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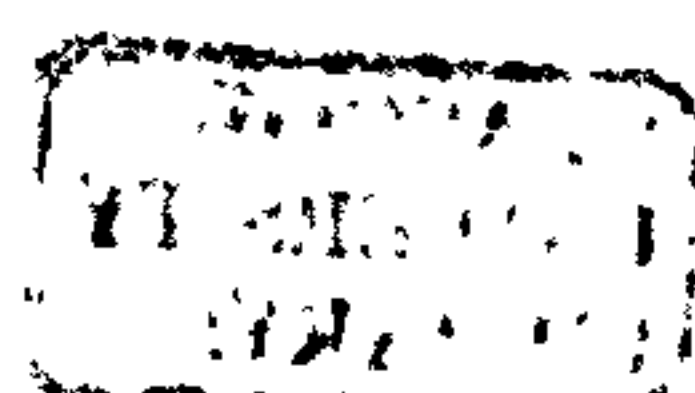
A Critical Analysis of the Profit Based Methods for
Satisfying the Comparables Test in UK Transfer Pricing
Regulations

A Dissertation Submitted in fulfillment of the degree of Doctor
of Philosophy in the Department of Accounting and Finance at
the University of Glasgow

by

Rajab Abdulla Rajab Al-Esmail

October 2003



Bismillah al Rahman al Raheem
In the Name of Allah the Compassionate, the Merciful

*TO THE TWELVETH IMAM:
BAQIATUL-LAH
AL- HUJEH BIN AL HASSAN AL-MAHDI*
(May God hasten his emergence)

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This dissertation is dedicated to my two daughters, Noor and Fatima, for they are my true inspiration.

Abstract

The arm's-length principle (ALP), the transactions taken place between unrelated parties acting at an arm's length in competitive markets, is used by income tax authorities to determine transfer pricing, the pricing of goods, services and intangibles transferred between affiliates of a multinational enterprise (MNE), and is an important international tax issue for a number of reasons. First, globalization creates integrated businesses with enormous cross-border transfers whilst corporate income tax systems remain nationally based. Second, governments insist that globalization provides MNEs with more opportunities to manipulate transfer prices and reduce taxes than in the past, thus the need for tighter regulation. Third, there is an increased desire amongst tax authorities faced with tight fiscal situations, to protect and enhance their revenue base encouraging stricter regulation of MNEs.

Profit is seen as only one of the many goals that motivate the behaviour of MNEs and the newly introduced profit based methods of transfer pricing has increased the reliance on comparables significantly. As the number of specified methods was increased and the hierarchy of acceptable methods was replaced by either the best method rule or the method of last resort, taxpayers are expected to document their transfer pricing policies. The documentation has to be contemporaneous and available upon request. The methods newly introduced by the Organization for Economic Cooperation and Development's (OECD, 1995), Transaction Net Margin Method (TNMM), and US Internal Revenue Service's (IRS, 1994) Comparable Profit Method (CPM), vary in relation to their application and views in controlling for function and risk when developing comparables. This suggests a degree of discretion may be exercised under different regulations that may be detected through ownership and tax. This study attempts to identify the level of discretion provided under both OECD (TNMM) and US IRS (CPM) methods. It is also tests the scope of ownership effect on the reported profit of Japanese-owned companies and US-owned companies compared to their UK counterparts. Finally this study examines whether the reported tax expense has changed subsequent to tax policy changes, specifically the latest UK transfer pricing regulations introduced in 1998 corporation tax self-assessment.

The empirical analysis confirms differences between OECD and US IRS profit ranges and variations between different profit level indicators (PLIs). Foreign-owned

Japanese and US companies are also found to exhibit low profitability compared to UK companies. This research discovered low performance among a high number of the Japanese-owned companies with operating losses when compared to their UK counterparts and offers evidence of the low tax expenses reported by foreign-owned Japanese companies.

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List of Abbreviations

CPM	Comparable Profit method
CUP	Comparable uncontrolled method
FDI	Foreign Direct Investment
IR	Inland Revenue (UK tax authority)
IRS	Internal Revenue Service (US tax authority)
ITP	International transfer Price
MNE	Multinational enterprise
NTA	National Tax Agency (Japan tax authority)
OECD	Organization for Economic Cooperation and Development
PLI	Profit Level Indicator
SIC	Standard Industrial Classification
TNMM	Transaction Net Margin method

Chapter 1

Introduction and Research Question

1.1 Significance of the Issues

The arm's-length principle (ALP) that is, the transactions taken place between unrelated¹ parties acting at an arm's length in competitive markets, is used by income tax authorities to determine the international transfer pricing (ITP), the pricing of goods, services and intangibles transferred between affiliates of a multinational enterprise (MNE). This is the single "most difficult area of international taxation" and "the biggest international tax issue MNEs will face over the next two years", according to a survey of more than 450 multinational parent and subsidiaries (Ernst & Young, 1997). There are three reasons why transfer pricing has become such an important international tax issue.

First, globalization is creating integrated businesses with enormous cross-border transfers while corporate income tax systems remain nationally based. According to Minister Miyazawa, Japan's Minister of Finance, (1998), the size of world trade for one year as a whole is \$11 trillion and in the early 1990s, the Organization for Economic Cooperation and Development (OECD) estimated that more than 60 percent of world trade took place within MNEs. That proportion is likely to increase with the large number of cross-border consolidations. As MNEs globalize and create elaborate commercial partnerships, governments and fiscal authorities must create a new global framework and tools for managing this vast world commerce. The subject of transfer pricing has therefore gained increasing importance.

Second, governments argue that globalization provides MNEs with more opportunities to manipulate transfer prices and reduce taxes than in the past thus the need for tighter regulation. New legislation has been passed in many countries including Australia, Brazil, Canada, Denmark, France, Korea, and the United Kingdom. The focus in most of these countries is on the need to document adherence to the arm's length principle and the threat of large penalties for failing to do so. This is particularly true in the UK where Inland Revenue (IR) introduced legislation in 1998 to level the playing field through a new requirement to return profits calculated in accordance with the arm's length principle and with a penalty regime for those

¹ Under the 1998 UK new rules, any joint venture (related parties) in which the parties each have a minimum 40 percent of the relevant interests, rights, and powers in or over the joint venture will now have to ensure that all their dealings with the joint venture are at arm's length.

taxpayers that had been neglectful in doing so. The burden of proof of complying is finally on the taxpayer.

