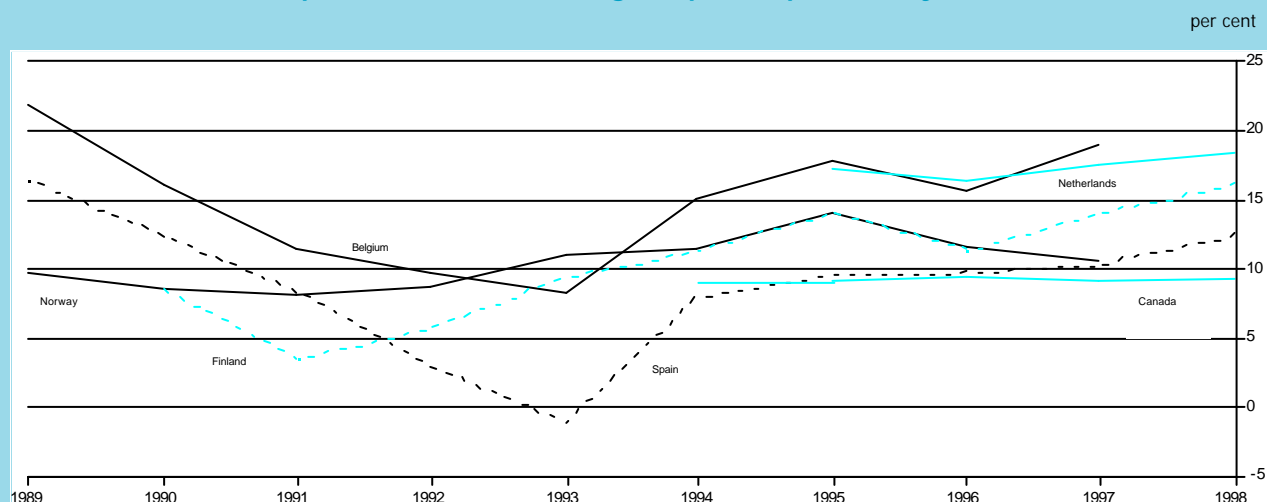
Although, as stated earlier, *Ireland* does not produce rates of return, it has been able to produce the net operating surplus for manufacturing and service companies. It is interesting to note the strength in profits of the manufacturing industry in Ireland. The average annual rate of growth in the net operating surplus of manufacturing companies was 15 per cent between 1991 to 1998. Also, manufacturing companies' share of net operating surplus of all non-financial companies rose in this period, from 63 per cent to 71 per cent. In the *United Kingdom*, manufacturing companies did increase their share of net operating surplus in this period. But, it was at a lower level, 25 per cent in 1998 from 15 per cent in 1991.

Manufacturing companies' share of the gross operating surplus in *Netherlands* has been stable between 1995 and 1998. Profitability has been strong. The net rate of return rose from 17.1 per cent in 1995 to 18.3 per cent in 1998. Returns were amongst the highest recorded, internationally.

In *Spain*, manufacturing companies' profitability rose to a peak (16.3 per cent) in 1989. The low point came in 1993 when a negative return on net assets of 1.1 per cent was recorded. The recovery in 1994 was strong and has been steady since. In 1998, the return on net assets was 12.5 per cent. A further rise to 12.9 per cent has been recorded in the third quarter of 1999.

Chart 3

International comparison of manufacturing companies' profitability



Profitability of manufacturing companies in the *United States* is calculated on a different basis. The Bureau of Census publishes the *Quarterly Financial Report for Manufacturing, Trade and Mining Corporations*. This report provide income statement and balance sheet data, based on financial statement accounting data for manufacturing corporations with assets over \$250,000. The data are used by the Bureau of Economic Analysis to extrapolate tax-return based estimates that are available with a two-year lag. Rates of return are calculated and published either as cents per dollar of sales or as a percentage of equity. The data shown in **Chart 4** are the annual rate of profit after taxes on equity for the final quarter of each year shown. Data are published as quarterly series. Annual data are not, however, calculated. There is little difference between averaging the four quarters' data or taking one plot of the annualised data at one specific quarter. The annual rate at the fourth quarter has, therefore, been plotted. Breaks in series have occurred. These were in 1981, 1986 when a re-definition of manufacturing took place, and in 1995 when there was a change in the sample survey of manufacturing companies.

