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**DIFFERENCES IN THE REPORTED
PERFORMANCES OF FOREIGN-
CONTROLLED AND DOMESTICALLY-
CONTROLLED FIRMS:
SOME UK EVIDENCE**

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Abstract

This study provides empirical evidence on the relative performances of foreign-controlled domestic companies (FCDCs) operating in the UK as compared to those of UK-controlled domestic companies (UKDCs). One hundred and fifty (150) FCDCs, selected from the *Times 1000* (1995), were matched with 150 UKDCs on the bases of size and industry. The reported performance data of the two sub-samples for five years were extracted from the FT Extel secured database. Statistical tests were then carried out, on five-year average and annual bases, to establish whether there were differences in the performances of the two groups of firms. Results revealed statistically significant differences in the reported performances of FCDCs and UKDCs operating in the UK over the five-year period. Foreign-controlled firms significantly under-performed UKDCs of comparable size and industry. The lower profitability figures reported by these firms were partly as a result of higher trading expenses. The study also found differences in the year-to-year magnitude of under-performance by FCDCs. While findings in this study corroborate those of earlier US-based studies, the management and owners of FCDCs' parents should be interested in the apparent under-performance of their UK-based assets. It is possible, however, that the figures reported do not reflect real asset performance. In which case, the UK tax authorities may want to take a closer look at FCDCs' reported performances to establish whether they are the outcome of income-shifting practices. Future studies could examine how the performances of the managers of these foreign-located assets are evaluated and rewarded and explore other possible explanatory factors for their reported under-performance.

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1. Introduction

The reported performances of foreign-controlled domestic companies (FCDCs) relative to those of indigenously-controlled domestic firms is a subject of immense interest, not least to tax authorities in various countries. While these interests have resulted in a considerable number of research studies in countries such as the US, little has so far been reported on the performances of FCDCs in other countries. This paper aims to provide empirical evidence on the relative profitability of FCDCs operating in the UK. Their reported performances are compared with those of UK-controlled domestic companies (UKDCs), matched by size and industry over a five-year period. Results indicate statistically significant differences in the profitability of the two samples of firms. FCDCs significantly and consistently underperformed UKDCs over the five years covered by this study. The magnitude of differences in performance however differed from one year to the other.

The rest of this paper is organised as follows. The relevant literature is discussed in the next section, followed by a presentation of justification for the current study. The research hypothesis is then stated. The penultimate section contains the research design, including samples, data collection and analysis. Finally, discussions of research results and conclusions, including possible limitations of the study and areas for further study, are presented.

2. Related Literature

Some theories of foreign direct investment (Buckley and Casson, 1976; 1991; Rugman, 1980; and Rugman et al, 1985; for example) suggest that firms locate abroad because of their ability to utilise certain advantages to obtain greater returns than local firms. On comparing the performances of FCDCs to those of locally owned firms therefore, it is logical to expect them to report greater profit returns than their domestic counterparts. Even where substantial dissipation of these advantages have taken place, an equal level of performance with domestic firms is still expected to justify the parent multinational enterprise's (MNE's) continuing investment in the location. Available empirical evidence, however, does not appear to support this position. Using various accounting measures of performance, a number of studies (most of which are US-based) have compared the performances of FCDCs to those of domestically owned firms.

Wheeler (1988) examined the rates of return on the assets of US-based FCDCs and compared them to those of US-controlled firms. He found that US-owned firms' rate of return were six times larger than those of foreign-owned firms. In a statement presented before the US House of Representative's Ways and Means Oversight Subcommittee on Tax underpayments by Foreign-owned US Subsidiaries, Wheeler (1990) reported illogical comparative trends in the asset base, profitability and dividend distributions of foreign-owned US subsidiaries between 1983 and 1987. He identified international transfer pricing (ITP) manipulations as a possible explanation for these differences. He however failed to undertake formal statistical analysis to isolate the significance of his results.