Third, the increased desire of tax authorities, faced with tight fiscal situations, to protect and enhance their revenue base also encourages stricter regulation of MNEs. Thus, transfer pricing is a prime area for international conflict, which is only partially mitigated by double taxation agreements between jurisdictions.

The rationale for transfer pricing regulation derives from the fact that multinational enterprises are integrated businesses. The primary objective of most MNEs (and possibly the reason for their existence as detailed in Chapter 2) remains profit maximization which can be achieved through their internal advantages, assets specificity, and cost advantages. Profit is seen as only one of the many goals that motivate the behaviour of companies and the aim to minimize global tax liability may not be a prime corporate objective. This study attempts to contribute to the debate on the objectives MNEs may follow.

The typical MNE consists of several affiliated firms that are located in different countries, under common control of the parent firm and sharing common resources and goals. Each multinational must declare income and pay taxes in the various countries where its affiliates do business. The need to declare taxable income means that the MNE must allocate its expenditures and revenues among its various affiliates and set transfer prices for all intra-firm transactions in goods, services and intangibles.

Since governments have the authority to tax entities on both the source principle (i.e., all income earned within a country's borders is taxable regardless of ownership) and the residence principle (i.e., all income earned by a country's residents is taxable regardless of where the income was earned), multinationals must follow the different and, most likely, conflicting corporate tax rules set down by both home and host governments. Thus, double taxation of MNE income is a real possibility. At the same time, MNEs can arbitrage the differences in national tax systems, through transfer price manipulation, to reduce their overall taxation burden. In order to prevent both double taxation and under-taxation of MNE income, tax authorities have developed

sophisticated transfer pricing and income allocation rules and procedures as part of their corporate income tax systems.

The most common solution that national tax authorities have adopted to reduce transfer price manipulation is to develop specific legislation as part of the income tax regulations. Tax authorities require transfer prices to be set according to the arm's length principle. The OECD defines the arm's length principle;

“Where conditions are made or imposed between the two enterprises in regard to their commercial relations, which cause those relations to differ from those which would, but for those conditions, have benefited/accrued to one of the enterprises, but, by reason of those conditions, the enterprise has not so benefited, then the outcome of those relations may be included in the profits of that enterprise and taxed accordingly” (OECD, 1995, para. 1.6).

Essentially, the ALP asks an MNE the question as to what would the parties have done if they were unrelated. The answer can only be hypothetical since the affiliates of an MNE are by definition related to each other. The most feasible measure is a proxy done in either of two ways. The first approach is to make reference to a price for the same or similar product negotiated by two other unrelated parties under the same or similar circumstances (External Comparable). The second approach is to use the price for the same or similar product traded between one of the related parties and an unrelated third party under the same or comparable circumstances (Internal Comparable). Both approaches together are called the comparable uncontrolled price (CUP) method; mentioned in detail in Chapter 5, this is the method most highly recommended by tax officials. The problem is that often neither approach can be used in practice because there are often specific services and unique goods where no real comparable transactions are available. In these cases, tax authorities must rely on other methods to determine the arm's length price such as the latest profit based methods as explained in Chapter 5.

As comparables can be either comparable transactions or comparable companies, the reliance on comparable companies has increased significantly due to the introduction of profit based methods. The introduction of profit based methods in the US was mainly due to the increase in the number of transactions amongst national affiliates of MNEs which typically involve pricing unique products or services, thus rendering arm's length transactions unidentifiable. By default, "fourth" methods were widely

applied in actual cases, but with no regulatory guidance as to which specific methods were or were not appropriate (Cole, 1999).

In 1994, the US Treasury was the world's most active innovator and developer of transfer pricing policy (Eden, 2001), and introduced the Comparable Profits Method (CPM). In the final 1994 Section 482 regulations, the numbers of specified methods were increased and the earlier hierarchy of acceptable methods was replaced by the best method rule, requiring the taxpayer to select the best method based on the facts and circumstances of the case. Taxpayers are expected to document their transfer pricing policies; the documentation has to be contemporaneous and available to the Internal Revenue Service (IRS) upon request. The final IRS regulations, when compared with the earlier proposed and temporary regulations, are seen as a substantial retreat by the United States from any potential departure from ALP (Eden, 2001). Across the Atlantic, the OECD after twice criticizing the US changes, spent three years rewriting its own transfer pricing guidelines. The new guidelines (OECD, 1995) clearly show the stamp of the US 482 regulations; for example, they include a version of CPM called the Transactional Net Margin Method (TNMM). This major change is referred to as “transactional profit methods”. OECD Guidelines recognize that, “The transactional net margin method may afford a practical solution to otherwise insoluble transfer pricing problems if it is used sensibly and with appropriate adjustments to account for differences” (OECD, 1995, para. 3.39).

OECD Guidelines recognize the following transfer pricing methods as potentially consistent with the arm's-length principle: the CUP method, the resale price method, the cost plus method, the profit split method, and the transactional net margin method. Under OECD guidelines, profit based methods are to be applied only if the traditional methods can not be used. Although this priority of methods was abandoned in US regulations, it is preserved in the Guidelines which describe the profit methods as methods "of last resort", to be applied only when the complexities of real life business situations place practical difficulties in the way of application of the traditional transaction methods (OECD, 1995, Chap. II, para. 2.49; Chap. III, 3.1).

In spite of the cautions on the application of CPM set forth in the 1994 US IRS Regulations and the practical benefits in determining arm's length transfer prices in

actual cases, CPM has received a hostile response according to Horst (Cole, 1999) from many MNEs and foreign governments. Their objections to CPM reflect a perception that the US systematically uses Section 482 to overreach and subject to US tax income which belongs in other countries. On a theoretical level, they argue that CPM does not address transfer prices. Profitability is affected by many factors aside from transfer pricing and, therefore, CPM is out of place as a transfer pricing method. On a practical level, MNEs and foreign governments accuse CPM of permitting the use of comparables with only limited comparability to the tested party and being less than rigorous in requiring adjustments that could increase comparability.

