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INTERNATIONAL SUCCESS OF BRITISH COMPANIES

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INTERNATIONAL SUCCESS OF BRITISH COMPANIES

Abstract

This paper examines the international success of British companies in a matrix combining global market share and international revenues. We identify those industry segments in which British companies are most successful internationally, and also investigate whether these are attractive industries in terms of profitability and growth. We find that the industries with the largest global market shares for British companies are Mining, Casinos (and Gaming), Oil Companies (Major), Distillers & Brewers, and Water Utilities. Four of the top ten might be considered to be "sin" industries. The industries with the highest international revenues are Precious Metals, Pharmaceuticals, Industrial (Diversified), Oil Companies (Secondary), and Mining. We also find that virtually all of the largest British firms average over a 10% global market share, in the "British Winners" segment of our matrix. However, we find the second measure, the extent of internationalization, to be ambiguous. The manufacturing (product-based) firms tried to be highly internationalized, as they compete globally, but the largest British services firms (financials, retailers) tend to have low internationalization, and therefore appear to benefit from a still somewhat regulated home market. In addition, British companies have done a good job of building up global market shares in higher growth industries. We provide recommendations for managers as to how British companies with different combinations of global market share and extent of internationalisation can improve their positions. Our methodology can also be applied to analyzing companies from other nations.

In what industries are British companies most successful internationally? Why do some large British firms, such as BP, in the energy industry, and GlaxoSmithKline, in the pharmaceutical industry, have extensive international activities? In 2003 BP derived 83% of its revenues from outside the U.K., and GSK 67%. Why do other large British firms, such as Barclays, in banking, and Tesco, in retailing, have limited international activities? In 2003, Barclays had 17% foreign revenues and Tesco 20%. Clearly there is a strong industry effect. Which are the industries in which British firms have the largest global market shares? The surprising answer is the mining industry at number one (57% global share, 2001-2003 average) and the casino and gaming industry at number two (33% share)! These rankings are quite different when compared with other countries. For example, if we look at other European economies of similar size we find that German firms have their largest global market shares in air freight, advanced industrial equipment, and automobiles; and French firms in water utilities, cosmetics, and food retailing. South Korea is even more different—its largest global market shares are in shipbuilding, semiconductors, specialty conductors, and consumer electronics.

The importance of industry effects is strongly supported by international business researchers.¹ In international business, industry effects are clearly confounded with country effects, as inherent country conditions favour some industries rather than others.² Our analysis shows a very strong industry effect for Britain. Its large companies are concentrated in a small number of sectors. Of the 37 British companies on the *Fortune* magazine Global 500 list for 2003, 12 are in financial services, 7 in retailing or distribution, 3 in other consumer services, 5 in utilities, 3 in natural resources, 2 in pharmaceuticals, 3 in consumer packaged goods, and 2 in other manufacturing. In summary, 27 of the 37, or 73%, operate in service sectors. Is this picture true for all British firms?

We investigate in this paper the question: in what types of industries are British companies more internationally successful? This question matters to both managers and government policy makers. For managers, the answer provides an indication of where they should concentrate their efforts, and how to align their firms' capabilities with industry opportunities. The answer may even indicate underexploited gaps. For policy makers the answer provides guidance for supportive investments.

This question of international success has been addressed many times before but nearly all prior research has focussed on *industry exports* or *industry productivity* as the measures of international competitiveness. These measures are relevant but partial. Managers care more about total revenues, regardless of source, than they do about exports. Managers also care more about total profitability rather than just the productivity that contributes to profits. Also, while exports and productivity are of great interest to economists, management researchers have more interest in the question of the kinds of industries in which British management may provide an advantage.

Countries clearly differ in the mix of industries in which their companies excel. We believe that the home country effect comprises a mix of home country factors--such as the nature of demand (e.g., British liking for gambling) and supply (e.g., work force abilities as in creative industries)--and of history (e.g., British firms were the first to internationalise in a number of industries, following the Empire). Perhaps there is even a country management effect—through training, experience and preference. British managers may be more effective in finance-based industries or in creativity-based ones. We do not seek in this paper to test all these possible explanations of national differences in industry performance. But we do seek to identify, as a first step, the industries in which British companies excel. That will provide a starting point for understanding why and also provide some guidance to managers as to where to look for competitive advantage.

We conducted this study because previous work has examined *national competitiveness* from the viewpoint of the economy, especially the export performance of British companies. We have focussed, instead, on the *international success of individual companies*, based on their worldwide activities. This gives our study much more focus on the abilities of British companies rather than of the British economy.

DEFINITION OF INTERNATIONAL SUCCESS

In addressing the question of the industries in which British companies are the most successful internationally, we use two measures of success: global market share and the international share of revenues. We will categorise industries by the performance of British companies along these two dimensions. From this categorisation, we will also investigate the attractiveness of these industries in terms of profitability and growth.

In conceptual terms there are two metrics of most relevance for strategic decision making at firm level. Managers of the large British companies need to be competitive internationally. This is shown first by the global market share of their company in its relevant industry group (assuming away conglomerates and highly diversified firms, as has become the case over the last decade after British conglomerate failures). The second relevant metric is the degree of international sales. As British firms now need to compete with other firms in a deeply integrated European regional market, as well as in a flatter world economy, the degree of international revenues is a first indicator of success in international markets. By taking international sales at firm level we improve over earlier studies which only looked at a firm's exports. Indeed, we can capture the sales of a firm's foreign subsidiaries, as these are included in the metric for foreign revenues. Table 1 compares some alternative measures of international success at the country, industry and company levels.

[Table 1 about here]

Global Market Share

Global market share provides a measure of relative competitive advantage and of company size relative to global competitors. Different researchers have used various measures of size, particularly revenues, assets, profits, and market capitalisation. We prefer revenues to profits or market capitalization as the former is a much more stable measure over time. Revenues are also a better indicator of the extent of activities. For example, quite small firms can have very large market capitalisations. Furthermore, the latter is subject not only to large fluctuations but also to the underlying strength of national equity markets, in itself partly a function of investor fashion. We could also use assets, but this raises two problems. First, assets can have a production rather than revenue generating role, and therefore does not relate well to global market share, which is our measure of international success or competitiveness. Second, the value of assets depends on when they were created or acquired, leading to distortions from timing and hence weaker comparability across companies.

International Share of Revenues

Occasionally, a company with a large global market share may merely benefit from a large home market and derive the bulk of its revenues domestically. This is especially true of large US firms like Wal-Mart, rather than British firms which have a smaller home economy. To be internationally successful, a company needs, by definition, to have significant international activities. The combination of large global market share and a large percentage of international revenues provides a strong measure of such international success. Hence, we also need to measure the percentage of revenues that are international.⁴

We focus on total international revenues, which is the sum of foreign subsidiary revenues plus exports from the headquarters country. Looking at only exports has been the much more common measure of a company's international competitiveness.⁵ We consider that a focus on exports has exacerbated the confounding of country, industry and firm effects. This

is because the exports of a firm are, inherently, highly dependent on the home country, while worldwide performance depends on the entire network of countries in which the multinational enterprise (MNE) operates. With globalization, the competitiveness of firms has become increasingly separated from the competitiveness of their home countries. Indeed, one measure of firm success, now, is how well an MNE can escape the institutional structures of its home country.

Profitability

There are many different ways to measure profitability. Company success and performance are multidimensional and complex phenomena. Performance can mean many things to many different stakeholders. For example, shareholders pay most attention to total return to shareholders (TRS). Some groups of business researchers, especially those in finance, claim that TRS should be the sole criterion for performance. But researchers are now questioning the primacy of shareholder value, especially since the Internet-induced stock market bubble.⁶ Furthermore, shareholder-based measures of performance may not work when we seek to distinguish between domestic and international performance, as TRS is a globally unitary measure that cannot be allocated geographically. As our base is global revenues, we will use as our measure net profits as a percentage of revenues. An attractive feature of our database is that it reports the geographical segment data for the worldwide earnings (net profits) of firms. Thus, we will use these net profits on geographically dispersed real assets (subsidiaries) as a metric for profitability.

Growth Rate

The key issue with growth rates is the relevant period over which to measure the growth. We used the three-year period of 2001 to 2003 for the measures of global market share and percentage international. Hence, we will use the same period to measure industry growth rate.

DATA

The data issues are of central importance. Hence, we summarise here the nature of the data we use, rather than leaving all discussion for the section on Research Methodology.

We use the Osiris data base, provided by Bureau van Dijk, which contains annual report data on 30,000 public companies (and 8,000 unlisted and delisted companies) from around the globe for up to 20 years. It covers more than 125 countries worldwide. Essentially this means coverage of nearly all the significant public companies in the world. A very useful aspect for our study is one of Osiris's systems for classifying companies into a dominant industry segment. The standard problem in analysing companies relative to industries is that traditional industry classification systems, especially the Standard Industrial Classification, provide a poor match with the activities of diversified companies, having been designed with industries, not companies, in mind. Osiris uses the Dow Jones Global Segmentation Industry Classification scheme, which assigns one dominant industry to each company (public ones only). The advantage of the Dow Jones system is that it was designed to achieve the best fit for the world's existing companies. Hence, the classifications work remarkably well for capturing the actual diversified patterns of most companies. So, although problems of classifying diversified companies can never be eliminated, the Dow Jones system of 89 defined industries seems to provide the lowest level of error. This allowed us to do large sample analysis of all the 1,884 public British companies listed in Osiris, among a set of 30,000 companies worldwide, without having to resort to hand adjustments for the industry mix of each company.

To reduce the effects of yearly fluctuations, we used the annual averages of the data for the three most recent years available, 2001 to 2003. This period began with the slowing of GDP growth worldwide and in the United Kingdom, followed by gradual recovery.

RESULTS

We find very interesting results both for global market share and international share of revenues, as well as for the profitability and growth rates of the industries.

Global Market Share

Table 2 shows the global market share of all public British companies, averaged over the three years 2001-2003. (We measured global market share as the combined revenues of all British companies in an industry divided by the combined revenues of all companies in the world in the same industry.) Hence, this table shows the industries in which British companies can be considered to be the most successful on a global basis, although we do not know from this table the extent of international activities. The findings are very interesting: topping the list is Mining at 57% global share, followed by Casinos (and Gaming) at 33%; Oil Companies (Major) at 29%, and Distillers & Brewers at 22%. Also notable in the top ten are Tobacco, 9th at 19% and Restaurants, 10th at 17%. Of the top ten, seven are pure services, one is extractive, and two are in packaged goods, with none in classic manufacturing. In addition, three of the top ten are in "sin" industries, with Restaurants as a possible fourth (after all, gluttony is one of the seven deadly sins). At the other end of the list, in joint last place is the Automobile industry. There are no public British companies left in this industry.

[Table 2 about here]

The industries can also be considered as comprising three groups. First, there are 25 industries each with an average British share above 10%. These could be considered "winner" industries, in which British firms have a share above the British all-industry average of 8.8%, and at 10% or more are clearly notable, even dominant, on a global scale. Second, there are 31 industries (26th to 56th) with average shares between 2% and 10%. These might be considered "challenger" industries, in which British companies have significant but not dominant roles. Third, there are 33 industries in which British companies average less than 2% share. These

might be considered "loser" industries. Note that the terms "winner", "challenger" and "loser" refer to how British companies perform in these industries rather than to the industries themselves. Indeed, a "loser" industry for British companies is, by definition, also a "winner" and a "challenger" for other countries.

The number one spot for Mining reflects the special situation of some very large mining companies from Commonwealth countries (such as Australia, Canada, and South Africa) having their headquarters in Britain even though the bulk of their activities are overseas. Nevertheless, these companies have a strong British heritage. The Casinos (and Gaming) number is biased upward by the fact that the largest British casino company (as classified by the Dow Jones system) is Hilton Group, but a significant portion of that company's revenues comes from hotels and not casinos. But other than these two possible anomalies, the rest of the rankings look reasonable.

One other comment is that the average share across all industries of British companies is 8.8%, while the U.K.'s share of global gross domestic product for the same three years is only 4.8%. Hence British companies are 1.8 times more important relative to all companies in the world, than is the British economy relative to the global economy. The opposite would hold true for those countries with a limited corporate sector, whose companies have limited international activities, or which have a large amount of inward foreign direct investment relative to outward. China today would be a prime example of such countries, on all three counts.