Kim and Lyn (1990) went a step further than Wheeler in this regard. As part of a broad-ranging study of the monopolistic power, performance, growth opportunities, risk, efficiency, etc. of foreign MNEs in the US, they examined the profitability of foreign-owned firms in comparison to those of US-owned ones. Using five different ratios (earnings per share, return on equity before tax, return on equity after tax, gross profit margin and operating profit margin) they compared the average performances of a group of 54 foreign firms with an unmatched group of 54 US firms. Kim and Lyn's analysis of the financial data over a five-year period seems to confirm under-performance by foreign-owned firms as trends rather than one-off occurrences. They failed, however, to disaggregate and examine their data on an annual basis to establish whether there were year-to-year variations in performances. In addition, the statistical power of the study is limited by the lack of any form of matching (by industry, asset, turnover, or any other measure) of the two samples.

This particular limitation was addressed in Crain and Stitts' (1994) study. As part of a larger survey of international transfer pricing (ITP) practices, they investigated the differences in the gross profit margins (GPM) of foreign- and US-controlled firms, matching their two samples on the bases of SIC codes and sales. They found that the mean GPM of the two groups were significantly different. Foreign-controlled firms reported significantly lower GPMs than US-controlled firms. Crain and Stitts' study revealed under-performance by FCDCs even when size and industry are controlled for.

It is usually presumed that the lower profit performance of FCDCs is a manifestation of income-shifting strategies for tax-minimisation purposes. A number of studies carried out in the US have reported links between the low profitability of FCDCs, tax rates and income-shifting, with ITP being frequently cited as the main mechanism for achieving this objective.

Grubert et al (1993) compared the taxes paid by FCDCs operating in the US to those of USDCs. They found significant differences in the taxable income (as a percentage of total assets and sales) of the two groups. The income of FCDCs were substantially lower than those of US-owned domestic companies. After accounting for a number of possible extraneous factors such as age and industrial classification of firms, they found that a significant proportion of the differences remained unexplained. They suggested income shifting, through ITP, as a possible explanation for most of these differences¹. Hines and Rice (1990), Grubert and Mutti (1991), Harris et al (1993) and Jacob (1996) have all reported evidence suggesting income-shifting behaviour based on inter-jurisdictional tax rate differentials².

Hardly any evidence exists on the comparative performances of UK-based FCDCs. A few exceptions are Nitsch et al (1995), Munday and Peel (1997) and Oyelere and Emmanuel (1998). Nitsch et al reported on the characteristics and performances of Japanese FDI located in seven Western European countries including the UK. They found statistically significant differences in inter-country performances, industry, mode of entry and reasons for making investments.

Oyelere and Emmanuel conducted a study into the performance and post-performance distributions of UK-based FCDCs. Matching them with UK-owned firms on the basis of total assets, they found differences between the profitability and dividend payouts of the two groups. It was possible, from their logistic regression to predict the control location (that is, either foreign- or UK-controlled) of sampled firms. A firm in their sample was more likely to be foreign-controlled than UK-controlled if it reported a combination of lower profitability and higher dividend distributions. Oyelere and Emmanuel's study was however limited by the low number of sampled firms (72 in all) and the limited period (two years) for which data was collected.

Munday and Peel undertook a wide-ranging comparison of the performances of Japanese owned manufacturing firms operating in the UK with those of their UK-owned counterparts. They found that Japanese-owned firms significantly under-performed UK-owned ones with

¹ Gideon (1990), Mackie-Mason (1993) and Crain & Stitts, while generally recognising this explanation, are cautious about whether ITP is the primary reason. "Other factors, such as start-up expenses, acquisition indebtedness, the age of the investment, the experience and skills of management, the product being produced, and the nature of the manufacturing process" (Crain and Stitts, p. 97) could also be partly responsible for these performance differentials.

² A more comprehensive review of the literature in this area is provided in Oyelere (1998).

respect to profitability, asset efficiency, stock efficiency and credit risk, and suggested that Japanese firms may be engaging in ITP strategies which have the effect of minimising liability to UK corporate tax. Buckley and Hughes (1997) provide an intuitively appealing explanation of Japanese companies' behaviour, which relates to the resale price method of ITP and target costing being preferred. Munday and Peel is limited in two respects: (1) it applies to a one-year period only; their results could therefore be a one-off event rather than sustained under-performance by Japanese firms; and (2) only Japanese-owned firms' performances, rather than those of foreign-owned firms of varied national backgrounds, were examined. The authors suggested that future studies should consider eliminating these limitations.