There are similarities between manufacturing companies in the *United States* and the *United Kingdom* (**Chart 4**). First, there is the comparability in profitability in the troughs of economic activity in 1979/82 and 1990/92. Second, similar peaks are recorded in 1988/89. But, one difference is the current strength in manufacturing in the two countries. In the United Kingdom, the manufacturing companies' rate of return has improved steadily in each year since 1991. In the United States, the recovery is a little stronger. But, whereas in 1998 profitability remained strong in the United Kingdom, in the United States, manufacturing companies reported a lower growth rate in the fourth quarter of 1998. The latest published data for the second quarter of 1999 shows, however, a rate of return earned by manufacturing companies in the United States of 17.5 per cent. This compares with 16.0 per cent in the first quarter and 14.9 per cent in the second quarter of 1998.

Chart 4

Manufacturing companies' profitability in the United Kingdom and the United States

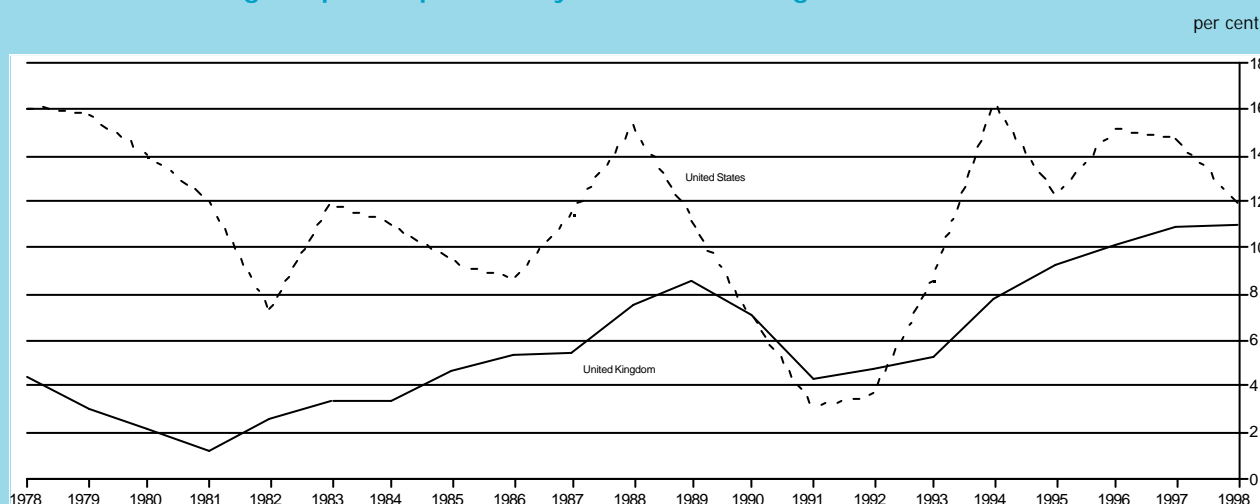
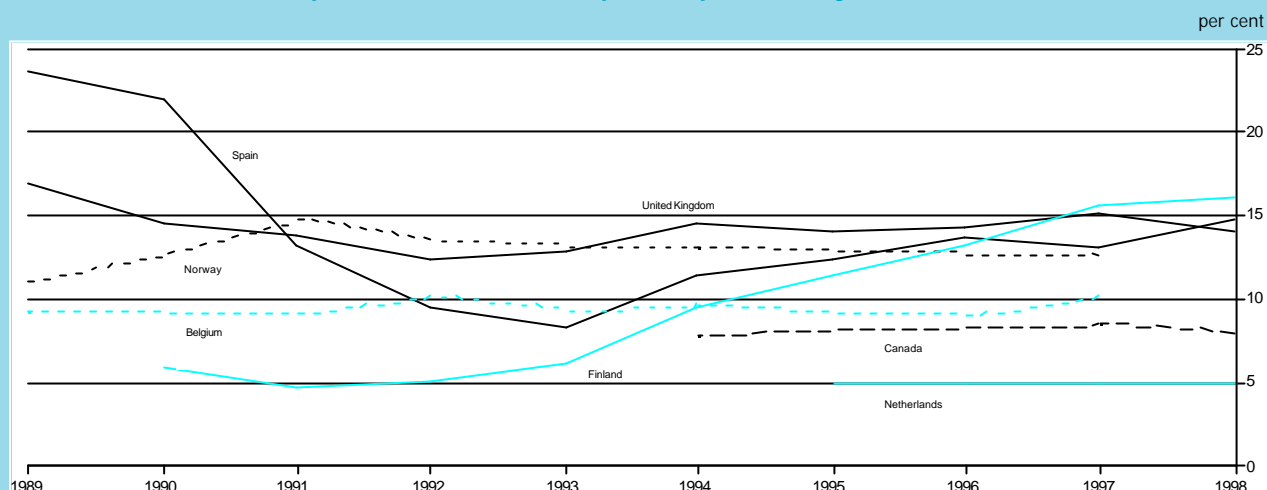


Chart 5

International comparison of service companies' profitability



Analysis of services companies' profitability in the international context

Chart 5 compares profitability in the service companies in the United Kingdom, Belgium, Canada, Finland, Netherlands, Norway, and Spain.