International Share of Revenues

Table 3 shows the average international share of revenues (foreign/total or F/T) for British firms in each industry. There are three caveats to be made. First, we had to obtain this measure one company at a time. Hence it was not feasible to do this for all 1,884 British firms. Instead, we collected this data for only those 312 British firms in the global top 100 in each

industry. The number of British companies in this top 100 group ranged from 2 to 13, depending on the industry. Second, in 27 industries, there were either no British firms in the top 100 or the firms did not report international revenues. Hence these 27 industries are excluded from the table. Third, not all firms reported UK versus non-UK revenues, but reported Europe versus non-Europe. Hence, in some cases, the extent of international (non-UK) revenues is understated. On the other hand, our use of only those British companies in the top 100 of their industries overstates the extent of international share, as smaller companies typically have lower rates of internationalisation.

[Table 3 about here]

Table 3 ranks the industries in three columns: the first one shows the industries where the average F/T is over 50%, the second column those between 25% and 50%, and the third column those below 25%. These breaks of 50% and 25% are important natural ones. When a company goes over 50% F/T a fundamental shift in mindset occurs. It is no longer a British (or other national) company with some international activities. It is a multinational, or even global, company. The other break at 25% indicates that a company is halfway to the halfway mark, probably also an important psychological crossing point. As it happens, these breaks divide the industries into roughly equal thirds as far as British companies are concerned. We can see that the great majority (44 of 62 = 71%) of British industries have companies with their sales primarily at home (i.e., F/T of less than 50%).

This ranking of industries uses all international revenues, which means combining exports with the revenues from foreign subsidiaries. Most other rankings about the international success of British industries or companies usually use just exports. Hence our list looks very different from these other export-based lists. ¹⁰

Combining Global Market Share and International Share of Revenues

What is really interesting is to combine the rankings on global market share and F/T, as we do in Figure 1. We can do this as the data show that there is no correlation between the two measures (see Table 7 in the Appendix.) We can now see that those industries in the top third in terms of global market share divide into more or less three equal groups in terms of their extent of internationalisation. Only six of the 25 U.K. "winner" industries have F/T above 50%: Aerospace, Mining, Oil Companies (Major), Pharmaceuticals, Tobacco and Wireless Communications. A similar pattern holds among the "loser" and "challenger" industries, with the majority having F/T below 50%.

[Figure 1 about here]

In the top right cell (A1) are those industries in which British companies have both large global market shares and F/T greater than 50%. These can be considered as the industries in which British companies are the most internationally successful ("global champions")—Aerospace, Building Materials, Mining, Oil Companies (Major), Pharmaceutical, Tobacco and Wireless Communications. In contrast, in the bottom right cell (A3) are those industries in which British companies have large global market shares, but F/T that is relatively low, below 25%. Casinos (and Gaming) and Water Utilities are prime examples of such "domestic champions."

The left hand column also has interesting stories. These industries have the lowest global market shares. But some of them have very high F/T, above 50% (in cell C1)-Biotechnology, Chemicals (Commodity), Electric Components, and Insurance (Property). In contrast, the bottom left cell (C3) has industries low on both global market share and F/T—Broadcasting, Consumer Electronics, Cosmetics, Fixed-Line Communications, Footwear, and Internet Services.

There is a long standing debate about whether it is good or bad that most of the U.K. economy has migrated to services, away from manufacturing. For a long time it was considered a sign of weakness that the U.K. economy did less and less manufacturing. Our analysis focuses on the worldwide activities of British companies rather than just the U.K. economy. So Figure 1 shows a somewhat different picture when we focus on product-based industries (highlighted in bold). Nearly half (29 of 62) of the industries are product-based, although the importance of manufacturing varies. Hence, British companies are more involved in product-based industries than is the U.K. economy. At the same time, Figure 1 reveals distinctive patterns. The top row of highly international industries has mostly product-based industries. In contrast the bottom row of low international has mostly service-based industries. This difference fits the general notion of services being harder to internationalise. The middle row contains what might be called mixed industries that have some aspects favouring internationalisation and some not. 14

Most interesting is that cell B3, moderate market share and low international, and cell A3, high global market share but low international, each contain only service-based industries, with one exception in each case. Being service-based these industries are mostly immune to imports and also, typically, require a high degree of local knowledge. Hence, they are well suited for sustainable domination by domestic companies. The one exception in cell A3, Distillers & Brewers, has a very large service component (the operation of public houses), and requires a high level of local knowledge (beer being a category with very localised preferences all over the world). Another interesting example is Casinos (and Gaming). While gambling has broad global appeal, the specifics of what people want to bet on, and how, have a very strong local flavour. What foreign company could cope with the British interest in betting on who will score the first goal in a match between Manchester United and Tottenham Hotspur? and setting the correct odds?

So our data shows that a concentration on services by British companies provides some insulation from global competition. Some service industries are vulnerable to the offshoring of jobs, but our study focuses on revenues and where those are obtained rather than where the work is done. Nevertheless, the service businesses in the bottom row tend to be relatively low in the potential for offshored work, with the exception of Internet Services in cell C3.¹⁵

[Figure 2 about here]

It is also worth looking at where the largest British companies are located in this matrix. Figure 2 does so for the 32 companies in the *Fortune* Global 500 in 2003. Not surprisingly, as the largest British companies, nearly all are located in the right hand column of "British as Winners." Only one, BT, falls into the "British as Losers" column, and only five into the "British as Challengers" column. Notable is that only 7 of the 32 place in the top row of "highly international." Indeed, exactly half fall in the "low international" row.

Profitability and Growth

Are the industries in which British companies are internationally successful also attractive ones? Table 4 ranks the 89 industries by the *profitability* of British companies averaged over the three years 2001-2003, with profitability calculated as the ratio of net income to operating revenue. (We use a sales-based measure of profitability in order to be consistent with our sales-based measures of both market share and extent of internationalisation. In addition, while sales-based measures reflect sector-specific biases, e.g., retailing has low sales margins; different biases apply to any other measure of profitability, e.g., return on capital penalises capital-intensive industries such as utilities.) There is a fairly large gap between the 25th and 26th most profitable industries, suggesting 4% as a natural break for this sample. In addition, a break at the obvious level of 0% creates a further approximate third of industries.

Table 5 ranks the 89 industries by the annual compound *growth* rate of the worldwide industry over the same three years. We use the growth rate for all firms in each industry, not

just British firms, because we do not want to mix up the growth of British companies with their global market shares, as these latter two are obviously related. As growth rates change from year to year, there are no particular psychological breakpoints as for global market share or F/T. Hence, we simply divide the table into equal thirds. We then use the categories to highlight the industries in Figure 1, by adding the dimension of industry profitability (Figure 3) and that of industry growth (Figure 5).

[Tables 4 and 5 about here]

Figure 3 reveals that the bottom row, Low International, has the most interesting story in terms of profitability. All except one of the industries in cell C3 (low global market share) has low profitability. The reverse holds for cells B3 (medium global market share) and A3 (high global market share). Here all industries except one in each cell have either moderate or high profitability. Interestingly, the one industry, Diversified Technology, in cell B3 that was an exception in being product-based, is also the exception with low profitability. So these findings on the bottom row fit the earlier argument that it is good for British companies to be in service business that are low in internationalisation. Here we can add the rider that companies need at least a moderate global market share (2% or more) to enjoy good profits.

[Figure 3 about here]

We further investigated the relationship between internationalisation and profitability by conducting a regression analysis (see Research Methodology for details). Figure 4 shows the resulting relationship. The observed U-shape relationship fits the standard theory in international business that profitability declines as companies begin to internationalise. ¹⁶ This arises from the difficulties of learning how to internationalise and usually indicates a reciprocal vulnerability to foreign competition coming into the home market. In our analysis this negative effect bottoms out at about 40% F/T, after which profitability starts to rise. From this point on, it seems that British companies in those industries have both learned how to operate

internationally and indeed now dominate the global space in their industries. The prescription for managers seems pretty clear. Either stick to industries that are primarily domestic or choose industries that are highly international but in which you can also achieve at least a moderate level of global market share. Do not get "stuck in the middle" in industries that have middling levels of internationalisation (say 10% to 40% F/T) especially if you can achieve only a low global market share. Of course, a company can escape the fate of its industry, but it takes something special to do that, which is like rowing upstream.¹⁷

[Figure 4 about here]

Figure 5 highlights the growth rates of the industries. It tells an encouraging story for British companies. Most of the industries in which British companies have large global markets shares also have moderate or high growth rates (the right hand, A column). Indeed, cell A3 of low international, high global share companies, which has the most profitable industries also has the most high or moderate growth industries—another win for the British "domestic champions." In contrast, a majority (eight of 15) of industries in which British companies have low global market shares also have low growth rates. This pattern of growth rates suggests that British companies have been reasonably adept at focusing their efforts in higher growth industries.

[Figure 5 about here]

IMPLICATIONS FOR INTERNATIONAL STRATEGY

We can infer from Figures 3 and 5 some possible implications for international strategy.

Increasing International Share of Revenues

Companies can try to move up the matrix by increasing the international share of revenues. Typically this means increasing international revenues faster than the rate of increase of domestic revenues (rather than actually reducing domestic revenues). As usual, a company can increase its revenues either by growing it or by buying it (through acquisitions).

Companies in the bottom row (industries with F/T below 25%) are probably in industries where internationalisation is difficult. For example, customer preferences may be very different across countries, products may be expensive to transport, services may have to be provided locally, governments may impose barriers to trade or foreign investment and so on.¹⁸ Indeed, the industries in the bottom, Low International, row exhibit most of these characteristics. Hence, companies in these industries will, typically, find it hard to increase internationalisation through organic growth, but are more likely to have to resort to acquisition. For example, British banks expanded internationally primarily through acquisition, and conversely foreign banks have acquired into the United Kingdom (e.g., Hong Kong & Shanghai Bank's acquisition of Midland Bank to create HSBC, now one of the world's largest banks. Similarly, in water utilities, the U.K.'s largest firm, Thames Water, was acquired in 2001 by Germany's RWE, as was Wessex Water in 2003 by Malaysia's YTL. Hence, neither Thames Water nor Wessex Water feature in the list of British water utility companies. Despite that, Water Utilities still ranks fifth among British industries in global market share, and first in the world (i.e., British companies' combined market share is larger than that of any other country's).

Companies in the top, Highly International, row (industries with F/T above 50%) are probably in the fortunate position of being in industries where internationalisation faces few barriers. They have a choice of both growing or buying revenues. Many industries in this row are technologically intensive and technology advantages are particularly easy to leverage into foreign markets. Companies in the middle, Moderately International, row typically face mixed drivers and barriers for internationalisation. The key here is to pick those products or services that are more suitable for internationalisation, to exploit the drivers and to overcome the barriers for internationalisation. In food products, some products are much easier than others to internationalise. For example, Unilever has been able to build a global business in ice cream,

because that product does not have a strong tradition in most countries. In airlines, companies face major regulatory barriers to international expansion. Hence, they have resorted to alliances as their most common strategy for internationalisation.

It is certainly possible to greatly increase the level of internationalisation. Among the 32 largest British companies in Figure 2, GlaxoSmithKline has reached the top "highly international" row through its creation as a merger of a large British and a large American company. Several companies in the bottom "low international" row are currently using both internal expansion and acquisition to increase their level of international activity. These include: Barclays, HSBS, Royal Bank of Scotland, and Tesco. For example, in early 2006, Tesco announced a plan to move into the West Coast region of the United States. Conversely, foreign companies are also using acquisition of British companies to increase their own level of internationalisation. Of most recent note is the 2004 acquisition of Abbey National (in the lower right cell of Figure 2) by Spain's Banco Santander Central Hispano.

Increasing Global Market Share

Companies can move to the right of the matrix, increasing global market share, using all the standard strategies for market share growth, especially by enhancing bases of competitive advantage. Internationalisation is one strategy that we can focus on here. A company with an established source of competitive advantage from its home or other existing country-markets often finds it easier to increase global market share by adding new countries rather than by trying to increase share in existing countries. Many of the companies in the industries in the "winner" industry column, especially those in the "highly" and "moderately" international rows expanded their global share by going international. Vodafone in cell A3 (high share and highly international) provides a recent prime example of an internationalisation strategy via acquisition (e.g., of Germany's Mannesmann). As a result Vodafone is now the world's largest wireless communications company.