3. Justification for Current Study

The lack of a substantial body of literature on the relative profitability of UK-based foreign operations is surprising. The UK's economic environment is one of the most open and deregulated in the world. It attracted overseas investments totaling £364,756 million from 1987 to 1997 inclusive (Office of National Statistics 1998). Some of the country's industries, automobile production for example, are exclusively dominated by FCDCs. The magnitude and prevalence of this form of investment activity therefore justifies investigation of the relative performances of FCDCs as compared to locally-controlled firms. Extensions to current knowledge in the area will also be provided by assuaging for the limitations identified in previous studies as reviewed above. In this regard, the following procedures were incorporated in the research design of the current study:

1. Controlling for both size and industry by matching sampled FCDCs and UKDCs when undertaking formal statistical testing;
2. Using performance data extending beyond a two-year period; and examining the data, not only on the basis of the average for the period covered, but also on individual year bases to capture both trend and annual variations.

4. Research Hypothesis

The objective of this study is to compare empirically the performances of FCDCs operating in the UK with those of their UK-owned counterparts. The main research queries are: Do UK-owned MNEs substantially out-perform their foreign-owned counterparts? Are the reported profits of large UK-owned firms significantly and consistently greater than those of foreign-owned companies? To answer these questions, a null hypothesis is stated as follows:

H₀: There are no significant differences between the performance of foreign-owned firms operating in the UK and those of their UK-owned counterparts.

5. Research Design

5.1 Sample Selection

The samples for this study were selected from the 1995 edition of the *Times 1000* which lists the top 1000 companies operating in the UK. Dun and Bradstreet's *Who Owns Whom* (1995) was used to stratify the population into FCDCs³ and UKDCs. One hundred and fifty (150) FCDCs were randomly selected and carefully matched with an equal number of UKDCs on the basis of industry and size (capital employed). A breakdown of the sample according to industrial classification and size is presented in Table 1.

³ For the purpose of this study, an FCDC is defined as a firm, 51% or more of whose ownership resides outside the UK.

Table 1
Average Size of Sample Companies by Industry
*

TIMES 1000 INDUSTRY		FCDCS	UKDCS	ALL	% OF	
					Sample	Population (industry)
Aerospace	Mean N	162,365,000 2	194,799,500 2	178,582,250 4	1.3	40
Agriculture	Mean N	8,561,000 2	8,477,500 2	8,519,250 4	1.3	20
Building materials & services	Mean N	143,273,750 4	142,924,750 4	143,099,250 8	2.7	23
Business services	Mean N	14,161,750 4	12,657,250 4	13,409,500 8	2.7	44
Chemicals	Mean N	102,174,571 7	102,468,857 7	102,321,714 14	4.7	48
Commodities trading	Mean N	72,707,000 2	70,417,500 2	71,562,250 4	1.3	27
Contracting, construction	Mean N	78,316,250 4	78,297,500 4	78,306,875 8	2.7	16
Electricals	Mean N	125,809,166 6	125,183,166 6	125,496,166 12	4.0	67
Electronics	Mean N	112,311,823 17	113,140,764 17	112,726,294 34	11.3	51
Engineering - general	Mean N	75,944,200 10	76,361,300 10	76,152,750 20	6.7	27
Food manufacturing	Mean N	113,720,545 11	113,611,909 11	113,666,227 22	7.3	42
Food wholesaling & retailing	Mean N	63,932,500 2	64,444,000 2	64,188,250 4	1.3	10
Health & household	Mean N	159,300,363 11	159,363,181 11	159,331,772 22	7.3	47
Media	Mean N	179,483,285 7	179,131,857 7	179,307,571 14	4.7	29
Metal & metal forming	Mean N	125,597,333 9	128,678,111 9	127,137,722 18	6.0	75
Miscellaneous	Mean N	91,884,928 14	95,608,500 14	93,746,714 28	9.3	45
Oil, gas & nuclear fuels	Mean N	187,301,285 7	187,408,285 7	187,354,785 14	4.7	38
Other industrial materials & products	Mean N	84,962,666 6	85,186,000 6	85,074,333 12	4.0	46
Packaging, paper & printing	Mean N	75,438,777 9	75,713,222 9	75,576,000 18	6.0	53
Transport - manufacture & distribution	Mean N	164,801,300 10	164,853,600 10	164,827,450 20	6.7	32
Transport services	Mean N	147,421,333 6	147,352,333 6	147,386,833 12	4.0	25
ALL	Mean N	116,038,073 150	117,049,973 150	116,544,023 300	100.0	n/a

* Size was measured by capital employed (1993).