In October 1997, the UK's IR issued a consultative document, Modernization of the TP Legislation, which served as a basis for revamping the UK's cumbersome transfer pricing legislation. The document, which includes draft rules, applied from 1999, and was necessitated by the need to reform the system to fit into the new self-assessment regime operating for UK taxpayers and the increased level of cross-border intra-group trading by MNEs (Rolfe, 1997). In 1998 the Finance Act introduced a comprehensive modernization of the United Kingdom's transfer pricing legislation. These changes were part of a wider reform of the Corporation Tax regime, which included the introduction of self-assessment for companies. The document proposed to bring OECD Transfer Pricing Guidelines and Article 9 of the OECD Model Tax Convention directly into UK statutory rules. Thus, this research examines the profit based methods through OECD guidelines (adopted by the UK) and US IRS regulations. More analysis of the regulations is detailed in chapter 4.

This research tests the degree of discretion provided under different regulations through the assessment of comparables relative to a sample of UK based enterprises. The introduction of profit based methods by the OECD and US IRS as well as the ownership effect on the reported profit level indicators (PLIs) and the latest UK regulatory requirements introduced as a part of corporation tax self-assessment (with contemporaneous documentation, burden on proof, and penalties) are examined to assist the search for comparables.

The UK was chosen to investigate the application of transfer pricing regulations for a number of reasons. As most ITP studies are conducted in the US, there remains a

need for empirical studies to be conducted outside the US to expand current research since transfer pricing remains the most important international tax issue facing global companies (Ernst & Young, 1999). The UK is the focus of this research as it is an example of a country adopting OECD guidelines and therefore, provides a sound basis for evaluating OECD's TNMM. US IRS regulations are selected due to the lead of the US transfer pricing regulations model with its documentation requirements and penalties which have been adopted strictly by other tax authorities in the world economy (Ernst and Young, 2001). Studying the gap between the two major regulatory bodies (OECD's TNMM vs. US IRS' CPM) in relation to profit-based methods not only provides an evaluation and increased awareness of the actual differences but also prevents future conflicts as the EU Commission announces the establishment of EU Joint Transfer Pricing Forum which is based on OECD guidelines (Tax Analysts, 2002). Providing an assessment of these differences might open new avenues towards a universal transfer pricing regulation structure or increased harmonisation.

“This gesture toward the United States and international transfer pricing harmony was considerably weakened by designating TNMM last resort.”
(Cole, 1999, pg. 9-32)

1.2 The Comparables Focus

This research focuses on both TNMM, adopted by OECD guidelines in 1995 and CPM, the US IRS transfer pricing methodology that approximates arm's length conditions when traditional transaction methods cannot be reliably applied. Since profit-based methods have been newly introduced as part of the acceptable transfer pricing methods, the relevance of testing the validity and reliability of these methods is essential if MNE discretion is to be curbed.

“In early 1999 more foreign countries appear to be willing to use CPM/TNMM than in 1995 when the OECD Guidelines were issued” (Cole, 1999 pg. 9-37).

The two methods of regulating transfer price are the OECD's TNMM and the US IRS's CPM. The OECD describes TNMM as computing the appropriate net profit on particular transactions or groups of transactions. TNMM is usually applied when comparing the net margin resulting from a group of related party transactions with the

net profit margins of independent companies that are engaged in broadly comparable transactions. Under CPM, the profitability of the user affiliate's closest competitor is used to compute a "normal" profit for the user affiliate. Essentially the principle underlying this arm's length return concept is that a user affiliate may earn the same return (or profitability) as a competitor.

Due to the importance of 1995 OECD guidelines and 1994 US IRS regulations, this research highlights the major discrepancies in terms of acceptable ranges of ITP between the main regulatory bodies. By closely examining these two methods, this study attempts to answer several issues that arise as a result of the OECD's adoption of TNMM and the US IRS' adoption of CPM including, whether there are, in fact, substantial differences between TNMM and CPM; how TNMM and CPM is applied in practical situations; the relative strengths and weaknesses of TNMM and CPM; and, whether either or both "control" transfer pricing abuse and curb MNE discretion to a similar degree. This research stresses the importance of understanding and evaluating the applications of transfer pricing regulations, resulting in increased compliance on the part of MNEs and awareness by regulatory bodies.

1.3 The Ownership Focus

The growing internationalization of the world economy, spurred by the growth in numbers and size of domestic and foreign MNEs and in their intra-firm trade activities with their increased amount of foreign direct investment (FDI) worldwide and especially in the United States during the mid-1980s, was a cause of concern for the US Treasury in relation to transfer price manipulation. The new fear was that foreign MNEs, especially Japanese MNEs, were overinvoicing inbound transfers to their US affiliates and not paying US taxes (Eden, 1998). In response, US Congress passed several pieces of legislation setting out new procedures for ensuring compliance with the ALP. These included a variety of information and reporting requirements, an accuracy-related tax penalty for transfer pricing mis-valuations, and an Advance Pricing Agreement (APA) procedure (a mechanism whereby a taxpayer and the US IRS can voluntarily negotiate an agreed transfer pricing methodology that is binding on both parties for three years). The transfer pricing penalty (Section 6662) provoked the most negative response from business and other tax authorities; it was

widely perceived as a "big stick" designed to shift tax revenues from foreign tax authorities and MNEs to the IRS (Eden, 1998).

The theories of MNEs (reviewed in Chapter 2) suggest that the main pre-condition for the spread of FDI is the ability of a company to internalize certain advantage(s), carry them across national borders and transfer them into profits that are over and above those indigenous companies in the host country can make. This higher return is necessary to compensate the foreign MNE for developing, internalizing and transporting the advantage(s). The theory therefore supports higher levels of performance by foreign-owned subsidiaries in their foreign operations. Previous research (detailed in Chapter 3) suggests that non-compliance with the regulations exists among MNEs, particularly on the part of foreign companies and in the US. For example, the return on assets ratio of domestic-owned companies is six times larger than those of foreign-owned companies (Wheeler, 1988) and profits of foreign-owned companies are significantly lower than domestic-owned companies (Crain and Stitts, 1994). Thus, the second part of this research attempts to examine whether behaviours of foreign-owned companies differ from domestic companies. Previous research undertaken by academics (Harris, 1993) and practitioners (Ernst & Young, 2001) confirm that the majority of MNEs fear ITP audits, possibly due to non-compliance of arm's length pricing.

This research also examines the extent to which ownership affects reported profit of foreign-owned companies in the UK. The research uses a representative sample of Japanese-owned companies and US-owned companies operating in the UK in order to test whether superior performance exists among foreign companies in the UK relative to UK indigenous companies. This provides an alternative empirical study to the US studies in the areas of income shifting and performance evaluation of foreign companies.