Improving "Par" Performance

All the industry data we have presented constitute averages across companies. By definition, many companies will be above or below average in terms of their global market share or their international share of revenues. Managers can view the industry averages as the "par" scores for their industry. They can then investigate why their firm is above or below par. There is much to learn from other companies, in the same industry, that have higher global market shares and greater internationalisation. Conversely, companies that are above par need to understand why they are where they are, and seek to preserve the factors that got them to their current favourable positions.

Improving Profitability and Growth

Managers can also use our data on industry profitability and growth as further indicators of par performance. Those below their industry par can set targets for improvement, using the standard techniques to boost profits or growth.²⁰

Should and Can Companies Make Strategic Changes?

We have suggested above a number of strategic changes that companies might seek to make. In an increasingly globalized world the long term success of companies depends on their being able to maintain their international competitiveness, especially if they operate in industries that lack insulation from global competition. The two measures we have applied in this article, global market share and international share of revenues, provide good indicators of this international competitiveness. British companies with low global market share and/or low international share of revenues can use the matrices we have developed to diagnose if their performance is typical of their industry. If typical, or above average, their positions may benefit from industry protections and be defensible. If below average, the company is likely to be more vulnerable than its industry to global competition, and may well need to make strategic changes to achieve greater international success.

There is now an extensive debate as to how easy it is for companies to change their positions and strategies, and which strategic renewal journey they should employ.²¹ That debate is well beyond the scope of this article. Nevertheless, making such changes is certainly the responsibility of top managers. Recent research suggests that strategic transformation is hard, but doable if approached in the right way.²²

CONTRIBUTIONS AND LIMITATIONS

The key conceptual contribution of this article is to argue that the international success of companies needs to take account of the entire worldwide activities of the company and not just its exports from its home country. Hence, we are further supporting the view that increasingly a company's prospects can be separated from that of its home country. On the other hand, we also recognise that there are strong country effects, especially as these affect which are the industries in which a country's companies are more likely to be internationally successful. We demonstrate that industries can be divided into those in which a country's companies can be winners, challengers, or losers in terms of global market shares. We also demonstrate that the international success of companies is best measured by the combination of global market share and international share of revenues. Neither is sufficient on its own. The matrix we have developed, combining these two measures, provides a new way to think about how to compare companies and industries in terms of international success.

Empirically, our study is the first to calculate global market share based on worldwide revenues (including subsidiary sales), instead of exports, as a basis for the international competitiveness of British companies. We have, on the other axis, added the dimension of the international share of revenues. We apply these new international metrics to British industries and also to a set of the largest British multinational enterprises, and examine their positioning and performance. Our findings provide new insight into the international success of British

companies, with clear implications for international strategy, as discussed in the preceding section on "Implications for International Strategy". Our methodology can be replicated by other researchers for other countries, using the same data base. That would yield very interesting comparisons.

This study has some limitations inherent in the data. These are discussed at greater length in our Appendix on Research Methodology, and relate particularly to issues of industry classification. Thus, our findings should be viewed as indicative rather than definitive.

APPENDIX

RESEARCH METHODOLOGY

i. Data Issues

We needed to calculate global market share. But such market share data are not available from secondary sources. Hence, we used worldwide company sales, from annual reports, as the basis for calculating a close proxy. There are three standard challenges: the choice of industry definition, the problem of firm diversification, and the absence of non-public companies. On the first challenge, the use of S.I.C.-defined industries has often been criticized as not mapping well to what most large companies actually do.²³ To avoid this problem we have chosen to use instead the Dow Jones Global Segmentation Industry Classification scheme of 89 industry segments or sectors (listed in Tables 2 to 6). According to this classification, companies are grouped into 10 economic sectors, which are further refined into 18 market sectors, 51 industry groups and 89 sub-groups based on a company's nature of business. The nature of the company's business is determined by its source of revenue or where it obtains the majority of revenues. We also checked how the Dow Jones classifications compared with those of the S.I.C. code for the 34 British companies in the Fortune Global 500 in 2003 (Table 5). In general, the classifications are similar, except that the Dow Jones ones are generally a bit broader. Hence, there is less of a problem from company diversification as the Dow Jones classifications cover more of each company's activities.

[Table 6 about here]

On the second challenge of firm diversification, there is no easy solution except at the level of individual companies, where a researcher can conduct painstaking reallocation of revenues across industries, when such data are even reported. As the calculation of global market share of British companies requires a numerator per sector of all British public companies (nearly 1,900 in total) and a denominator of all public companies in the world

(about 30,000 in total), such a reallocation for all companies is not possible. Hence, we have to accept that the results are not completely accurate.

Our calculation of global market share--the sales of a company divided by the sales of all companies in the same market--is conceptually the same as standard measures of market share. The only difference is that, because of company diversification, our measure is not as precise. To check on possible distortions we were able to find global market share data for one industry and four companies. For the aerospace industry we calculated that British companies held 10.2% market share in 2003. *Factiva* reported 13% in 2004, driven partly by a 3.4% increase in the UK industry. For the pharmaceutical industry we calculated that two British companies (GlaxoSmithKline and AstraZeneca) together held 12.9% market share in 2003. A report by Mergent, *The Europe Pharmaceutical Sectors*, 2004, calculated 11% for the same year. In the tobacco industry we calculated that British American Tobacco held 9% global market share in 2003. A report by The Tobacco Industry, *Action on Smoking and Health*, reported 15.4%. This difference probably arises from diversification by non-British tobacco companies such as the U.S.'s Altria, which has a large food business in addition to its tobacco business (Philip Morris). We conclude that there are some distortions from our measurement method but not seriously so.

On the third challenge of the absence of private companies, possible biases vary by industry. Fortunately, private companies play a relatively small role among British companies, in contrast to European Continental companies. The recent rise of private equity firms as owners of previously public companies will make this problem more of a challenge in the future.

Table 7 reports a close to zero correlation between our two key metrics, thus providing the rationale to construct the orthogonal axes of the matrix shown as Table 3.

[Table 7 about here]

ii. Regression Analysis

We conducted a regression analysis of the effect of an industry's internationalisation on its profitability, the latter measured by net income divided by operating revenues (or return on sales). In line with previous research, the key explanatory variable we used was the extent of company internationalisation in each industry (measured as a ratio of foreign to total sales, F/T). ²⁴ We also controlled for a number of other factors which have been shown to have a significant effect on firm profitability. We have included the industry's profitability (Industry World Return on Sales) as a control as other studies have found this to be important.²⁵ In particular, using industry profitability establishes a base level so that we can look at the incremental effect of the F/T ratio on the profitability of individual British companies.

Firm size has long been considered a major determinant of firm profitability by international business scholars.²⁶Some point to potential non-linearities in the relationship: larger firms typically benefit from economies of scale and scope,²⁷ while very large firms may become rigid and very inert.²⁸

Other factors, which have been shown to constitute a basis for competitive advantage and significantly affect MNEs' performance, include: R&D intensity, advertising intensity, and financial structure ²⁹. The degree of product diversification has also been found to influence the profitability of multinational companies.³⁰

We used the same Osiris database as in the other analyses in this study. Our sample consists of the 62 industries for which we were able to calculate an average foreign to total sales ratio for U.K. companies.

We found a significant U-shape relationship between profitability and international share of revenues (F/T), after controlling for the effects of global market share of UK companies, industry world growth rate, industry world profitability, and sector effect (product

or service). Out of the control variables, only industry profitability was found to be a highly significant determinant of profitability of UK companies, followed by a much less significant effect of the industry growth rate (interestingly the relationship is negative). At the same time, neither global market share nor sector affiliation were found to be significant in this analysis (see Table 8).

[Table 8 about here]

TABLE 1
Alternative Measures of International Success

COUNTRY LEVEL	
Exports (or net of imports) as % of GNP	Measures the entire economy and includes export activities of locally-based subsidiaries of foreign companies. Hence, it is not a good measure of the success of domestic companies, e.g., Ireland has very strong export performance but mostly by locally-based foreign companies. Also, it is hard to compare the export activities (or other local aspects of performance) of domestic and foreign companies as each depends on the worldwide business systems of the companies, e.g., the performance of Toyota's UK subsidiary depends a great deal on products developed in Japan even though much of the production is in the UK.
INDUSTRY LEVEL	
Exports (or net of imports) as % of industry	Same arguments apply as for the country level
COMPANY LEVEL	
Exports as % of revenues	Measures primarily the performance of the domestic part of the company, and depends a great deal on domestic country factors.
Global market share	Provides measure of competitive and achieved position relative to all global competitors. Has advantage of capturing the performance of the entire company, not just the domestic portion. Has drawback of favouring companies based in larger economies when comparing across countries, or favouring companies in categories with above (global) average usage or consumption rates when comparing within countries (e.g., gambling has higher usage rate in UK than in most other countries compared with cosmetics).
International share of revenues	Offsets the drawbacks of global market share. Has own drawback of bias from home country size when comparing companies across countries, but not a problem when comparing within countries. Provides complement to global market share as joint measures of international success

TABLE 2 Industries Ranked by Global Share of British Companies (2001-2003 average, listed companies)