Table 1 reveals a near-exact size and industrial classification matching of the two groups of companies in this study. Intra-industrial size matching is a particularly important methodological extension for investigations in this area. The *Oil, gas and nuclear fuels* industry had the highest mean capital employed of about £187 million. This is followed by the *Media and Transport (manufacturing and distribution)* industries with about £179 and £165 millions mean capital employed, respectively. The lowest average capital employed of about £8.5 million was in the *Agriculture* industry.

In terms of inter-industrial spread of the sample, the *Electricals* industry, was the highest (about 11%) represented of the twenty-one *Times 1000* industrial classes in the sample. The *Aerospace, Agriculture, Commodities trading and Food wholesaling and retailing* industries, with four companies (about 1%) each, had the least representation.

5.2 Data Collection

Data on the financial performances of sampled firms were extracted from their annual reports and accounts as provided on the FT Extel database. The database provides financial information and news on up to 11,000 companies worldwide including 3,900 UK quoted and major unquoted companies. Data were downloaded on annual basis for the years 1990 to 1994 and on five-year average bases. Downloaded performance data are coded and defined in Table 2 (Panel A). The performance data were also normalised into a number of performance ratios - trading expenses to sales (TEXS), return on capital employed (ROCE), return on employees (ROEM) and return on turnover (ROTO). These are coded and defined in Panel B of Table 2.

Table 2
Definition of Research Variables and Ratios

Panel A: Performance variables			
VARIABLES	RESEARCH CODE	EXTEL CODE	DEFINITION¹
Trading expenses	TDEX	te	The total trading expenses of the company. ²
Profit before interest and tax	PBIT	pit	Total profit for the year before tax and net interest receivable/payable but after income from associated companies and amounts written off investments and exceptional items.
Profit before tax	PBTX	pbt	Total profit for the year before tax but after income from associated companies and other investments, interest receivable, interest payable, amounts written off investments and exceptional items.
Profit after tax	PATX	pat	Total profit for the year after tax but before after-tax items, extraordinary items and dividends.
Net income	NINC	ni	Total income for the year after tax, extraordinary and other after-tax items, but before any dividend distribution is made.
Panel B: Performance ratios³			
RATIOS	RESEARCH CODE	DEFINITION	
Trading expenses to sales	TEXS	$\frac{\text{Trading expenses} \times 100}{\text{Sales (to 3}^{\text{rd}} \text{ parties only)}}$	
Return on capital employed	ROCE	$\frac{\text{Profit before interest and tax} \times 100}{\text{Capital employed (full time equivalent)}}$	
Return on employees	ROEM	$\frac{\text{Profit before tax}}{\text{No. of employees}}$	
Return on turnover	ROTO	$\frac{\text{Net income} \times 100}{\text{Sales}}$	

1. Unless otherwise stated, definition is that used by EXTEL.

2. The constituents of trading expenses were presented in two different ways by different companies, either by function or by nature.

3. Ratios are researcher-defined.

For measuring the performances of sampled companies, this study depended exclusively on financial accounting figures, as reported in the annual reports and accounts of sampled firms, as a measure of performance. Arguably, accounting figures alone may not capture all the economic value-based performance of a firm within a certain period (Oyelere 1998). Other economics-based models that measure differences in a firm's value at the beginning and end of a period, for example, may perhaps provide a more accurate measure of performance. Nonetheless, accounting figures, as contained in the audited financial statement of companies, remain a globally-recognised medium of communication in the business world. The mere announcement of performance figures from these statements have considerable effect on value in the city and various organisational stakeholders input the results into their decision-making process. From an accounting research point of view therefore, these figures are considered sufficiently useful for this study.

Despite the meticulous attempt at matching of FCDCs and UKDCs in this study, the level of comparability of data collected could still be limited by the fact that FCDCs' activities and practices are, to some extent, subject to controls by their parents as well as accounting and other rules and regulations in the parents' home countries. However, these firms, insofar as they operate within the UK like the UKDCs in the sample, are expected to meet UK legal and accounting regulations. This assumption, as made in previous studies, provide a valid premise for the comparisons undertaken here.