Japanese-owned companies were selected as representative of foreign-owned companies operating in the UK as they play a leading role in international trade, and previous findings have suggested that Japanese-owned companies operating in the UK have lower profit performance (Munday and Peel, 1997). In addition, press reports have alleged the misuse of transfer pricing mechanisms by Japanese MNEs (Sunday

Times, 1992). Transfer pricing regulations used in Japan (issued in 1986 with minor updates in 2000) have not expressly adopted the arm's-length principle and have not been updated relative to the OECD or US IRS, thus, making Japanese-owned companies a good set for comparison due to their practices. In addition, Japan's unique business culture suggests preference in reporting profits and taxes from overseas operations in Japan (Buckley and Hughes, 1996).

On the other hand, US-owned companies were chosen as representative of foreign-owned companies to provide another matched sample for UK-owned companies and to increase the validity of the comparison by comparing two sets rather than one as Japanese-owned and US-owned companies are capable of similar performance relative to the UK indigenous companies. US-owned companies were selected as the US IRS leads in transfer pricing regulation in the global market thereby possibly influencing the behavior of US-owned companies. Additionally, US MNEs are considered to be the most experienced in terms of compliance with current regulations (Section 482, 1994).

“Foreign authorities observing the United States enlarge its transfer pricing requirements and enforcement efforts are increasingly concerned that multinationals will overcorrect in favor of the United States. More generally, they are concerned about protecting their tax bases whether the related party is located in a low-tax or a high-tax jurisdiction. Hence, these countries are also strengthening their transfer pricing rules and stepping up their transfer pricing enforcement. Indeed, for many multinational groups, foreign transfer pricing enforcement has become more of a problem than US transfer pricing enforcement” (Cole, 1999 pg. 1-6).

This research also examines the effect of the form of investment as an organizational factor influencing MNEs transfer pricing policies. Several empirical studies (Kim and Miller, 1979; Tang and Chan, 1979; Tang, 1981) rank the interests of local partners of a foreign subsidiary as an important variable in the non-abuse of transfer pricing. A local partner in a joint venture plays a monitoring role which might restrict the latitude of transfer pricing strategy practiced by the foreign investor (Lecraw, 1985; Emmanuel and Mehafdi, 1994). The influence of a local partner as a factor on transfer pricing decisions remains inconclusive and is difficult to generalize as it depends upon the management role of a local partner in the joint venture. Since the presence of local partners may motivate foreign investors to use transfer pricing to reduce ITP

abuse (reported profits) of the joint venture (Lall, 1973; Lyn et al., 1993; Emmanuel and Mehafdi, 1994), this research used a sample of Japanese-owned companies with a UK partner and US-owned companies with a UK partner compared with the UK companies with foreign partners.

This research attempts to compare the performance of loss-making foreign-owned companies (companies with average operating losses) with domestic loss-making UK-companies. The shortage of loss-making company studies in the transfer pricing literature, the high number of loss making companies in the UK (especially Japanese-owned companies), and the elimination of loss-making companies in developing comparables by the regulatory bodies provides the impetus for this comparison.

It was noted from the ITP literature that there were no studies that address the effects of the final UK tax regulations on transfer pricing and income shifting. One of the most important environmental factors on a company's transfer pricing policies is the tax and accounting rules changes (Business International Corporations and Ernst & Young, 1991). UK international tax rules are complex and this study supplements the body of knowledge in the area of international taxation. It attempts to identify changes in the patterns of reported tax by foreign-owned companies and UK-owned companies and to further establish if these changes can be attributed to transfer pricing strategies aimed to shift income out of the UK.

This research examines whether the reported tax expense has changed subsequent to tax policy changes, specifically the UK 1998 transfer pricing regulatory requirements introduced as part of the corporation tax self-assessment. This research utilized the most recent data available to assess the effects of the 1998 UK transfer pricing regulations on foreign-owned companies. As the financial year ended 2000 was the most up-to-date for the sample data during the data collection period, the sample of foreign-owned companies (Japanese- and US-owned) and domestic UK companies are obtained using the years ended 1999 and 2000 to represent the period subsequent to the 1998 UK regulations and the years ended 1996 and 1997 to represent an equivalent two-year period prior to the 1998 UK regulations.

The final portion of this research uses a sample of foreign-owned (Japanese- and US-

owned) and UK-owned companies to test the relative reported tax in order to obtain evidence, of the misuse of transfer pricing. This research endeavors to determine the impact, if any, of the latest 1998 UK corporation tax self-assessment on the tax expenses of both foreign-owned (Japanese- and US-owned) and UK-owned companies.

While the first research question tests comparables in relation to profit-based TNMM and CPM methods, the remaining questions of this research investigate the comparability (differences, if any) between foreign-owned Japanese and US companies compared to their UK counterparts. With the existence of joint ventures and the large number of loss making companies among foreign-owned companies, it was necessary for this study to fill the gap in the literature and test the performance and comparability of entities with these features. The investigation of the latest 1998 UK regulations and the tax expenses of foreign-owned companies was central to this research in order to explain the effects of the regulations on the profitability and comparability, and supply evidence (if any) of the reported tax.

1.4 Research Questions

Due to strict tax regulations which may adversely affect world trade, as well as uncertain and unclear ITP regulations which may reduce FDI's growth, the following research questions are stated as follows:

Do OECD (TNMM) and US IRS (CPM) international transfer pricing (ITP) regulations, where applied, determine comparable sets of companies that justify the arm's length principle? Do companies (both profit- and loss-making) of different countries of ownership display different patterns of performance as measured by a wide range of profit level indicators? Do companies of different countries of ownership report different amounts of tax and, if so, what are the effects of the 1998 UK transfer pricing regulations (corporation tax self-assessment) on the patterns of reported tax by companies of different ownership?