Mining	Rank	Name of Industry	Market Share	Rank	Name of Industry	Market share	Rank	Name of Industry	Market share
3 Oil Companies (Major) 29,1 28 Chemicals (Specialty) 7,1 59 Advanced Industrial Equipment 1,6 4 Distillers & Brewers 21,5 29 Retailers (Apparel) 6.9 60 Oil Companies (Secondary) 1,5 5 Water Utilities 21,4 30 Coal 6.8 61 Communications Technology 1,4 6 Transportation Services 19,8 31 Heavy Construction 6,7 62 Electric Components 1,3 7 Wireless Communications 19,7 32 Marine Transport 6,6 63 Insurance (Property) 1,3 8 Advertising 19,2 33 Airlines 6,0 64 Biotechnology 1,2 9 Tobacco 18,6 34 Retailers (Drug-based) 5,9 65 Internet Services 1,1 10 Restaurants 17,4 35 Household Products Nondurable 5,7 66 Clothing & Fabrics 0,9 11 Publishing 16,9 36 Software 5,5 67 Medical Supplies 0,7 12 Insurance (Life) 16,1 37 Industrial Services 5,4 68 Footwear 0,7 13 Home Construction 15,4 38 Fixed-Line Communications 4,9 69 Chemicals (Commodity) 0,7 14 Entertainment 15,3 39 Industrial (Diversified) 4,8 70 Factory Equipment 0,6 15 Retailers (Specialty) 14,8 40 Railroads 4,5 71 Computers 0,6 16 Gas Utilities 13,5 41 Precious Metals 4,4 72 Heavy Machinery 0,6 17 Pharmaceuticals 12,7 42 Real Estate 4,3 73 Healthcare Providers 0,5 18 Lodging 11,9 43 Household Products Durable 4,2 74 Tires 0,4 19 Consumer Services 11,5 44 Advanced Medical Devices 3,4 77 Semiconductors 0,3 20 Insurance (Full Line) 11,5 45 Retailers (Broad-line) 3,7 76 Office Equipment 0,3 21 Banks (Ex-S&L) 11,3 46 Electric Utilities 3,4 77 Semiconductors 0,3 22 Recreation Products 10,8 49 Investment Services 3,4 79 Trucking 0,2 23 Food Retailers 10,9 48 Steel 3,4 79 Trucking 0,2 24 Food Products 10,8 49 Investment Services 3,3 80 Land Transportation Equipment 0,2 25 Aerospace 10,2 50 Furnishings & Appliances 3,2 81 Soft Drinks 0,0 26 Foothers 10,9 48 Steel 10,9 48 Steel 10,9 48 Steel	1	Mining	56.7	26	Building Materials	8.3	57	Diversified Financial	1.7
A Distillers & Brewers 21.5 29 Retailers (Apparel) 6.9 6.0 6.0 Companies (Secondary) 1.5	2	Casinos (and Gaming)	33.1	27	Containers & Packaging	7.9	58	Agriculture	1.6
S Water Utilities	3	Oil Companies (Major)	29.1	28	Chemicals (Specialty)	7.1	59		1.6
6 Transportation Services 19.8 31 Heavy Construction 6.7 62 Electric Components 1.3 7 Wireless Communications 19.7 32 Marine Transport 6.6 63 Insurance (Property) 1.3 8 Advertising 19.2 33 Airlines 6.0 64 Biotechnology 1.2 9 Tobacco 18.6 34 Retailers (Drug-based) 5.9 65 Internet Services 1.1 10 Restaurants 17.4 35 Household Products Nondurable 5.7 66 Clothing & Fabrics 0.9 11 Publishing 16.9 36 Software 5.5 67 Medical Supplies 0.7 12 Insurance (Life) 16.1 37 Industrial Services 5.4 68 Footwear 0.7 13 Home Construction 15.4 38 Fixed-Line Communications 4.9 69 Chemicals (Commodity) 0.7 14 Entertainment 15.3<	4	Distillers & Brewers	21.5	29	Retailers (Apparel)	6.9	60	Oil Companies (Secondary)	1.5
7 Wireless Communications 19.7 32 Marine Transport 6.6 63 Insurance (Property) 1.3 8 Advertising 19.2 33 Airlines 6.0 64 Biotechnology 1.2 9 Tobacco 18.6 34 Retailers (Drug-based) 5.9 65 Internet Services 1.1 10 Restaurants 17.4 35 Household Products Nondurable 5.7 66 Clothing & Fabrics 0.9 11 Publishing 16.9 36 Software 5.5 67 Medical Supplies 0.7 12 Insurance (Life) 16.1 37 Industrial Services 5.4 68 Footwear 0.7 13 Home Construction 15.4 38 Fixed-Line Communications 4.9 69 Chemicals (Commodity) 0.7 14 Entertainment 15.3 39 Industrial Services 4.8 70 Factory Equipment 0.6 15 Retailers (Specialty) 14.8 <td>5</td> <td>Water Utilities</td> <td>21.4</td> <td>30</td> <td>Coal</td> <td>6.8</td> <td>61</td> <td>Communications Technology</td> <td>1.4</td>	5	Water Utilities	21.4	30	Coal	6.8	61	Communications Technology	1.4
8 Advertising 19.2 33 Airlines 6.0 64 Biotechnology 1.2 9 Tobacco 18.6 34 Retailers (Drug-based) 5.9 65 Internet Services 1.1 10 Restaurants 17.4 35 Household Products Nondurable 5.7 66 Clothing & Fabrics 0.9 11 Publishing 16.9 36 Software 5.5 67 Medical Supplies 0.7 12 Insurance (Life) 16.1 37 Industrial Services 5.4 68 Footwear 0.7 13 Home Construction 15.4 38 Fixed-Line Communications 4.9 69 Chemicals (Commodity) 0.7 14 Entertainment 15.3 39 Industrial (Diversified) 4.8 70 Factory Equipment 0.6 15 Retailers (Specialty) 14.8 40 Railroads 4.5 71 Computers 0.6 16 Gas Utilities 13.5 41 Precious Metals 4.4 72 Heavy Machinery 0.6 17 Pharmaceuticals 12.7 42 Real Estate 4.3 73 Healthcare Providers 0.5 18 Lodging 11.9 43 Household Products Durable 4.2	6	Transportation Services	19.8	31	Heavy Construction	6.7	62	Electric Components	1.3
9 Tobacco 18.6 34 Retailers (Drug-based) 5.9 65 Internet Services 1.1 10 Restaurants 17.4 35 Household Products Nondurable 5.7 66 Clothing & Fabrics 0.9 11 Publishing 16.9 36 Software 5.5 67 Medical Supplies 0.7 12 Insurance (Life) 16.1 37 Industrial Services 5.4 68 Footwear 0.7 13 Home Construction 15.4 38 Fixed-Line Communications 4.9 69 Chemicals (Commodity) 0.7 14 Entertainment 15.3 39 Industrial (Diversified) 4.8 70 Factory Equipment 0.6 15 Retailers (Specialty) 14.8 40 Railroads 4.5 71 Computers 0.6 16 Gas Utilities 13.5 41 Precious Metals 4.4 72 Heavy Machinery 0.6 17 Pharmaceuticals 12.7 42 Real Estate 4.3 73 Healthcare Providers 0.5 18 Lodging 11.9 43 Household Products Durable 4.2 74 Tires 0.4 19 Consumer Services 11.5 44 Advanced Medical Devices 3.8 75 Consumer Electronics 0.3 20 Insurance (Full Line) 11.5 45 Retailers (Broad-line) 3.7 76 Office Equipment 0.3 21 Banks (Ex-S&L) 11.3 46 Electric Utilities 3.4 77 Semiconductors 0.3 22 Recreation Products 10.9 47 Shipbuilding 3.4 78 Cosmetics 0.2 23 Food Retailers 10.9 48 Steel 3.4 79 Trucking 0.2 24 Food Products 10.8 49 Investment Services 3.3 80 Land Transportation Equipment 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 24 Food Products 10.8 49 Investment Services 3.3 Pipelines 0.0 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 26 Forest Products 0.1 52 Diversified Technology 2.6 83 Pipelines 0.0 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 26 Forest Products 0.1 55 Auto Parts 2.0 86 Aluminium n/a 1 1 1 1 1 1 1 1 1 1	7	Wireless Communications	19.7	32	Marine Transport	6.6	63	Insurance (Property)	1.3
10 Restaurants 17.4 35 Household Products Nondurable 5.7 66 Clothing & Fabrics 0.9 11 Publishing 16.9 36 Software 5.5 67 Medical Supplies 0.7 12 Insurance (Life) 16.1 37 Industrial Services 5.4 68 Footwear 0.7 13 Home Construction 15.4 38 Fixed-Line Communications 4.9 69 Chemicals (Commodity) 0.7 14 Entertainment 15.3 39 Industrial (Diversified) 4.8 70 Factory Equipment 0.6 15 Retailers (Specialty) 14.8 40 Railroads 4.5 71 Computers 0.6 16 Gas Utilities 13.5 41 Precious Metals 4.4 72 Heavy Machinery 0.6 17 Pharmaceuticals 12.7 42 Real Estate 4.3 73 Healthcare Providers 0.5 18 Lodging 11.9 43 Household Products Durable 4.2 74 Tires 0.4 19 Consumer Services 11.5 44 Advanced Medical Devices 3.8 75 Consumer Electronics 0.3 20 Insurance (Full Line) 11.5 45 Retailers (Broad-line) 3.7 76 Office Equipment 0.3 21 Banks (Ex-S&L) 11.3 46 Electric Utilities 3.4 77 Semiconductors 0.3 22 Recreation Products 10.9 47 Shipbuilding 3.4 78 Cosmetics 0.2 23 Food Retailers 10.9 48 Steel 3.4 79 Trucking 0.2 24 Food Products 10.8 49 Investment Services 3.3 80 Land Transportation Equipment 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 26 Diversified Technology 2.6 83 Pipelines 0.0 27 Semiconductors 0.1 28 Paper Products 0.1 29 Paper Products 0.1 20 Diversified Technology 2.6 83 Pipelines 0.0 20 Pipelines 0.0 21 State 17 18 18 18 18 18 22 Diversified Technology 2.6 83 Pipelines 0.0 24 Food Products 10.9 18 18 18 18 18 18 25 Diversified Technology 2.6 83 Pipelines 0.0 26 Paper Products 0.1 18 18 18 27 Paper Products 0.1 18 18 28 Paper Products	8	Advertising	19.2	33	Airlines	6.0	64	Biotechnology	1.2
Publishing 16.9 36 Software 5.5 67 Medical Supplies 0.7	9	Tobacco	18.6	34	Retailers (Drug-based)	5.9	65	Internet Services	1.1
12 Insurance (Life) 16.1 37 Industrial Services 5.4 68 Footwear 0.7 13 Home Construction 15.4 38 Fixed-Line Communications 4.9 69 Chemicals (Commodity) 0.7 14 Entertainment 15.3 39 Industrial (Diversified) 4.8 70 Factory Equipment 0.6 15 Retailers (Specialty) 14.8 40 Railroads 4.5 71 Computers 0.6 16 Gas Utilities 13.5 41 Precious Metals 4.4 72 Heavy Machinery 0.6 17 Pharmaceuticals 12.7 42 Real Estate 4.3 73 Healthcare Providers 0.5 18 Lodging 11.9 43 Household Products Durable 4.2 74 Tires 0.4 19 Consumer Services 11.5 44 Advanced Medical Devices 3.8 75 Consumer Electronics 0.3 20 Insurance (Full Line) 11.5 45 Retailers (Broad-line) 3.7 76 Office Equipment 0.3 21 Banks (Ex-S&L) 11.3 46 Electric Utilities 3.4 77 Semiconductors 0.3 22 Recreation Products 10.9 47 Shipbuilding 3.4 78 Cosmetics 0.2 23 Food Products 10.9 48 Steel 3.4 79 Trucking 0.2 24 Food Products 10.8 49 Investment Services 3.3 80 Land Transportation Equipment 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 82 Paper Products 0.0 26 Sa Pipelines 0.0 27 Sa Paper Products 0.0 28 Paper Products 0.0 29 Paper Products 0.0 20 Pollution Control 2.1 85 Air Freight n/a ¹ 20 Pollution Control 2.1 85 Air Freight n/a ¹ 20 Pollution Control 2.1 85 Air Freight n/a ¹ 20 Pollution Control 2.1 85 Air Freight n/a ¹ 20 Pollution Control 2.1 85 Air Freight n/a ¹ 20 Pollution Control 2.1 85 Air Freight n/a ¹	10	Restaurants	17.4	35	Household Products Nondurable	5.7	66	Clothing & Fabrics	0.9
13 Home Construction 15.4 38 Fixed-Line Communications 4.9 69 Chemicals (Commodity) 0.7 14 Entertainment 15.3 39 Industrial (Diversified) 4.8 70 Factory Equipment 0.6 15 Retailers (Specialty) 14.8 40 Railroads 4.5 71 Computers 0.6 16 Gas Utilities 13.5 41 Precious Metals 4.4 72 Heavy Machinery 0.6 17 Pharmaceuticals 12.7 42 Real Estate 4.3 73 Healthcare Providers 0.5 18 Lodging 11.9 43 Household Products Durable 4.2 74 Tires 0.4 19 Consumer Services 11.5 44 Advanced Medical Devices 3.8 75 Consumer Electronics 0.3 20 Insurance (Full Line) 11.5 45 Retailers (Broad-line) 3.7 76 Office Equipment 0.3 21 Banks (Ex-S&L) 11.3 46 Electric Utilities 3.4 77 Semiconductors 0.3 22 Recreation Products 10.9 47 Shipbuilding 3.4 78 Cosmetics 0.2 23 Food Retailers 10.9 48 Steel 3.4 79 Trucking 0.2 24 Food Products 10.8 49 Investment Services 3.3 80 Land Transportation Equipment 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 26 83 Pipelines 0.0 0.0 27 82 Paper Products 0.1 28 Forest Products 0.0 0.0 29 Forest Products 0.0 0.0 20 87 Automobile n/a 0.1 20 Retailers 10.9 10.7 10.7 21 85 Air Freight 10.7 22 10.7 10.7 10.7 23 10.7 10.7 10.7 24 10.7 10.7 10.7 25 10.7 10.7 10.7 26 10.7 10.7 10.7 27 82 Paper Products 0.0 28 Paper Products 0.0 29 Paper Products 0.0 20 87 Automobile 10.7 20 87 Automobile 10.7 21 85 Air Freight 10.7 22 10.7 10.7 23 10.7 10.7 24 10.7 10.7 25 10.7	11	Publishing	16.9	36	Software	5.5	67	Medical Supplies	0.7