5.3 Data Analysis

The research hypothesis was set up to investigate the *a priori* notion that, *ceteris paribus*, the reported financial performances of FCDCs do not differ substantially from those of UKDCs. As reported above, data on both groups' performances (PBIT, NINC, etc.) have been collected on an annual and average bases over five years. The *Wilcoxon matched-pairs signed-ranks* test was used to test the hypothesis of equal mean performances by members of the two samples of companies. The test procedure permits the comparison of the means of a variable for two groups of observations on a matched one-to-one basis. It is one of the most powerful nonparametric statistical tests available (Siegel and Castellan 1988) because it not only uses the direction of the differences between pairs of observations, but also takes the magnitude of the differences into consideration (Norusis 1993). The test was first applied to the five-year average data collected on the two samples. Results of these are presented in Table 3. Then, the test procedure was applied to the data collected on annual basis. The results of the tests for each of the five years are presented in Table 4.

Table 3**Wilcoxon matched-pairs signed-ranks test of the equality of mean performances of FCDCs and UKDCs (5-year average)**

Research Variable	Mean rank		FoDC > UKDC	FoDC < UKDC	Ties	Z	Significance (2-tailed)
	FoDCs	UKDCs					
TDEX	70.41	62.22	69	63	0	1.0652	.2868
PBIT	62.33	69.48	55	77	0	-2.1827	.0291 ^b
PBTX	56.00	73.37	54	78	0	-3.0299	.0024 ^a
PATX	60.18	70.48	51	81	0	-2.9981	.0027 ^a
NINC	61.63	69.57	51	81	0	-2.83	.0047 ^a
TEXS	72.30	57.58	80	52	0	-3.1684	.0015 ^a
ROCE	63.82	68.19	51	81	0	-2.5756	.0100 ^a
ROEM	67.42	65.80	57	75	0	-1.2401	.2149
ROTO	60.63	70.20	51	81	0	-2.9458	.0032 ^a

N, the number of matched pairs, is 132 for all performance variables.

a and b indicate significance at 1% and 5% levels respectively.

TDEX = Trading expenses; PBIT = Profit before interest and tax; PBTX = Profit before tax; PATX = Profit after tax; NINC = Net income; TEXS = Trading expenses to sales; ROCE = Return on capital employed; ROEM = Return on employees; ROTO = Return on turnover.

Decision: H_0 is rejected for majority of the performance variables in this study.

6. Discussion of Results

From the results presented in Table 3 above, the hypothesis of no difference is rejected for almost all the performance variables in this study. There are differences in the performances of UKDCs and FCDCs and these differences are significant at the 1 per cent level for PBTX, PATX, NINC, TEXS and ROTO; and at the 5 per cent level for PBIT and ROCE. With respect to all the performance variables, FCDCs reported a combination of lower mean profitability and higher mean trading expenses.

These results generally confirm the findings of Wheeler (1988), Kim and Lyn (1990), Gideon (1990), Crain and Stitts (1994), Munday and Peel (1997) and Oyelere and Emmanuel (1998), who all found that foreign-owned firms returned lower profits than their domestically-owned counterparts. This raises questions on the current validity of a number of advantage-based FDI theories that proposed that MNEs move abroad after developing certain firm-specific advantage(s), which they transport across national boundaries into a foreign location, with the rational economic expectation being that these advantages should generate returns over and above those which locally-owned firms are capable of generating. The findings of this study suggest that such returns are either not being generated or are not being fully reported by foreign-owned companies. A revision of these theories and a more careful examination of figures disclosed in FCDCs' annual reports and accounts is necessary.

Initial tests on TDEX did not reveal a statistically significant difference between the groups. However when TDEX was normalised by sales (TEXS), FCDC's were found to be significantly higher than UKDC's. From a transfer pricing perspective, trading expenses is one of the most important profit and loss account items. The fact that it is higher for UK-based FCDCs may be a pointer to significant overpricing by their suppliers, who are most likely to be related parties located abroad. Kim and Lyn also reported a similar finding in relation to the trading expenses of foreign-owned firms operating in the US.

There are no statistically significant differences in the ROEM of the two groups. This may be because the lower level of profitability reported by FCDCs is counterbalanced by their use of significantly lower number of employees. This also reinforces the possibility that ITP is a major influence. Employee costs do not seem to influence trading expenses differently in the two samples.