1.5 Structure of the Dissertation

The following chapter of this dissertation covers the theories of FDI and MNEs in order to highlight the link between FDI theories and the performance of foreign

subsidiaries. In addition, Chapter 2 also provides a theoretical understanding of comparables. Chapter 3 presents the literature review as well as income shifting studies in order to note scarcity of similar studies, limitations of previous empirical studies, and the various focuses of previous work. Chapter 4 of this dissertation discusses the importance of ITP and ITP regulations and summarizes the methods adopted by different countries. Chapter 5 focuses on whether different comparable methods (TNMM and CPM) reflect functions and risks differences, stressing the importance of research design. Chapters 6 and 7 dealing with methodology and analysis highlight the research design used by this research, the method adopted, and the various stages of the analysis that satisfy the research questions. Finally, Chapter 8 summarizes the findings, results, and possible areas of future research, as well as discusses the limitations and the implications of this study.

Chapter 2

FDI and Multinationals Theories

2.1 Introduction

It is commonly observed that as companies grow in size and complexity, they tend towards a decentralized organization comprising several divisions. As the volume of divisionalized global trade expands and these companies increasingly dominate the world economy, the importance of transfer pricing increases. An examination of some of the existing theories of the growth of the MNE may help to clarify the important areas of choice of asset utilization, location of operations, and cost allocation policies. These theories suggest that FDI is motivated by internal economies and resources plus highly imperfect external markets. Hence, foreign comparable companies, according to the FDI theories, expect to report greater performance (profits) compared to their indigenous counterparts.

Although the primary objective of most companies remains profit maximization, a criticism of this objective is that the centrality of emphasis on profit maximization makes it deficient and unrealistic. Profit is seen as only one of the many goals that motivate the behavior of companies.

The importance of these theories was furthered when regulators realized the typical difficulties of obtaining an arm's length transaction and introduced the latest profit based methods as an acceptable method of determining transfer pricing. The latest profit based methods allows the use of comparables profit to limit corporate discretion.

Decentralization of operations and associated transfer prices and cost allocations has complicated the search for a theory of why companies expand to become MNEs. The trend toward decentralization within business organizations has increased the importance of appropriate accounting for internal transfers of goods and services, in part, to measure how well individual responsibility centers contribute to the goals of the company. On the other hand, literature suggested the contrary (Chapter Three provides a review of the evidence of low performance among MNEs).

This chapter explains how MNEs are coordinated businesses engaged in formulating and implementing strategies at the global level and provides the theoretical justification for their existence. It is necessary to conclude from the following MNE

theories the expected performance of these entities to assess their comparability.

2.2 Definitions

The key concept in terms of understanding what MNEs are and why they exist is that the MNE is a multidivisional business. By definition, an MNE consists of two or more firms under common control, with a common pool of resources and common goals, where the units of the enterprise are located in more than one country (Eden, 1994). Other definitions have described MNEs as “a company that has at least one division in a foreign country” (Tang, 1981, pg. 7), and “any firm which performs its main operations, either manufacture or the production of service, in at least two countries” (Brooke and Remmer, 1970, pg. 5) to “firms with manufacturing subsidiaries in six or more nations” (Vernon, 1971). Disagreements abound over the exact number of foreign locations of operation that will qualify a firm to be referred to as an MNE. Buckley and Casson (1976) avoided this debate by defining an MNE as “an enterprise which owns and controls activities in different countries” (pg. 1). The definition of an MNE cannot, however, be reduced to the location of its production facilities alone. According to Holland (1993), the MNE:

1. operates within and between a spectra of differing political, legal, economic, social and cultural systems;
2. trades within and across a number of product and factor markets, each displaying differing levels of efficiency and competition;
3. resorts frequently to foreign exchange markets for a wide range of different currencies; and,
4. accesses a broad range of regulated and unregulated domestic and international capital markets which display different levels of efficiency and integration (pg. 3).

A definition of an MNE that involves three variables is as follows,

1. location of production facilities – which should “be restricted to firms which operate in six or more foreign nations”;
2. the foreign to total operations (F/T) ratio – which attempts to categorize firms by comparing the percentage of their sales or profits generated in, or assets or employees located on, foreign sites to the totals; and,

3. attitude of management – Perlmutter (1969) classified management views into: ethnocentric (portraying a home-country orientation by management); polycentric (reflecting an international outlook which however lacks systematic global integration); and geocentric (which not only thinks and operates on a worldwide basis, but also operationalizes a globally-integrated planning strategy) (Rugman et al, 1985).

The definition of an MNE will, in most circumstances, depend on which of these three variables warrants greatest importance. By considering all variables, a more well rounded definition is attained.

It is important to be able to distinguish the MNE from a number of similar looking forms of investment which include pure portfolio investments; multi-plant domestic operations; exporting and importing; licensing and technical agreements; and, uncontrolled foreign direct investment (FDI).

Hood and Young (1979) provided descriptions on each of these close relations of the MNE. They appropriately concluded that:

“The MNC represents the outworking of the FDI process...(and) as with the multi-plant domestic operation...owns and controls production units in more than one location. On the other hand, the MNC’s production units are operated in different nation states. Secondly, as with an exporting firm, the MNC sells goods across national boundaries. Conversely, unlike the exporting firm, the MNC also produces these goods outside its domestic location and moreover a large part of MNC exports may represent intra-group trade. Thirdly, like the national firm licensing foreign manufacturers, the MNC is involved in foreign production. But the multinational company owns and controls its manufacturing units located abroad, and this characteristic also clearly distinguishes the MNC from a basically national company with foreign portfolio holdings” (pg. 29).

FDI involves the ownership (in part or whole) and management of a foreign operation established through the wholesale transfer of a package of production resources abroad. These transferred resources translate into foreign subsidiaries and may be formed either through the acquisition of existing local companies or in the form of new ventures. Whether a company is determined an MNE is dependent on its ability to originate and continuously perpetuate FDI. Various pieces of literature that discuss

FDI theories are equated to, and viewed as MNE theories (Rugman, 1980). A wide range of existing FDI and ITP theories are examined in the next section.

2.3 FDI Theories

2.3.1 Internalization Theory

Internalization has been suggested in one form or another as an underlying reason for FDI but was only first developed as a theory in its own right by Buckley and Casson (1976). Their original objective was to use the concept to develop a model of the growth of the firm. Their theory depends on the assumption of profit maximization, emphasizes very general forms of imperfect competition stemming from the costs of organizing markets, and concentrates on imperfections in intermediate product markets rather than in the final products markets (Buckley, 1989; pg. 78).