14 Entertainment 15.3 39 Industrial (Diversified) 4.8 70 Factory Equipment 0.6 15 Retailers (Specialty) 14.8 40 Railroads 4.5 71 Computers 0.6 16 Gas Utilities 13.5 41 Precious Metals 4.4 72 Heavy Machinery 0.6 17 Pharmaceuticals 12.7 42 Real Estate 4.3 73 Healthcare Providers 0.5 18 Lodging 11.9 43 Household Products Durable 4.2 74 Tires 0.4 19 Consumer Services 11.5 44 Advanced Medical Devices 3.8 75 Consumer Electronics 0.3 20 Insurance (Full Line) 11.5 45 Retailers (Broad-line) 3.7 76 Office Equipment 0.3 21 Banks (Ex-S&L) 11.3 46 Electric Utilities 3.4 77 Semiconductors 0.3 22 Recreation Products 10.9 47 Shipbuilding 3.4 78 Cosmetics 0.2 23 Food Retailers 10.9 48 Steel 3.4 79 Trucking 0.2 24 Food Products 10.8 49 Investment Services 3.3	12	Insurance (Life)	16.1	37	Industrial Services	5.4	68	Footwear	0.7
15 Retailers (Specialty) 14.8 40 Railroads 4.5 71 Computers 0.6 16 Gas Utilities 13.5 41 Precious Metals 4.4 72 Heavy Machinery 0.6 17 Pharmaceuticals 12.7 42 Real Estate 4.3 73 Healthcare Providers 0.5 18 Lodging 11.9 43 Household Products Durable 4.2 74 Tires 0.4 19 Consumer Services 11.5 44 Advanced Medical Devices 3.8 75 Consumer Electronics 0.3 20 Insurance (Full Line) 11.5 45 Retailers (Broad-line) 3.7 76 Office Equipment 0.3 21 Banks (Ex-S&L) 11.3 46 Electric Utilities 3.4 77 Semiconductors 0.3 22 Recreation Products 10.9 47 Shipbuilding 3.4 78 Cosmetics 0.2 23 Food Retailers 10.9 48 Steel 3.4 79 Trucking 0.2 24 Food Products 10.8 49 Investment Services 3.3 80 Land Transportation Equipment 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 51 Broadcasting 2.7 <td>13</td> <td>Home Construction</td> <td>15.4</td> <td>38</td> <td>Fixed-Line Communications</td> <td>4.9</td> <td>69</td> <td>Chemicals (Commodity)</td> <td>0.7</td>	13	Home Construction	15.4	38	Fixed-Line Communications	4.9	69	Chemicals (Commodity)	0.7
16 Gas Utilities 13.5 41 Precious Metals 4.4 72 Heavy Machinery 0.6 17 Pharmaceuticals 12.7 42 Real Estate 4.3 73 Healthcare Providers 0.5 18 Lodging 11.9 43 Household Products Durable 4.2 74 Tires 0.4 19 Consumer Services 11.5 44 Advanced Medical Devices 3.8 75 Consumer Electronics 0.3 20 Insurance (Full Line) 11.5 45 Retailers (Broad-line) 3.7 76 Office Equipment 0.3 21 Banks (Ex-S&L) 11.3 46 Electric Utilities 3.4 77 Semiconductors 0.3 22 Recreation Products 10.9 47 Shipbuilding 3.4 78 Cosmetics 0.2 23 Food Retailers 10.9 48 Steel 3.4 79 Trucking 0.2 24 Food Products 10.8 49 Investment Services 3.3 80 Land Transportation Equipment 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 25 Diversified Technology 2.6 83 Pipelines 0.0<	14	Entertainment	15.3	39	Industrial (Diversified)	4.8	70	Factory Equipment	0.6
17 Pharmaceuticals 12.7 42 Real Estate 4.3 73 Healthcare Providers 0.5 18 Lodging 11.9 43 Household Products Durable 4.2 74 Tires 0.4 19 Consumer Services 11.5 44 Advanced Medical Devices 3.8 75 Consumer Electronics 0.3 20 Insurance (Full Line) 11.5 45 Retailers (Broad-line) 3.7 76 Office Equipment 0.3 21 Banks (Ex-S&L) 11.3 46 Electric Utilities 3.4 77 Semiconductors 0.3 22 Recreation Products 10.9 47 Shipbuilding 3.4 78 Cosmetics 0.2 23 Food Retailers 10.9 48 Steel 3.4 79 Trucking 0.2 24 Food Products 10.8 49 Investment Services 3.3 80 Land Transportation Equipment 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 25 Diversified Technology 2.6 83 Pipelines 0.0 53 Toys 2.5 84 Forest Products 0.0 54 Pollution Control	15	Retailers (Specialty)	14.8	40	Railroads	4.5	71	Computers	0.6
18 Lodging 11.9 43 Household Products Durable 4.2 74 Tires 0.4 19 Consumer Services 11.5 44 Advanced Medical Devices 3.8 75 Consumer Electronics 0.3 20 Insurance (Full Line) 11.5 45 Retailers (Broad-line) 3.7 76 Office Equipment 0.3 21 Banks (Ex-S&L) 11.3 46 Electric Utilities 3.4 77 Semiconductors 0.3 22 Recreation Products 10.9 47 Shipbuilding 3.4 78 Cosmetics 0.2 23 Food Retailers 10.9 48 Steel 3.4 79 Trucking 0.2 24 Food Products 10.8 49 Investment Services 3.3 80 Land Transportation Equipment 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 25 Diversified Technology 2.6 83 Pipelines 0.0 53 Toys 2.5 84 Forest Products 0.0 54 Pollution Control 2.1 85 Air Freight n/a ¹ 55 Auto Parts 2.0 86 Aluminium n/a ¹ <	16	Gas Utilities	13.5	41	Precious Metals	4.4	72	Heavy Machinery	0.6
19 Consumer Services 11.5 44 Advanced Medical Devices 3.8 75 Consumer Electronics 0.3 20 Insurance (Full Line) 11.5 45 Retailers (Broad-line) 3.7 76 Office Equipment 0.3 21 Banks (Ex-S&L) 11.3 46 Electric Utilities 3.4 77 Semiconductors 0.3 22 Recreation Products 10.9 47 Shipbuilding 3.4 78 Cosmetics 0.2 23 Food Retailers 10.9 48 Steel 3.4 79 Trucking 0.2 24 Food Products 10.8 49 Investment Services 3.3 80 Land Transportation Equipment 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 25 Diversified Technology 2.6 83 Pipelines 0.0 51 Broadcasting 2.7 82 Paper Products 0.0 52 Diversified Technology 2.6 83 Pipelines 0.0 54 Pollution Control 2.1 85 Air Freight n/a ¹ 55 Auto Parts 2.0 86 Aluminium n/a ¹ 60 Oil	17	Pharmaceuticals	12.7	42	Real Estate	4.3	73	Healthcare Providers	0.5
20 Insurance (Full Line) 11.5 45 Retailers (Broad-line) 3.7 76 Office Equipment 0.3 21 Banks (Ex-S&L) 11.3 46 Electric Utilities 3.4 77 Semiconductors 0.3 22 Recreation Products 10.9 47 Shipbuilding 3.4 78 Cosmetics 0.2 23 Food Retailers 10.9 48 Steel 3.4 79 Trucking 0.2 24 Food Products 10.8 49 Investment Services 3.3 80 Land Transportation Equipment 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 25 Broadcasting 2.7 82 Paper Products 0.1 52 Diversified Technology 2.6 83 Pipelines 0.0 53 Toys 2.5 84 Forest Products 0.0 54 Pollution Control 2.1 85 Air Freight n/a 55 Auto Parts 2.0 86 Aluminium n/a 6 Oil Drilling (Equipment) 2.0 87 Automobile n/a	18	Lodging	11.9	43	Household Products Durable		74	Tires	0.4
21 Banks (Ex-S&L) 11.3 46 Electric Utilities 3.4 77 Semiconductors 0.3 22 Recreation Products 10.9 47 Shipbuilding 3.4 78 Cosmetics 0.2 23 Food Retailers 10.9 48 Steel 3.4 79 Trucking 0.2 24 Food Products 10.8 49 Investment Services 3.3 80 Land Transportation Equipment 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 51 Broadcasting 2.7 82 Paper Products 0.1 52 Diversified Technology 2.6 83 Pipelines 0.0 53 Toys 2.5 84 Forest Products 0.0 54 Pollution Control 2.1 85 Air Freight n/a ¹ 55 Auto Parts 2.0 86 Aluminium n/a ¹ 56 Oil Drilling (Equipment) 2.0 87 Automobile n/a ¹	19	Consumer Services	11.5	44	Advanced Medical Devices	3.8	75	Consumer Electronics	0.3
22 Recreation Products 10.9 47 Shipbuilding 3.4 78 Cosmetics 0.2 23 Food Retailers 10.9 48 Steel 3.4 79 Trucking 0.2 24 Food Products 10.8 49 Investment Services 3.3 80 Land Transportation Equipment 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 51 Broadcasting 2.7 82 Paper Products 0.1 52 Diversified Technology 2.6 83 Pipelines 0.0 53 Toys 2.5 84 Forest Products 0.0 54 Pollution Control 2.1 85 Air Freight n/a ¹ 55 Auto Parts 2.0 86 Aluminium n/a ¹ 56 Oil Drilling (Equipment) 2.0 87 Automobile n/a ¹	20	Insurance (Full Line)	11.5	45	Retailers (Broad-line)	3.7	76	Office Equipment	0.3
23 Food Retailers 10.9 48 Steel 3.4 79 Trucking 0.2	21	Banks (Ex-S&L)	11.3	46	Electric Utilities	3.4	77	Semiconductors	0.3
24 Food Products 10.8 49 Investment Services 3.3 80 Land Transportation Equipment 0.2 25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 51 Broadcasting 2.7 82 Paper Products 0.1 52 Diversified Technology 2.6 83 Pipelines 0.0 53 Toys 2.5 84 Forest Products 0.0 54 Pollution Control 2.1 85 Air Freight n/a ¹ 55 Auto Parts 2.0 86 Aluminium n/a ¹ 56 Oil Drilling (Equipment) 2.0 87 Automobile n/a ¹	22	Recreation Products	10.9	47	Shipbuilding	3.4	78	Cosmetics	
25 Aerospace 10.2 50 Furnishings & Appliances 3.2 81 Soft Drinks 0.2 51 Broadcasting 2.7 82 Paper Products 0.1 52 Diversified Technology 2.6 83 Pipelines 0.0 53 Toys 2.5 84 Forest Products 0.0 54 Pollution Control 2.1 85 Air Freight n/a¹ 55 Auto Parts 2.0 86 Aluminium n/a¹ 56 Oil Drilling (Equipment) 2.0 87 Automobile n/a¹	23	Food Retailers	10.9	48	Steel	3.4	79	Trucking	0.2
51 Broadcasting 2.7 82 Paper Products 0.1 52 Diversified Technology 2.6 83 Pipelines 0.0 53 Toys 2.5 84 Forest Products 0.0 54 Pollution Control 2.1 85 Air Freight n/a ¹ 55 Auto Parts 2.0 86 Aluminium n/a ¹ 56 Oil Drilling (Equipment) 2.0 87 Automobile n/a ¹	24	Food Products	10.8	49	Investment Services		80	Land Transportation Equipment	0.2
52 Diversified Technology 2.6 83 Pipelines 0.0 53 Toys 2.5 84 Forest Products 0.0 54 Pollution Control 2.1 85 Air Freight n/a¹ 55 Auto Parts 2.0 86 Aluminium n/a¹ 56 Oil Drilling (Equipment) 2.0 87 Automobile n/a¹	25	Aerospace	10.2	50	Furnishings & Appliances	3.2	81		
53 Toys 2.5 84 Forest Products 0.0 54 Pollution Control 2.1 85 Air Freight n/a¹ 55 Auto Parts 2.0 86 Aluminium n/a¹ 56 Oil Drilling (Equipment) 2.0 87 Automobile n/a¹				51	Broadcasting	2.7	82	Paper Products	0.1
54 Pollution Control 2.1 85 Air Freight n/a ¹ 55 Auto Parts 2.0 86 Aluminium n/a ¹ 56 Oil Drilling (Equipment) 2.0 87 Automobile n/a ¹				52	Diversified Technology	2.6	83	Pipelines	0.0
55 Auto Parts 2.0 86 Aluminium n/a ¹ 56 Oil Drilling (Equipment) 2.0 87 Automobile n/a ¹				53	Toys	2.5	84	Forest Products	
56 Oil Drilling (Equipment) 2.0 87 Automobile n/a ¹				54	Pollution Control		85	Air Freight	n/a^1
3 (T T)				55	Auto Parts	2.0	86	Aluminium	n/a ¹
				56	Oil Drilling (Equipment)	2.0	87		
\cdot							88	Nonferrous Metals	n/a^1
89 Savings & Loan n/a ¹							89	Savings & Loan	n/a¹