Table 4

Wilcoxon matched-pairs signed-ranks test of the equality of mean performances of FCDCs and UKDCs (Annual)

Research Variable	1990						1991					
	Mean rank		FoDC >	FoDC <	Z	Sig. (2-tailed)	Mean rank		FoDC >	FoDC <	Z	Sig. (2-tailed)
	FoDCs	UKDCs	UKDC	UKDC			FoDCs	UKDCs	UKDC	UKDC		
TDEX	66.79	66.12	75	57	-1.408	.159	66.90	65.91	79	53	-2.035	.042 ^b
PBIT	64.62	67.84	55	77	-1.897	.058 ^c	63.28	69.18	60	72	-1.345	.179
PBTX	67.96	65.67	48	84	-2.560	.010 ^b	62.64	69.26	55	77	-2.144	.032 ^b
PATX	62.46	69.13	52	80	-2.592	.010 ^b	65.13	67.45	54	78	-1.981	.048 ^b
NINC	66.40	66.56	52	80	-2.126	.034 ^b	65.63	67.10	54	78	-1.919	.055 ^c
TEXS	70.18	61.02	79	53	-2.623	.009 ^a	68.19	63.90	80	52	-2.421	.015 ^b
ROCE	73.72	62.10	50	82	-1.597	.110	62.17	69.89	58	74	-1.778	.075 ^c
ROEM	68.66	64.59	62	70	-.300	.764	67.93	65.34	59	73	-.865	.387
ROTO	67.80	65.71	50	82	-2.269	.023 ^b	63.12	68.70	52	80	-2.514	.012 ^b

N, the number of matched pairs, is 132 for all performance variables.

a b and c indicate significance at the 1, 5 and 10% levels respectively.

TDEX = Trading expenses; PBIT = Profit before interest and tax; PBTX = Profit before tax; PATX = Profit after tax; NINC = Net income; TEXS = Trading expenses to sales; ROCE = Return on capital employed; ROEM = Return on employees; ROTO = Return on turnover.

Table 4 (continued)

Wilcoxon matched-pairs test of the equality of mean performances of FCDCs and UKDCs (Annual)

Research Variable	1992						1993					
	Mean rank		FoDC >	FoDC <	Z	Sig. (2-tailed)	Mean rank		FoDC >	FoDC <	Z	Sig. (2-tailed)
	FoDCs	UKDCs	UKDC	UKDC			FoDCs	UKDCs	UKDC	UKDC		
TDEX	70.86	61.43	71	61	-1.458	.145	68.41	62.31	68	62	-.917	.359
PBIT	61.15	69.97	52	80	-2.746	.006 ^a	58.84	69.80	51	79	-2.920	.004 ^a
PBTX	62.51	68.63	46	86	-3.438	.001 ^a	63.67	66.47	45	85	-3.236	.001 ^a
PATX	62.59	68.59	46	86	-3.430	.001 ^a	62.67	67.00	45	85	-3.340	.001 ^a
NINC	62.21	68.87	47	85	-3.327	.001 ^a	62.13	67.35	46	84	-3.252	.001 ^a
TEXS	71.96	58.36	79	53	-2.944	.003 ^a	70.26	57.63	81	49	-3.331	.001 ^a
ROCE	69.98	64.51	48	84	-2.339	.019 ^b	60.29	66.78	45	83	-3.365	.001 ^a
ROEM	63.62	68.76	58	74	-1.588	.112	63.22	66.55	60	69	-.939	.348
ROTO	62.81	68.54	47	85	-3.264	.001 ^a	56.83	70.57	48	82	-3.554	.000 ^a

N, the number of matched pairs, is 132 for all performance variables.

a and b indicate significance at 1% and 5% levels respectively.

TDEX = Trading expenses; PBIT = Profit before interest and tax; PBTX = Profit before tax; PATX = Profit after tax; NINC = Net income; TEXS = Trading expenses to sales; ROCE = Return on capital employed; ROEM = Return on employees; ROTO = Return on turnover.