Buckley and Casson criticized previous FDI theories as lacking in comprehensive theoretical base and failing to take into account the various other activities that MNEs engage in such as research and development (R&D), marketing and distribution, training and development, etc. These activities are linked to the physical production process and generate a flow of a series of intermediate products, which could be in the form of knowledge, information, human capital and other intangibles. With market imperfection even more pertinent in the market for these intermediate products than in final markets, a company will seek to maximize its returns on these intermediate products by internalizing. Internal transfer pricing, for example, was suggested as an internalization weapon for sidestepping government-imposed market barriers such as tax, tariff, etc. Since flows of knowledge are so difficult to value, they provide an excellent basis for the manipulation of transfer pricing. Substantial benefit is derived from the ability to minimize the impact of government intervention through the use of transfer prices (Buckley & Casson, 1976). Markets will be internalized when the transaction costs of overcoming market imperfections exceed the cost of internal corporate trading.

The internalization theory rests on two axioms:

1. companies will choose the least cost location for each activity they perform; and,

2. companies grow by internalizing to the point where the costs of before making a decision, firms consider explicitly the relative costs of servicing foreign markets in one (or any combination) of three ways: exporting, FDI or licensing. The method of servicing a market is predicted to fluctuate with the associated costs of implementing each strategy (Rugman, 1980).

This internalization theory proposes that before FDI can proceed at all, the firm must possess some unique advantages obtained as “the rewards for past investments in (1) R&D facilities; (2) the creation of an integrated team of skills; and, (3) the creation of an information transmission network which not only allows the benefits of the first two advantages to be transmitted at low cost within the organization, but also protects such information from outsiders.” (Buckley and Casson, 1976, pg. 69). In essence, a company must not only possess unique advantages but also must be convinced in its economic calculations that it will be able to profitably exploit those advantages with minimal risk of dissipation.

Rugman’s (1980) and Rugman et al’s (1985) approach are very similar to Buckley and Casson’s. Progressing from a free trade assumption, they introduced market imperfection into the transfer pricing discussion and observed that MNEs are replacements for free trade when trade is impeded by market imperfections. Two sets of factors that account for FDI strategy were identified as a location-specific factors (environmental variables) and company-specific factors (internal variables).

Location-specific factors are the economic and non-economic variables in a country’s aggregate production function which include its political, cultural and social systems. They are exogenous parameters which the MNE cannot influence. Company-specific advantages on the other hand, are those internal advantages (such as knowledge, management, marketing, R&D and strategic planning skills, etc.) possessed by MNEs which gives them a relative advantage over other firms. The MNE then needs to exercise proprietary rights over its company-specific advantages to maximize its worldwide income with minimal dissipation of this invaluable asset. Through internalization, the creation of an internal market allows a company to appropriate the returns from the advantage it generates. Internalization therefore is a rational

response to market imperfections in the pricing of MNEs' unique advantages. It is an economically efficient internal response to exogenous impediments to free trade and is far superior to other potential solutions such as licensing or patent rights as it gives the MNE the additional benefit of self-regulation and monitoring of its advantages.

The development of internalization as a complete concept is a major breakthrough in the search for an FDI theory. Buckley and Casson were able to synthesize most previous theories of FDI and explain them relative to their own position. The overall effect is pervasive and most of the concepts that were developed afterwards have not been able to successfully eclipse Buckley and Casson's theory with the exception of Dunning's Eclectic OLI paradigm.

2.3.2 Dunning's Eclectic OLI Paradigm

According to Dunning's OLI paradigm, MNEs are the most successful form of business organization because of their ownership, locational, and internalization (OLI) advantages. The OLI paradigm, developed by John Dunning, provides a general explanation as to why firms engage in, and are successful at, international production. The model is formed from three basic approaches to the question of why MNEs exist and why they are relatively more successful than domestic firms: the location, ownership, and internalization approaches.

Dunning based his model on several theories:

1. industrial organization theory -- why international production takes place based on important ownership advantages (including technology, innovative capacity, and product differentiation). In the 1960s and 1970s, industrial organization theorists shifted the focus from a macro perspective on FDI to a micro perspective on the firm and its activities (the ownership approach). Industrial organization theorists argued that MNEs were generally found in oligopolistic markets, so that monopolistic advantages provided an explanation for MNEs (e.g., Hymer 1976). Another theory was that MNEs owned intangible assets on which they could earn additional profits if the assets were deployed in other countries (e.g., Caves 1971, Johnson 1970, Magee 1977);
2. location theory -- why a company produces in a particular country. The

location theory also explains FDI in terms of differences in country endowments and characteristics. Explaining the FDI approach assumes that external markets are characterized by high transactions costs; and,

3. firm theory and market failure theory -- which argue in favor of internalizing markets. Internalizing the market through a wholly owned foreign affiliate allows the firm to reduce transaction costs by creating an internal market to replace the imperfect external one. The internalization approach (e.g., Buckley and Casson 1976; Casson 1982; Rugman 1980, 1981, 1982, 1986) dominated much of the FDI literature throughout the 1980s.

Firm-Specific Advantages:

An MNE operating a plant in a foreign country is faced with additional costs compared with a local competitor. The additional costs could be due to cultural, legal, institutional, and language differences; a lack of knowledge about local market conditions; and/or, the increased expense of communicating and operating at a distance. So if the MNE is to be profitable abroad it must have some advantages not shared by its competitors. These advantages must be, at least in part, specific to the firm and readily transferable within the firm and between countries. These advantages are called ownership or firm-specific advantages. The firm owns this advantage, it has a monopoly over its firm-specific advantages and can exploit them abroad resulting in a higher marginal return or lower marginal cost than its competitors, thus more profit. These advantages are internal to a specific firm and may include location-bound advantages (i.e., related to the home country, such as monopoly control over a local resource) or non-location-bound (e.g., technology, economies of scale and scope from simply being of large size).

There are three basic types of ownership advantages for an MNE as follows:

1. Knowledge/technology -- broadly defined to include all forms of innovative activity;
2. Economies of large size (advantages of common governance) -- economies of scale and scope, economies of learning, broader access to financial capital throughout the MNE organization, and advantages from international diversification of assets and risks; and,
3. Monopolistic advantages -- accrue to the MNE in the form of privileged

access to input and output markets through patent rights, ownership of scarce natural resources, and the like.

As Dunning (1993) notes, some of these ownership advantages can be found with first-time overseas investments while others come from being an established affiliate in an MNE. Firm-specific advantages can change over time and will vary with the age and experience of the multinational.