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¹ No British companies are reported in OSIRIS database for this sector

TABLE 3 Industries Ranked by International Share of Revenues of British Companies, $2003^{2,3}$

Rank	Name of Industry	F/T	Rank	Name of Industry	F/T	Rank	Name of Industry	F/T
1	Precious Metals	100.0	19	Advanced Industrial Equipment	48.9	41	Advertising	23.6
2	Pharmaceuticals	93.4	20	Industrial Services	48.7	42	Diversified Technology	22.7
3	Industrial (Diversified)	82.4	21	Food Products	48.7	43	Transportation Services	22.4
4	Oil Companies (Secondary)	81.7	22	Electric Utilities	48.4	44	Fixed-Line Communications	21.4
5	Mining	75.8	23	Gas Utilities	48.3	45	Broadcasting	20.5
6	Auto Parts	74.5	24	Containers & Packaging	47.7	46	Banks (Ex-S&L)	20.4
7	Oil Drilling (Equipment)	72.4	25	Furnishings & Appliances	47.0	47	Heavy Construction	19.6
8	Tobacco	71.0	26	Household Products Durable	45.4	48	Distillers & Brewers	19.2
9	Biotechnology	69.8	27	Entertainment	44.6	49	Water Utilities	17.8
10	Oil Companies (Major)	67.5	28	Investment Services	42.2	50	Footwear	17.1
11	Electric Components	66.9)	29	Publishing	41.2	51	Consumer Electronics	16.9
12	Chemicals (Commodity)	65.8	30	Toys	39.9	52	Casinos (and Gaming)	14.6
13	Insurance (Property)	65.0	31	Retailers (Drug-based)	39.7	53	Internet Services	14.1
14	Building Materials	59.8	32	Insurance (Full Line)	39.7	54	Cosmetics	13.0
15	Wireless Communications	59.7	33	Recreation Products	39.3	55	Real Estate	11.7
16	Aerospace	55.4	34	Communications Technology	37.8	56	Railroads	9.6
17	Marine Transport	54.7	35	Airlines	35.8	57	Insurance (Life)	9.6
18	Software	51.2	36	Medical Supplies	34.9	58	Retailers (Broad-line)	8.6
			37	Household Products Nondurable	32.0	59	Restaurants	7.7
			38	Consumer Services	30.4	60	Retailers (Apparel)	7.4
			39	Retailers (Specialty)	28.7	61	Food Retailers	6.2
			40	Lodging	25.1	62	Home Construction	4.8

² Based on British companies in the global top 100 companies per industry (the number of British companies ranges from 2 to 13 per industry, totalling 303).

3 27 industries excluded for having no companies or none (or just one) reporting foreign revenues.

TABLE 4
Industries Ranked by International Share of Revenues of British Companies (2001-2003 average, listed companies)⁴

Rank	Name of Industry	Profitability	Rank	Name of Industry	Profitability	Rank	Name of Industry	Profitability
1	Banks (Ex-S&L)	21.83	26	Retailers (Broad- line)	3.94	55	Insurance (Life)	029
2	Precious Metals	20.08	27	Oil Drilling (Equipment)	3.85	56	Tires	-0.47
3	Pharmaceuticals	15.89	28	Retailers (Drug- based)	3.63	67	Insurance (Full Line)	-0.57
4	Mining	14.00	29	Restaurants	3.45	58	Recreation Products	-0.64
5	Oil Companies (Secondary)	13.36	30	Medical Supplies	3.41	59	Healthcare Providers	-0.72
6	Real Estate	11.65	31	Marine Transport	3.15	60	Entertainment	-0.78
7	Household Products Nondurable	9.99	32	Household Products Durable	3.04	61	Factory Equipment	-0.99
8	Diversified Financial	9.28	33	Gas Utilities	2.95	62	Customer Services	-1.03
9	Water Utilities	9.19	34	Insurance (Property)	2.86	63	Cosmetics	-1.88
10	Home Construction	8.86	35	Chemicals (Specialty)	2.85	64	Footwear	-1.97
11	Agriculture	8.18	36	Food Retailers	2.78	65	Electric Components	-2.16
12	Distillers & Brewers	7.96	37	Land Transportation Equipment	2.53	66	Publishing	-3.00
13	Transportation Services	7.52	38	Building Materials	2.34	67	Computers	-3.75
14	Trucking	7.45	39	Retailers (Specialty)	2.15	68	Steel	-4.80
15	Retailers (Apparel)	7.41	40	Shipbuilding	2.00	69	Coal	-4.84
16	Soft Drinks	7.18	41	Advertising	1.93	70	Diversified Technology	-5.49
17	Heavy Machinery	6.51	42	Casinos (and Gaming)	1.84	71	Broadcasting	-6.03
18	Tobacco	6.38	43	Clothing & Fabrics	1.63	72	Paper Products	-7.64
19	Lodging	6.02	44	Heavy Construction	1.60	73	Fixed-Line Communications	-10.21
20	Office Equipment	5.89	45	Railroads	1.58	74	Software	-13.48
21	Advances Medical Devices	5.85	46	Pollution Control	1.44	75	Semiconductors	-25.21
22	Oil Companies (Major)	5.35	47	Consumer Electronics	1.42	76	Communications Technology	-31.41
23	Chemicals (Commodity)	4.92	48	Auto Parts	1.37	77	Industrial (Diversified)	-31.43
24	Food Products	4.89	49	Industrial Services	1.20	78	Forest Products	-39.96
25	Electric Utilities	4.78	50	Airlines	0.67	79	Biotechnology	-10.48
			51	Toys	0.50	80	Wireless Communications	-43.29
			52	Aerospace	0.41	81	Advanced Industrial Equipment	-55.55
			53	Furnishings & Appliances	0.31	82	Investment Services	-64.65
			54	Containers & Packaging	0.27	83	Internet Services	-111.45
						84	Pipelines	-149.73
						85	Air Freight	n/a42
						86	Aluminium	n/a^5
						87	Automobile	n/a^5
						88	Nonferrous Metals	n/a^5
						89	Savings & Loan	n/a ⁵

TABLE 5
Industries Ranked by the World Growth Rate (2001-2003 compound, listed companies

					Growth			Growth
Rank	Name of Industry	Growth Rate	eRanl	Name of Industry	Rate	Ranl	k Name of Industry	Rate
1	Gas Utilities	15.42	31	Water Utilities	3.01	61	Electric Components Containers &	0.45
2	Agriculture	15.10	32	Heavy Construction	2.99	62	Packaging	0.30
3	Insurance (Life)	13.08		Distillers & Brewers	2.95	63	Tires	0.18
4	Biotechnology	12.66		Toys	2.70	64		0.13
5	Internet Services	12.45	35	Shipbuilding	2.69		Lodging	-0.14
6	Marine Transport	11.01		Automobile	2.54		Electric Utilities	-0.23
7	Advertising	9.87	37	Recreation Products	2.44	67	Office Equipment	-0.47
8	Pipelines	9.33	38	Building Materials	2.32	68	Publishing	-0.58
9	Casinos (and Gaming)	9.16		Food Retailers	2.24	69	Aerospace	-0.84
10	Investment Services	8.98	40	Semiconductors	2.16	70	Railroads	-0.93
11	Coal	8.16	41	Nonferrous Metals	2.14	71	Retailers (Broad-line)	-0.95
12	Wireless Communications	7.61	42	Factory Equipment	2.11	72	Trucking	-1.02
13	Consumer Electronics	6.63	43	Footwear	1.93	73	Broadcasting Advanced Industrial	-1.05
14	Chemicals (Specialty)	6.44	44	Restaurants	1.87	74	Equipment	-1.07
15	Precious Metals	6.37	45	Chemicals (Commodity)	1.86	75	Pollution Control Fixed-Line	-1.11
16	Steel	6.34	46	Auto Parts	1.68	76	Communications	-1.61
17	Insurance (Full Line)	5.98	47	Retailers (Specialty)	1.63	77	Food Products	-2.09
18	Home Construction	5.92	48	Consumer Services	1.61	78	Aluminium	-2.09
19	Insurance (Property)	5.56	49	Pharmaceuticals	1.55	79	Tobacco	-2.15
20	Transportation Services	5.45	50	Entertainment	1.53	80	Diversified Technology	-2.29
21	Oil Companies (Secondary)	4.76	51	Diversified Financial	1.36	81	Industrial (Diversified)	-2.56
22	Advanced Medical Devices	4.59	52	Cosmetics	1.27	82	Soft Drinks	-2.90
23	Banks (Ex-S&L)	4.44	53	Computers	1.02	83	Forest Products Household Products	-3.17
24	Oil Companies (Major)	4.39	54	Paper Products	0.96	84	Durable	-4.13
25	Savings & Loan	3.89	55	Heavy Machinery Oil Drilling	0.95	85	Software	-5.10
26	Real Estate	3.71	56	(Equipment) Furnishings &	0.81	86	Clothing & Fabrics Communications	-5.54
27	Land Transportation Equipment	3.69	57	Appliances Household Products	0.73	87	Technology	-6.23
28	Air Freight	3.13	58	Nondurable	0.70	88	Medical Supplies	-6.27
29	Retailers (Drug-based)	3.07		Retailers (Apparel)	0.57	89	Industrial Services	-7.14
30	Mining	3.04		Airlines	0.52			

TABLE 6 Comparison of Dow Jones and S.I.C. Code Industry Classifications

U.K. Rank 2003	Company Name	Dow Jones Global Index	Dow Jones Global Index Description	U.S. S.I.C. core code	S.I.C. core code description
1	BP	OIL	Oil Companies, Major	291	Petroleum refining
			1 , 3		Communications
2	Vodafone Group	CTS	Wireless Communications	489	services
3	Tesco	FDR	Food Retailer & Wholesaler	541	Grocery stores
4	Aviva	INF	Insurance, Full Line	630	Insurance carriers
5	HSBC Holdings	BKS	Banks, Ex-S&L	602	Commercial banks
6	Glaxosmithkline	DRG	Pharmaceuticals	283	Drugs
					Communications
7	BT Group	FTS	Fixed Line Communications	489	services,
,	Royal Bank of Scotland	115	Timed Elife Communications	107	services,
8	Group	BKS	Banks, Ex-S&L	602	Commercial banks
0	Group	DIG	Dunks, Ex See	002	Gas production and
9	Centrica	GAS	Gas Utilities	492	distribution
10	J Sainsbury	FDR	Food Retailer & Wholesaler	541	Grocery stores
11	Prudential	INL	Insurance, Life	631	Life insurance
12	Barclays	BKS	Banks, Ex-S&L	602	Commercial banks
	Royal & Sun Alliance	INF			
13			Insurance, Full Line	630	Insurance carriers
14	Astrazeneca	DRG	Pharmaceuticals	283	Drugs
1.5	Build in mil	TOD	m 1	211	Cigarettes
15	British American Tobacco	TOB	Tobacco	211	manufacturing
			_		Eating and drinking
16	Compass Group	RES	Restaurants	581	places
17	Anglo American	MNG	Mining	124	Coal mining services
					Hardware, and
					plumbing and heating
					equipment and
18	Wolseley	OTS	Retailers, Specialty	507	supplies wholesale
19	Lloyds TSB Group	BKS	Banks, Ex-S&L	602	Commercial banks
					Gas production and
20	National Grid Transco	ELC	Electric Utilities	492	distribution
21	Diageo	DST	Distillers & Brewers	208	Beverages
					Aircraft and parts
22	BAE Systems	ARO	Aerospace	372	manufacturing
23	Kingfisher	OTS	Retailers, Specialty	533	Variety stores
24	HBOS	BKS	Banks, Ex-S&L	602	Commercial banks
25	Hilton Group	CNO	Casinos	701	Hotels and motels
				, , , ,	Drugs, drug
					proprietaries, and
					druggists' sundries
26	Alliance Unichem	RTD	Retailers, Drug-Based	512	wholesale
27	Marks and Spencer Group	RTB	Retailers, Broadline	531	Department stores
<i>21</i>	iviarks and Spencer Group	KID	retuners, broaumic	331	Steel works, blast
					furnaces and rolling
					and finishing
28	Corus Group	STL	Steel	331	manufacturing
20	Corus Group	SIL	Steel	331	Air transportation,
					scheduled and
29	British Airways	AIR	Airlines	451	air courier services
30	GUS	RTB	Retailers, Broadline	596	Nonstore retailers
30	uus	KIB	Retailers, Droadine	390	
2.1	Daniel Mail II al l'occo	COM	Caraman San in a	421	United States postal
31	Royal Mail Holdings	CSV	Consumer Services	431	service
22	Olive 1	D. II	1 7:0	(1)	Mortgage bankers and
32	Old Mutual	INL	Insurance, Life	616	brokers
33	Legal & General Group	INL	Insurance, Life	630	Insurance carriers
					Mortgage bankers and
34	Abbey National	BKS	Banks, Ex-S&L	616	brokers