Table 4 (continued)
Wilcoxon matched-pairs test (Annual)

Research Variable	1994					
	Mean rank		FoDC >	FoDC >	Z	Sig. (2-tailed)
	FoDCs	UKDCs	UKDC	UKDC		
TDEX	63.06	66.30	71	57	-.8300	.407
PBIT	63.95	65.81	56	73	-1.437	.151
PBTX	59.90	67.64	52	76	-2.409	.016 ^b
PATX	60.13	66.28	47	80	-2.979	.003 ^a
NINC	60.98	65.78	47	80	-2.883	.004 ^a
TEXS	68.43	58.75	76	52	-2.552	.011 ^b
ROCE	58.74	60.00	47	71	-2.013	.044 ^b
ROEM	67.32	60.83	62	65	-.2650	.791
ROTO	58.88	67.43	51	76	-2.553	.011 ^b

N, the number of matched pairs, is 132 for all performance variables.

a and b indicate significance at 1% and 5% levels respectively.

TDEX = Trading expenses; PBIT = Profit before interest and tax; PBTX = Profit before tax; PATX = Profit after tax; NINC = Net income; TEXS = Trading expenses to sales; ROCE = Return on capital employed; ROEM = Return on employees; ROTO = Return on turnover.

The test procedures were also applied to the annual performance data variables for each of the five years covered by the study to investigate the year-to-year variability in comparative performance. Results as presented in Table 4 reveal that while performance differentials are consistently present in each of the five years of study, the degree of differences in the comparative performances of the two sub-samples vary from one year to the other. Differences in performance are more pronounced in years 3 and 4 than in others, as indicated by the levels of statistical significance (1%) in PBIT, PBTX, PATX, NINC, TEXS, ROCE and ROTO. This finding is an interesting one; it justifies the collection of performance data for periods extending beyond one or two years and may indicate inter-annual shifting or smoothing of income by UK-based foreign-controlled firms. Evidence of such shifts among US-based firms was reported in Altshuler and Newlon (1993) and Harris (1993).

A similar pattern to the five-year average emerges. Differences in trading expenses and returns on employees are insignificantly different. However, the other ratios relating to earnings, sales and profitability display significant differences virtually each year. The results are consistent with an ITP policy which over-prices incoming goods and services to FCDCs, thereby increasing expenses, and under-pricing outgoing goods and services, that is an apparent reduction in the value of sales. Of course, the same argument in reverse may apply to UKDCs which use ITP to magnify profitability in the home country.

7. Conclusion

This study revealed differences in the reported performances of FCDCs and UKDCs operating in the UK over a five-year period. Foreign-controlled firms significantly underperformed UKDCs of comparable size and industry over the period. Lower profitability figures are reported by these firms, partly as a result of higher reported trading expenses. While previous studies in this area have pinpointed the use of ITP for tax-minimisation purposes, as a likely reason for performance differentials, this assertion remains debatable, given the fact that UK nominal corporate tax rate is lower than those of the countries where the parents of most of the FCDCs in this study are located. In the search for other possible explanations, Buckley and Hughes (1997) suggested target costing, rather than ITP, as a more plausible reason for differences in the reported performances of Japanese-controlled firms operating in the UK. Future studies may compare the ITP practices of FCDCs with those of their locally-owned counterparts to provide empirical evidence on the relationship between ITP and the reported performances of FCDCs.

Findings in the current study have implications for a number of interested parties. The management and owners of FCDCs' parents should be interested in the apparent underperformance of their UK-based assets. Apart from the benefits associated with diversification, there is little justification for continued investment in the UK going by their reported financial accounting figures. It is possible, however, that reported figures do not reflect asset performance in reality. In which case, the UK tax authorities may want to take a closer look at FCDCs' reported performances to establish whether they are the outcome of income-shifting practices. It will be interesting to examine how the performances of the managers of these foreign-located assets are evaluated and rewarded.

Given the potential limitation of financial accounting measures of performance, future researchers may consider including some other measures to capture other aspects of firms' performances that may have eluded this study. Also, the current study could be extended by comparing the post-performance (dividend, for example) distributions, ITP practices and performance evaluation structure of foreign-controlled firms to those of UKDCs. Including other variables that may possibly explain performances (such as size, industry, age of assets, quality and experience of management, etc) in the research model could further enrich such studies. In addition, future researchers may consider disaggregating their sample of FCDCs on

country of ownership basis to observe whether salient nationalistic tendencies exist with regards to their performances.

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