Country-Specific Advantages:

A company must use some foreign factors in connection with its domestic firm-specific advantages in order to gain full value on these firm-specific advantages. Therefore, the location advantages of various countries are key in determining which will become host countries for the MNE. Clearly the relative attractiveness of different locations can change over time so that a host country can to some extent engineer its competitive advantage as a location for FDI.

The country-specific advantages that influence where an MNE will invest can be broken into three categories: economic, social, and political. Economic advantages include the quantities and qualities of the factors of production, size, and scope of the market and transport and telecommunications costs. Social/cultural advantages include relative proximity between the home and host country, general attitude towards foreigners, language and cultural differences, and the overall stance towards free enterprise. Political country-specific advantages include the general and specific government policies that affect inward FDI flows, international production, and intrafirm trade. Attractive country-specific advantages for an MNE would include a large, growing, high-income market, low production costs, a large endowment of factors scarce in the home country, and an economy that is politically stable, welcomes FDI, and is culturally and geographically close to the home country.

Internalization Advantages:

The existence of a specialized knowledge or skill is an asset that can generate economic rents for a company. These rents can be earned by licensing the firm-specific advantages to another company, exporting products using this firm-specific advantage as an input, or setting up subsidiaries abroad. The ownership advantages of

MNEs thus explain why they go abroad, while the location advantages of countries explain where MNEs set up foreign subsidiaries.

The OLI model argues that external, arm's length markets are either imperfect or in some cases nonexistent. As a result, the MNE can substitute its own internal market and reap some efficiency savings. A company could go abroad by simply exporting its products to foreign markets; however, uncertainty, search costs, and tariff barriers are additional costs that will deter such trade and possibly result in the loss of company specific advantages.

The OLI model predicts that the hierarchy (the vertically or horizontally integrated company based on internal markets) is a superior method of organizing transactions than the market (trade between unrelated companies) whenever external markets are nonexistent or imperfect. The theory predicts that internalization advantages will lead the MNE to prefer wholly owned subsidiaries over minority ownership or arm's length transactions. It is therefore the internalization advantages, part of the OLI paradigm, that explain why MNEs are integrated businesses, are producing in several countries, and are using intrafirm trade to ship goods, services, and intangibles among their affiliates.

In summary, the internalization part of the OLI paradigm therefore answers how an MNE goes abroad. The model predicts that the MNE will internalize markets in order to reduce natural market imperfections.

2.3.2.1 Criticisms of Dunning's OLI Paradigm

Critics of the OLI theory suggest that Dunning has underestimated the power of internalization theory for explaining MNEs. Teece (1982) addressed the issue of when internalization is most likely to be the most efficient way for an organization to conduct its economic activity. One of the benefits of dimensionalizing international trade is that "a contingency theory of the MNE (can be) developed" (pg. 52). Teece further explained FDI by distinguishing between production costs (associated with foreign production) and transactions/governance costs (associated with internalization). Analyzing the combination of the production cost function and the transactions cost function, Teece showed that there is a cost advantage favoring FDI

compared to licensing for horizontally integrated MNEs as technological complexity increases. Similarly for vertically integrated MNEs there is a cost advantage associated with internalization once the characteristics of an asset has reached a certain level of specificity.

2.3.2.2 Implications of the Internalization Theory and Dunning's OLI Paradigm on ITP

Within an MNE, FDI theory suggests that there will be internal transactions which cross international borders and have ITP consequences. An MNE can be assumed to have certain ownership advantages. In addition, it can be assumed from the statistics on FDI that MNEs prefer to internalize these ownership advantages. (The markets and hierarchies framework also lends some support to this assumption.) Finally, either to gain proximity to a market and/or take advantage of market imperfections (Qian, 1996) a suitable location will be selected. It is these market imperfections which the FDI, coupled with appropriate ITP policies, seeks to exploit.

Therefore, from a FDI viewpoint, MNEs seek to maximize location-specific advantages by taking advantage of government incentives and market imperfections. Consistent with this, ITP can be used as a mechanism for ensuring that the MNE is able to utilize these market imperfections (Leitch and Barrett, 1992). Dunning (1981) supported the link between ITP and internalization:

“Government intervention...encourages (MNEs) to internalize existing activities and to engage in new activities which offer the possibility of internalizing gain. Other things being equal, the more internal transactions the company engages in the greater its opportunity for doing this (manipulating transfer prices) – hence, in the case of and to practice product or process specialization within its organization” (pg. 31).

There does appear to be strong support for the view that ITP is a means for ensuring that FDI market imperfections can be exploited. ITP cannot be based on the market as it is imperfect. Although the majority of empirical studies survey the relative importance of a set of factors on the transfer pricing decision, very few studies either justify how these factors were selected or anchor them in terms of market imperfections and FDI theory.

2.3.3 Porter's Competitive Strategy

Porter (1985) stated that: "Competition is at the core of the success or failure of firms. Competition determines the appropriateness of a firm's activities that can contribute to its performance, such as innovations, a cohesive culture, or good implementation. Competitive strategy is the search for a favorable market position in an industry, the fundamental arena in which competition occurs. Competitive strategy aims to establish a profitable and sustainable position against the forces that determine industry competition." (pg. 1)

Porter proposed that competitive strategy is based on five competitive forces: the threat of new entrants; the threat of substitute products or services; the bargaining power of suppliers; the bargaining power of buyers; and, the rivalry among the existing competitors.

Porter's competitive advantage determines the way in which firms position themselves in an industry. The two basic types of competitive advantage are lower cost and differentiation (provision of superior value to the buyer). Porter (1990) argued that the central task concerning competitive advantage in industries "is to explain why firms based in a nation are able to compete successfully against foreign rivals in particular segments and industries. Competing internationally may involve exports and/or locating some company activities abroad" (pg. 10). Porter further argued that "multinational status is a reflection of a company's ability to exploit strengths gained in one nation in order to establish a position in other nations" (pg. 18).

Porter further noted that the reason for industries globalizing is that "shifts in technology, buyer needs, government policy, or country infrastructure create major differences in competitive position among firms from different nations or make the advantages of a global strategy more significant" (pg. 63). The company can either generate competitive advantage by concentrating activities in one country and exporting, or it can disperse activities through a number of countries through the use of FDI. In turn, the decision to disperse activities will mean that transfer pricing is more influential within that company. Whenever a company has activities located in a number of different countries it must be able to coordinate these activities.