TABLE 7 Comparison of Foreign/Total and Global Market Share

Industry	F/T%	Global Market Share%	Industry	F/T%	Global Market Share%
Advanced Indus. Equip.	48.9	1.2	Industrial Services	48.7	4.1
Advertising	23.6	19.1	Industrial, Diversified	82.4	4.3
Aerospace	55.4	9.9	Insurance, Full Line	39.7	10.4
Airlines	35.8	6.2	Insurance, Life	9.6	17.7
Auto Parts	74.5	1.8	Insurance, Property	65.0	1.3
Banks, Ex-S&L	20.4	15.6	Internet Services	14.1	1.3
Biotechnology	69.8	1.1	Investment Services	42.2	4.6
Broadcasting	20.5	3.6	Lodging	25.1	13.1
Building Materials	59.8	10.1	Marine Transport	54.7	5.8
Casinos	14.6	40.5	Medical Supplies	34.9	0.7
Chemicals, Commodity	65.8	0.7	Mining	75.8	48.9
Communications Tech.	37.8	1.6	Oil Companies, Major	67.5	32.4
Consumer Electronics	16.9	0.4	Oil Companies, Secondary	81.7	1.3
Consumer Services	30.4	11.8	Oil Drilling, Equipment	72.4	1.9
Containers & Packaging	47.7	8.0	Pharmaceuticals	93.4	13.0
Cosmetics	13.0	0.2	Precious Metals	100.0	3.8
Distillers & Brewers	19.2	21.2	Publishing	41.2	16.7
Diversified Technology	22.7	2.9	Railroads	9.6	4.9
Electric Components	66.9	0.6	Real Estate	11.7	3.1
Electric Utilities	48.4	4.0	Recreation Products	39.3	10.4
Entertainment	44.6	14.7	Restaurants	7.7	18.9
Fixed-Line Communications	21.4	4.9	Retailers, Apparel	7.4	7.3
Food Products	48.7	13.2	Retailers, Broadline	8.6	3.9
Food Retailers	6.2	13.3	Retailers, Drug-based	39.7	6.0
Footwear	17.1	0.6	Retailers, Specialty	28.7	16.7
Furnishings & Appliances	47.0	2.7	Software	51.2	5.9
Gas Utilities	48.3	21.6	Tobacco	71.0	20.2
Heavy Construction	19.6	7.4	Toys	39.9	2.6
Home Construction	4.8	15.5	Transportation Services	22.4	20.0
Household Prod. Durable	45.4	4.5	Water Utilities	17.8	22.1
Household Prod. Nondur.	32.0	5.8	Wireless Communications	59.7	21.3

Correlation: -0.044

Based on British companies in global top 100 companies per industry (the number of British companies ranges from 2 to 13).

TABLE 8
International Presence and Performance of British Industries

Dependent Variable		Return on Sales, UK Companies
Independent Variables	Label	ROSUK
Foreign Sales	F/T	-0.709** (0.025)
Foreign Sales ²	$(F/T)^2$	0.008** (0.015)
Market Share of UK Companies	MSHUK	0.164 (0.470)
Industry World Growth Rate	GRW	-0.787* (0.089)
Industry World Return on Sales	ROSW	1.470*** (0.000)
Dummy Manufacturing	DM	-2.438 (0.611)
Constant Term	С	12.827 (0.134)
R-Squared	\mathbb{R}^2	0.516
Adjusted R-Squared	Adj. R ²	0.464
Number of observations		62

^{*} p-values in parentheses

FIGURE 1 Classification of Industries (2001 – 2003, average)

(product-based industries in bold)		Global Market Share of British Companies				
		0% to 2% "British as Losers"	2% to 10% "British as Challengers"	10% + "British as Winners"		
	Highly International (F/T>50%)	Biotechnology Chemicals, Commodity Electric Components Insurance, Property Oil Companies, Secondary	B1 Auto Parts A1 Building Materials Industrial, Diversified Marine Transport Oil Drilling, Equipment Precious Metals Software	Aerospace Mining Oil Companies, Major Pharmaceuticals Tobacco Wireless Communications		
Extent of Internationalisation of British Companies	C2 Moderately International (50% <f t<25%)<="" td=""><td>Advanced Industrial Equipment Communications Technology Medical Supplies</td><td>Airlines Containers & Packaging Electric Utilities Furnishings & Appliances Household Products Durable Household Products Nondurable Industrial Services Investment Services Retailers, Drug-based Toys</td><td>Consumer Services Entertainment Food Products Gas Utilities Insurance, Full Line Lodging Publishing Recreation Products Retailers, Specialty</td></f>	Advanced Industrial Equipment Communications Technology Medical Supplies	Airlines Containers & Packaging Electric Utilities Furnishings & Appliances Household Products Durable Household Products Nondurable Industrial Services Investment Services Retailers, Drug-based Toys	Consumer Services Entertainment Food Products Gas Utilities Insurance, Full Line Lodging Publishing Recreation Products Retailers, Specialty		
	C3 Low International (F/T <25%)	Broadcasting Consumer Electronics Cosmetics Fixed-Line Communications Footwear Internet Services	B3 Diversified Technology Heavy Construction Railroads Real Estate Retailers, Apparel Retailers, Broad-line	Advertising Banks (exclS&L) Casinos (and Gaming) Distillers & Brewers Food Retailers Home Construction Insurance (Life) Restaurants Transportation Services Water Utilities		

Note: Number of industries in columns is not equal as 27 of the 89 industries were excluded for having no British companies present, or none (or just one) reporting foreign revenues.

FIGURE 2 Classification of Fortune Global 500 British Companies in 2003

Global Market Share of British Companies (2001-2003

			C1	Industry Average for British 0% to 2%	B Industry Average for British 2% to 10%	Industry Average for British 10% +
		Highly International (F/T>50%)	C2		B2	AngloAmerican AstraZeneca BAE Systems BP British American Tobacco Ayodafone GlaxoSmithKline
Extent of Inte	rnationalisation of British	Moderately International (50% <f t<25%)<="" th=""><th>С3</th><th></th><th>National Grid Transco B3 Alliance Unichem BA</th><th>Aviva Centrica Kingfisher Royal & Sun Alliance Royal Mail A3 Wolseley</th></f>	С3		National Grid Transco B3 Alliance Unichem BA	Aviva Centrica Kingfisher Royal & Sun Alliance Royal Mail A3 Wolseley
Companies	(2001-2003 average)	Low International (F/T <25%)		ВТ	Marks & Spencer GUS	Abbey National Barclays Compass Group HBOS HSBC Hilton Group J. Sainsbury Lloyds TSB Legal & General Old Mutual Prudential Royal Bank of Scotland Tesco

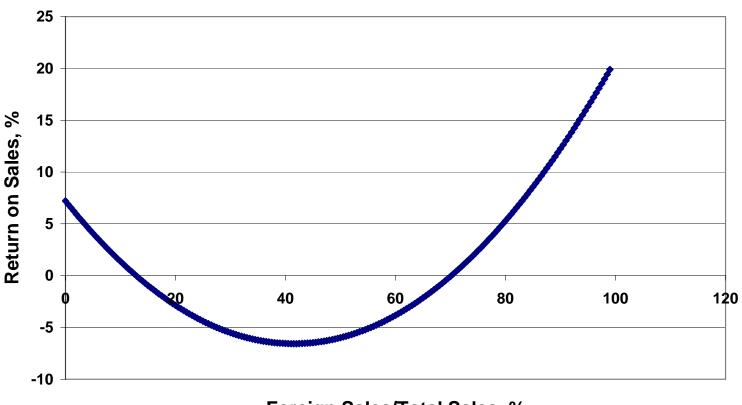
This figure classifies the largest British companies according to the average statistics of the main industries in which they participate. Hence the statistics refer to the industries and not the individual companies.

FIGURE 3 Classification of Industries (2001 – 2003, average) with Profitability Highlighted

		Glo	bal Market Share of British Com	panies
		0% to 2% (British as Losers"	2% to 10% B1"British as Challengers"	10% + "British as Winners"
	Highly International (F/T>50%)	Biotechnology Chemicals, Commodity Electric Components Insurance, Property Oil Companies, Secondary	Auto Parts Building Materials Industrial, Diversified Marine Transport Oil Drilling, Equipment Precious Metals Software B2	Aerospace Mining Oil Companies, Major Pharmaceuticals Tobacco Wireless Communications A2
Extent of Internationalisation of British Companies	Moderately International (50% <f t<25%)<="" td=""><td>Advanced Industrial Equipment Communications Technology Medical Supplies</td><td>Airlines Containers & Packaging Electric Utilities Furnishings & Appliances Household Products Durable Household Products Nondurable Industrial Services Investment Services Retailers, Drug-based Toys</td><td>Consumer Services Entertainment Food Products Gas Utilities Insurance, Full Line Lodging Publishing Recreation Products Retailers, Specialty</td></f>	Advanced Industrial Equipment Communications Technology Medical Supplies	Airlines Containers & Packaging Electric Utilities Furnishings & Appliances Household Products Durable Household Products Nondurable Industrial Services Investment Services Retailers, Drug-based Toys	Consumer Services Entertainment Food Products Gas Utilities Insurance, Full Line Lodging Publishing Recreation Products Retailers, Specialty
	Low International (F/T <25%)	C3 Broadcasting Consumer Electronics Cosmetics Fixed-Line Communications Footwear Internet Services	Diversified Technology Heavy Construction Railroads Real Estate Retailers, Broad-line Retailers, Apparel	Advertising Banks (exclS&L) Casinos (and Gaming) Distillers & Brewers Food Retailers Home Construction Insurance (Life) Restaurants Transportation Services Water Utilities

Note: Larger font indicates top third in profitability; bold smaller font indicates middle third; and plain smaller font indicates bottom third.

FIGURE 4
Return on Sales and Degree of Internationalisation



Foreign Sales/Total Sales, %

Source: Curve estimated from regression analysis. See Research Methodology

FIGURE 5 Classification of Industries (2001 – 2003, average) with Growth Highlighted

		Globa	l Market Share of British Companio	es —
		0% to 2% C1 "British as Losers"	2% to 10% B1 "British as Challengers"	10% + A1 "British as Winners"
	Highly International (F/T>50%)	Biotechnology Chemicals, Commodity Electric Components Insurance, Property Oil Companies, Secondary C2	Auto Parts Building Materials Industrial, Diversified Marine Transport Oil Drilling, Equipment Precious Metals B2 Software	Aerospace Mining Oil Companies, Major Pharmaceuticals Tobacco Wireless Communications
Extent of Internationalisation of British Companies	Moderately International (50% <f t<25%)<="" td=""><td>Advanced Industrial Equipment Communications Technology Medical Supplies</td><td>Airlines Containers & Packaging Electric Utilities Furnishings & Appliances Household Products Durable Household Products Nondurable Industrial Services Investment Services Retailers, Drug-based B3 Toys</td><td>Consumer Services Entertainment Food Products Gas Utilities Insurance, Full Line Lodging Publishing Recreation Products Retailers, Specialty A3</td></f>	Advanced Industrial Equipment Communications Technology Medical Supplies	Airlines Containers & Packaging Electric Utilities Furnishings & Appliances Household Products Durable Household Products Nondurable Industrial Services Investment Services Retailers, Drug-based B3 Toys	Consumer Services Entertainment Food Products Gas Utilities Insurance, Full Line Lodging Publishing Recreation Products Retailers, Specialty A3
	Low International (F/T <25%)	Broadcasting Consumer Electronics Cosmetics Fixed-Line Communications Footwear Internet Services	Diversified Technology Heavy Construction Railroads Real Estate Retailers, Apparel Retailers, Broad-line	Advertising Banks (exclS&L) Casinos (and Gaming) Distillers & Brewers Food Retailers Home Construction Insurance (Life) Restaurants Transportation Services Water Utilities

Note: Larger font indicates top third in growth rate; bold smaller font indicates middle third; and plain smaller font indicates bottom third.