Service companies' profitability in the 1990s for the *United Kingdom* and *Norway* has remained in a narrow range of rates of return of 12.5 per cent to 15 per cent. This reflected stable profitability gains. In both countries, capital intensity in service companies was probably quicker than in manufacturing companies. Net capital increased at current prices by over 50 per cent since 1990. This was also the case in *Belgium*, but net capital increased at current prices by close to 100 per cent and the range of returns was lower, at 9 per cent to 10 per cent. And, this was despite the growth in the service companies' contribution to non-financial companies' profits to one-fifth in 1997, from 7 per cent in 1984. Service companies' profits growth in Belgium has been stable, growing each year in the 1990s, on average, by 12 per cent.

In *Canada*, the net rates of return shown in **Table 5** are the average of the four main service sectors (transport and communications, wholesale trade, retail trade and 'other' services). The decline in profitability in 1998 was in all sectors, except transport and communications. The most profitable service sector is transport and communications. The return on capital for these companies was 8.8 per cent in 1998, but this was below the recent peak of 9.5 per cent in 1996. The retail trade has reported falls in the return on capital in each year since 1995.

In *Finland*, the depth of the 1991/92 recession was not as severe as in the manufacturing sector. The rate of return for service companies was 4.7 per cent in 1991, and has risen steadily to 16.0 per cent in 1998.

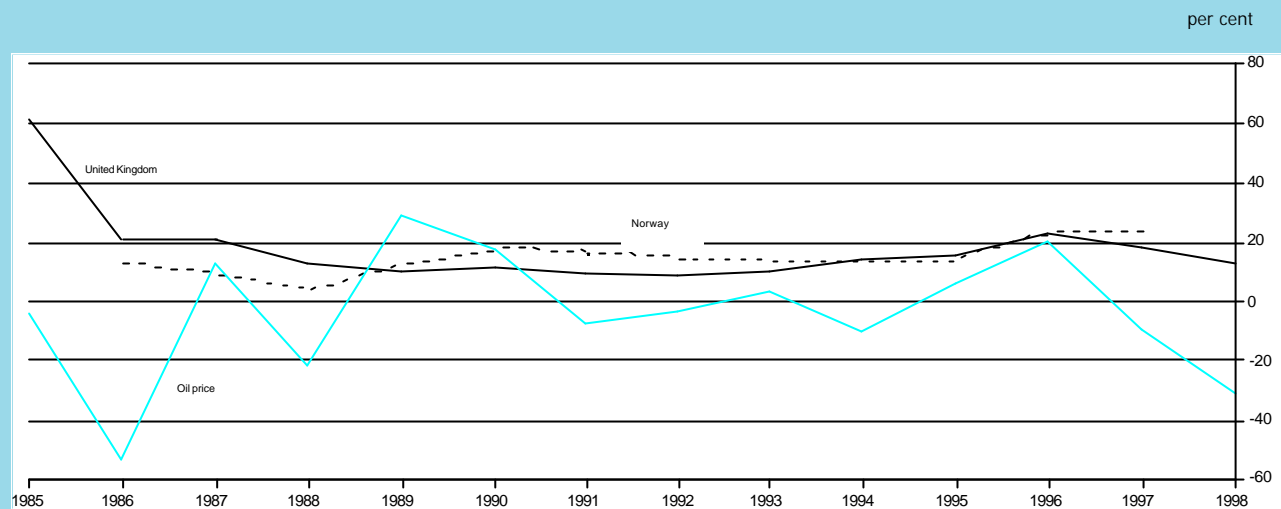
Service sector companies in *Ireland* had a difficult period in 1991/1992. In subsequent years, profits have been more volatile than in the manufacturing sector. In three of the four years, 1995 to 1998 (but not 1997), the growth in net operating surplus exceeded 20 per cent.

In the *Netherlands*, service companies (trade, hotels, transport and real estate) maintained between 1995 to 1998 a share of total gross operating surplus of close to 40 per cent. This was largely due to the strength in profits generated by the transport and real estate companies in 1997 and 1998. The net rate of return was stable in this period, at 5 per cent.

Returns on net assets recorded by distributive trades in *Spain* (shown in **Chart 5**) was strong and volatile in the second half of the 1980s, at between 17 per cent and 43 per cent. The recession of 1993 brought returns down to 8.2 per cent. Subsequently, profitability has improved and had risen to 14.8 per cent in 1998. Service sector companies in transport, storage and communications reported lower returns on net assets, within a narrow range of 5 per cent to 8 per cent between 1983 to 1998. In the third quarter of 1999, the return on net assets rose to 8.3 per cent.