NOTES

¹ S. Tallman and J. Li., Effects of international diversity and product diversity on the performance of multinational firms, *Academy of Management Journal* **39**(1), 179-97 (1996); M. Hitt, R. Hoskisson, and H. Kim, International diversification: Effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal* **40**(4), 767-99 (1997); Y. Luo, Industry attractiveness, firm competence, and international investment performance in a transitional economy. *Bulletin of Economic Research* **50**(1), 73-83, (1998).

² S. Lall and S. Siddharthan, The monopolistic advantages of multinationals: Lessons from foreign investment in the U.S., *Economic Journal* **92** (September), 668-83 (1982); W. Kim and E. Lynn, Foreign direct investment theories, entry barriers, and reverse investments in U.S. manufacturing industries, Journal of International Business Studies 19(2), 53-66 (1987); M. Porter, The Competitive Advantage of Nations, The Free Press, New York (1990); W. Shan and W. Hamilton, Country-specific advantage and international cooperation, Strategic Management *Journal* **12** (September), 419-32 (1991); F. Schroath, M. Hu and H. Chen, Country-of-origin effects of foreign investments in the People's Republic of China, *Journal of International Business Studies*, **24**(2), 277-90 (1993); S. Vuori, Technology sources and competitiveness: An analysis of Finnish industries, *Sarja B* 138 Series. Helsinki: Research Institute of the Finnish Economy, Paper, ISBN 951-628-268-7, (1997).

³ We use the term "competitiveness" in the strategist's sense of advantage over competitors, rather than in the economist's sense of productive efficiency.

⁴ The percentage of international revenues is a standard measure in international business research. (e.g., from A. Rugman, *International Diversification and the Multinational Enterprise*, D.C. Heath: Lexington, Mass. (1979); to A. Rugman, *The Regional Multinationals*. Cambridge University Press, Cambridge, U.K (2005).

⁵ e.g., M. E. Porter, *The Competitive Advantage of Nations*, The Free Press, New York (1990).

⁶ G. Day, Fein A. and G. Ruppersberger, Shakeouts in digital markets: Lessons from B2B exchanges, *California Management Review*, **45**(2), 131–150 (2003); S. Bond and J. Cummins, The stock market and investment in the new economy: Some tangible facts and intangible fictions, *Brookings Papers on Economic Activity*, **1**, 61–108 (2000).

⁷ Subsequent to this study Hilton Group plc sold its hotels division, Hilton International, to U.S. based Hilton Hotels Corporation. On this date, 23rd February 2006, Hilton Group plc changed its name to Ladbrokes plc.

⁸ As two or three companies seemed a low number for characterising an industry, we checked what would happen to the industry F/T if we used a minimum of four companies per industry, by adding British companies beyond the global top 100 in an industry. Of the 15 industries affected, only two resulted in a shift in category of F/T: Fixed Line Communications would have moved from Low International to Moderately International, and Wireless Communications would have moved from Highly International to Moderately International. As these changes are few and minor, we decide to stay with the rule of using only those British companies in the top 100 in their industry. In general, as we looked beyond each industry's top

100 to smaller British companies, the company's F/T ratio declined. Hence, any bias we have, by using only the largest British companies, is to over-estimate the extent of F/T.

⁹ These excluded industries are the four with no British companies at all (Aluminium, Automobile, Non-Ferrous Metals and Savings & Loan) and the 23 with no or just one firm reporting foreign revenues (Advanced Medical Devices, Agriculture, Chemicals, Specialty, Clothing & Fabrics, Coal, Computers, Diversified Financial, Factory Equipment, Forest Products, Healthcare Providers, Heavy Machinery, Internet Services, Land Transportation Equipment, Office Equipment, Paper Products, Pipelines, Pollution Control, Semiconductors, Shipbuilding, Soft Drinks, Steel, Tires, and Trucking). General knowledge about these industries suggests that they tend to be low in internationalisation, which is probably why firms in them do not separately report their international revenues.

¹⁰ See, for example Michael Porter's list of the U.K. industries with highest share of world exports. His top five industries in 1985 were whiskey (77.7%), aircraft reaction engines (56.5%), pig or cast iron metal straps (44.0%), engraving, antiques (39.8%), and sorted, rough, simply worked diamonds (37.1%).

¹¹ J. Stopford and L. Turner, *Britain and the Multinationals*, Chichester, Wiley (1985).

¹² For example, Mining, Oil Companies (Major) and Oil Companies (Secondary) might be excluded as extractive industries rather than manufacturing ones.

¹³ See, for example, C. Lovelock and G. Yip, Developing global strategies for service businesses, *California Management Review*, **37**(3), 64-86 (1996).

¹⁴ R. Calori, Atamer, T. and P. Nunes, International Competition on Mixed Industries, *Long Range Planning*, **33** (3), 349-376 (2000).

¹⁵ McKinsey & Company examined eight industry sectors, finding the following theoretical maximum percentages of their service (excluding manufacturing) jobs that could be done offshore: packaged software 49%, IT services 44%, retail banking 25%, insurance 19%, pharmaceutical 13%, automotive 11%, healthcare 8%, and retail 3%. See *The Emerging Global Labor Market*, McKinsey Global Institute, 2005.

Scholars who find a U-shaped relationship between multinationality and performance include: J.W. Lu and P.W. Beamish, The internationalisation and performance of SMEs, *Strategic Management Journal*, **22**, 565-586 (2001); W. Ruigrok and H. Wagner, Internationalisation and performance: An organisational learning perspective, *Management International Review*, **43**(1), 63-83 (2003). It should be noted that other scholars have found an inverted U relationship and, more recently, a horizontal S curve. For a summary of this work see F.J. Contractor, S.K. Kundu and C.C. Hsu, A three-stage theory of international expansion: the link between multinationality and performance in the service sector, *Journal of International Business Studies*, **34**(1), 5-18 (2003). In a previous study of UK firms a positive linear relationship was found between multinationality and performance, see R.M. Grant, Multinationality and performance among British manufacturing companies, *Journal of International Business Studies*, **18**(3), 79-89 (1987)

- ²¹ Some research discusses emergent, directed, facilitated and transformational strategic renewal journeys and how these ways differ in their capacity to cope with the changing environment. See H. Volberda, C. Baden-Fuller, and F. Bosch. Mastering Strategic Renewal, *Long Range Planning*, **34** (2), 159-178 (2001).
- Among other important factors, success of organisation change is believed to depend upon a change in cultural values. However, recent research shows that acceptance of change does not require a change in values, but rather a change in the way that values were applied. See Y. Carlisle and C. Baden-Fuller, Re-applying Beliefs: An Analysis of Change in the Oil Industry, *Organisation Studies*, **25** (6), 987-1014 (2004). For the latest review on strategic transformation, see Chapter 2, "Transforming Strategy" in Rick Delbridge, Lynda Gratton and Gerry Johnson, et al., *The Exceptional Manager*, Oxford University Press, 2006.
- ²³ S. Bhojraj, C. Lee and D. Oler, What's My Line? A Comparison of Industry Classification Schemes for Capital Market Research, *Cornell University, working paper*, 2003, May; K. Kahle and R. Walkling, The impact of industry classifications on financial research, *Journal of Financial and Quantitative Analysis*, **31**(3), 309-35 (1996).
- See, for example, R. M. Grant, Multinationality and performance among British manufacturing companies, *Journal of International Business Studies*, **18**(3), 79-89 (1987); M. Gerringer, P. Beamish, and R. DaCosta, Diversification strategy and internationalization: implications for MNE performance, *Strategic Management Journal*, **10**(2) (1989); M.A. Hitt, R.E. Hoskisson, and H. Kim H, International diversification: effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal*, **40**(4): 767-95 (1997); S. Tallman and J.T. Li, Effects of international diversity and product diversity on the performance of multinational firms. *Academy of Management Journal*. **39**: 179-196 (1996).
- See, for example, D. Datta, N. Rajagopalan, and A. Rasheed. Diversification and performance: critical review and future directions. *Journal of Management Studies*, **28**(5): 529-59 (1991); S. Tallman and J.T. Li, Effects of international diversity and product diversity on the performance of multinational firms. *Academy of Management Journal*. **39**: 179-196 (1996); J. Stimpert and I. Duhaime. Seeing the big picture: The influence of industry, diversification, and business strategy on performance. *Academy of Management Journal*. **40** (3): 560-584 (1997).

¹⁷ A recent study shows that most companies in an industry perform at the level of the industry average. Only exceptions at the extremes achieve performance that is significantly different. See G. Hawawini, V. Subramanian and P. Verdin, Is performance driven by industry-or firm-specific factors? A new look at the evidence, *Strategic Management Journal*, **24** (1), 1-16 (2003).

¹⁸ For an extensive list of factors favouring the globalization of industries, see G. Yip, *Total Global Strategy*, Prentice Hall (1992), and C. Lovelock and G. Yip, Developing global strategies for service businesses, California Management Review, **37**(3), 64-86 (1996).

¹⁹ The PIMS Program pioneered the concept of "par" performance in strategy. See R. Buzzell and B. Gale, *The PIMS Principles*, New York: The Free Press (1987).

²⁰ See any good strategy textbook, such as R. M. Grant, *Contemporary Strategy Analysis*, 5th edition, Oxford: Blackwell (2005).

As shown in works by M.A. Hitt, R.E. Hoskisson, and H. Kim H, International diversification: effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal*, **40**(4): 767-95 (1997); S. Tallman and J.T. Li, Effects of international diversity and product diversity on the performance of multinational firms. *Academy of Management Journal*. **39**: 179-196 (1996); H. Barkema and F. Vermeulen. International expansion through start-up or acquisition: A learning perspective. *Academy of Management Journal*, **41**: 7-26 (1998).

²⁷ H. Haveman. Organizational size and change: diversification in the savings and loan industry after deregulation. *Administrative Science Quarterly*, **38**(1): 20-51 (1993); L. Franko. Unrelated diversification and global corporate performance. In International Strategic Management, Negandhi, A.R. and A. Savara (eds). D.C. Heath-Lexington Books, Lexington, MA (1989).

²⁸ M. Hannan M. and J. Freeman The population ecology of organizations. *American Journal of Sociology* **82** (5): 929-964 (1977).

²⁹ See, for example, L. Franko. Global corporate competition: Who's winning, who's losing and the R&D factor as one reason why. *Strategic Management Journal*, **10**(5): 449-475 (1989).; Y. Luo. Industry attractiveness, firm competence, and international investment performance in a transitional economy. *Bulletin of Economic Research* **50**(1): 73-95 (1998); R. Morck and B. Yeung Internalization: An event study test. *Journal of International Economics* **33**: 41-56 (1992); J.W. Lu and P.W. Beamish, The internationalisation and performance of SMEs, *Strategic Management Journal*, **22**, 565-586 (2001); R. Buhner. Assessing international diversification of West German corporations. *Strategic Management Journal* **8**(1): 25-37 (1987); T. Burgman. An empirical examination of multinational corporate capital structure. *Journal of International Business Studies* 27(3): 553-570 (1996).

³⁰ As shown in works by S. Tallman and J.T. Li, Effects of international diversity and product diversity on the performance of multinational firms. *Academy of Management Journal.* **39**: 179-196 (1996); M.A. Hitt, R.E. Hoskisson, and H. Kim H, International diversification: effects on innovation and firm performance in product-diversified firms. *Academy of Management Journal*, **40**(4): 767-95 (1997); and H. Barkema and F. Vermeulen. International expansion through start-up or acquisition: A learning perspective. *Academy of Management Journal*, **41**: 7-26 (1998).