Chart 6

International comparison of UK and Norwegian companies operating in oil and gas extraction



The Internal Revenue Service of the Department of the United States Treasury presents *United States*' corporate profits based on tax accounting standards, but the balance sheets are based on financial accounting standards. Data are available by industries including manufacturing and services (the latest data are for 1996), but rates of return are not calculated. Data are also available for the corporate profits of transportation and public utilities and the wholesale and retail trades. These data are produced in the context of US national accounts. There was greater volatility in profits in the 1990s generated by these service companies, than in the profitability measures (discussed earlier) for manufacturing companies.

Analysis of oil and gas exploration profitability in the international context

For *UK* and *Norwegian* companies operating in oil and gas exploration, profitability has been largely determined by oil prices (**Chart 6**). The major collapses in the oil prices were in 1986, 1988, 1991/92 and more recently in 1997/98. 1996 was a peak year in the 1990s for companies in both countries, when rates of return of 23 per cent to 24 per cent were earned. **Chart 6** shows the percentage change in oil prices and the net rates of return of companies operating in oil and gas exploration.

In the United Kingdom, the fall in the net rate of return in 1997 and 1998 reflected both the fall in oil prices and the rise in net capital employed. In 1999, oil prices rose, linked to the production cuts agreed by OPEC in March 1999 and improving prospects for world demand. As a consequence, profits rose in the second and third quarters of 1999.

World competitiveness

This article has concentrated on rates of return on capital as a relevant economic indicator of competitiveness in its own right. Competitiveness is very difficult to measure. The IMD management school in Lausanne has published the '*The World Competitiveness Yearbook*' for the past ten years. The 1999 Yearbook includes some indicators which are traditionally used in assessing competitiveness. Specific indicators are listed in the 'scorecard' shown in **Table 4**. For the 18 countries under review in this article, GDP per capita, output per person and companies' financial health are ranked.

IMD ranks the United Kingdom as 45th in the world in terms of output per person and 23rd in terms of GDP per capita. For a separate indicator, the financial health of companies the United Kingdom is ranked 25th. Overall, taking into account more qualitative economic measures of competitiveness, the United Kingdom is ranked at 15th. And, the World Economic Forum ranked the United Kingdom as 8th in the world.

Looking at the data provided in this article on profitability, the United Kingdom compares favourably with other countries. Companies operating in the United Kingdom are efficient in generating a relatively high level of profit from a given level of capital. This contrasts with the productivity measures used by the IMD. But, productivity indexes can be misleading indicators. Rapid productivity growth may simply be due to starting from a very low level of productivity and then catching up. For example, US productivity growth has tended to be relatively low, but the level of productivity is still high.

Table 4 World competitiveness 'scorecard': 1999

	Global rank	Companies' financial health	Productivity*	GDP per capita+
United States	1	18	46	16
Finland	3	2	12	10
Netherlands	5	3	29	14
Switzerland	6	6	41	29
Denmark	8	7	11	25
Germany	9	8	14	21
Canada	10	17	6	26
Ireland	11	14	21	1
Australia	12	9	2	17
Norway	13	13	31	30
Sweden	14	1	40	20
United Kingdom	15	25	45	23
Japan	16	36	24	39
Austria	19	19	3	24
France	21	16	13	13
Belgium	22	11	4	19
Spain	23	10	39	11
Italy	30	23	23	31

* Percentage change of real GDP per person employed. + Real GDP per capita, computed on a local currency and constant prices basis.

Conclusions

In the international context, there is evidence that profitability of the non-financial company sector in the 1990s has strengthened. It is too early to say whether recent peaks in profitability of the corporate sector, in 1998 for Germany, Netherlands, Spain and Finland and in 1997 for the United States, Belgium, Norway and the United Kingdom will be emulated in 1999. Or, whether Japan's profitability will recover from a low point in 1997.

The growth in capital in most countries has not been as strong in the 1990s, as it was in the 1980s. With profits continuing to be generated, this could indicate that companies are able to generate greater profitability from a given level of capital, than previously.

It is perhaps surprising that manufacturing industry has survived

the 1990s with strength in their profitability. And most countries reported higher rates of return in manufacturing than in service companies. These trends were supported by strong growth in manufacturing companies using new IT and communications techniques to develop existing and new business. Where service company profitability was higher, in the United Kingdom, Spain and in Norway, the differential with manufacturing companies in rates of return on capital has narrowed since 1990.

Finally, companies in the United Kingdom and Norway operating in the North Sea show remarkably similar patterns in profitability. This is, in large part, determined by swings in the oil price.

A future update of this article will expand the number of countries, provide more insight into international trends and report further on the moves to internationally agreed measures of capital.