2.3.3.1 Criticism of Porter's Competitive Advantage Theory

It is argued that the focus of strategy should not be on how to beat the competition but on how to create value for customers. A middle strategic course, between cost-leadership and up-market product differentiation, is consistent with the focus on the customer. Also, some believe that companies can successfully pursue cost leadership and product differentiation simultaneously (Ohmae, 1988).

In addition, Porter's nation-state focus has been challenged. It has been argued that on a competitive map political boundaries have largely disappeared and the notion of national boundaries are becoming obsolete. It is further contended that the crucial question relevant to national competitiveness is where a company conducts its R & D and other technologically complex activities, and not where the company is headquartered or where a majority of its shareholders are domiciled (Reich, 1990).

2.3.3.2 Implications of Competitive Advantage Theory for ITP

Within the competitive advantage framework, Porter (1985) identified transfer pricing policies as one of the procedures used to govern cross-business unit activities. The framework identifies a particular role for transfer pricing systems:

“Interrelationships imply that transfer pricing and other decisions should be designed to improve the firms' overall position and not the financial results of individual business units...Business unit goals also may need to be adjusted in order to make them consistent with transfer pricing rules” (pg. 404).

2.3.4 Transaction Cost Economics Theory

Transaction cost theory concentrates on the relative efficiency of different exchange processes. If internalization of one or more stages of production might generate savings on the costs for that company, it could lead also to transactional economies (savings on the cost of inputs) when reduced amounts of resources are required to get the intermediate inputs.

A central hypothesis of transaction-cost theory is that interunit relationships in which supplier assets are specialized have lower transaction costs inside an organization than when the relationship occurs between organizations (Klein, Crawford, and Alchian. 1978; Riordan and Williamson, 1985; Demsett, 1988).

Williamson (1985) identifies a number of types of asset specificity which involve investments in the transactions by one or both parties to the transaction. These include: (1) physical asset specificity resulting from investments in tangible assets, e.g. plant, equipment, tooling, dies, etc. that are more or less unique to this economic relationship; (2) human asset specificity resulting from investments in specialized training or specialized know-how gained through education or experience which is not easily transferred to other transactions; (3) site specificity which results from parties locating their operations in close physical proximity to one another for flow economies; and, (4) dedicated asset specificity which arises from investments in generalized (as contrasted to special purpose) productive capacity for the explicit purpose of selling a significant amount of a product to a specific customer and that capacity cannot be redeployed or otherwise utilized with a cost.

Proponents of transaction cost economics theory (Williamson, 1985) have found that organizations and markets differ in their governance capabilities. Other authors (Stinchcombe, 1983; Granovetter, 1985; Eccles and White, 1988), however, suggest that the transaction-cost argument is stated too strongly. They argue that organizations and markets are not discrete institutions to which the theory can be applied in a straight forward fashion.

2.3.4.1 Criticisms to Transaction Cost Economics Theory

The major criticisms of transaction cost theory is that it overstates the effect of asset specialization on vertical integration and understates the costs of managing interunit relationships within an organization, particularly for nonstandard organizations and markets. Transaction costs are only relevant when relationships are:

1. Frequent – if a transaction is not frequent there is less chance of internalization;
2. Uncertain – if complete contracts cannot be foreseen, the company making the specific investment is advantaged when future contingencies impose to renegotiate the contract terms based on environmental uncertainty (unpredictability of future contingencies) and behavioral uncertainty (possibility of monitoring the behavior of the contract party); and,
3. Asset specific

2.3.4.2 Implications of Transaction Cost Economics Theory for ITP

Spicer (1988) draws on transaction cost economics to develop a positive theory of the transfer pricing process in which the strategic and transactional characteristics of specific transfers are related to transfer pricing issues and the organizational processes used to manage transfers within firms. Based on the premise that internal transfers are transactions, he argues that transaction cost economics can be used to consider contracting issues involved with the management of internal transfers and the setting of transfer prices.

As Spicer (1988) points out, the extent to which a company makes internal transfers arises out of a strategic choice between buying components from external sources and making them itself. This is the issue of the appropriate extent of vertical integration. Porter (1980) cites the potential benefits of vertical integration as including economies of operations, tapping into technology, assuring supply, offsetting bargaining power and input cost distortions in non-competitive markets, and enhancing ability to differentiate end products. The transaction cost economics framework offers a particular explanation for vertical integration. The make-or-buy decisions can be made so as to minimize the sum of production and transaction costs. The scope of the transactions involved (asset specificity, uncertainty and extent) is thought to positively relate to the decision to integrate vertically into component production.

2.4 Summary

Through the years a number of theories explaining the origin and continued influence of MNEs have been reviewed. Those reviewed here are primarily economic in nature although most of them drew upon varied aspects such as political, socio-psychological, etc. backgrounds in an attempt to develop concepts well rounded enough to cover the multitudinous nature of MNEs' involvement, and predict them over time. The asset specificity dimension gives further reason to state that market prices are unavailable, hence providing justification to the regulators in adopting profit based ITP methods and increasing the reliance on comparables in setting transfer prices. As MNE theories claim that foreign-owned companies, due to their internal and external advantages over time should perform as well or better than domestic companies, this statement needs to be certified in order to ensure that

comparables (including MNEs) under different regulations are reliable to determine whether MNE discretion is limited or safeguarded.

Chapter 3

Literature Review & Income Shifting Evidence

3.1 Introduction

The importance of international transfer pricing has increased due to the ever-growing effect of international taxation on the global economy. For many years, there has been an awareness that MNEs can evade a large portion of their statutory tax burden through the manipulation of transfer prices on cross-border charges. In summary, a number of research approaches have been used to examine the transfer price manipulation: macro-level and regional studies, comparison at the company level, and micro level (plant level) studies using primary data drawn from questionnaires and/or case studies. Each approach has its relative advantages and disadvantages.

This chapter lists some of the important empirical studies in order to determine whether the theoretical foundation of comparables can be matched with previous empirical studies. The demonstration of the income shifting studies is essential in order to uncover limitations, various focuses, limited theoretical bases, methods adopted by previous empirical studies, and provide a justification of the under researched area of comparables and income shifting in the UK.

3.2 Income Shifting Evidence

This chapter provides summaries of previous research studies to help demonstrate the significance of income shifting on both in the UK and on a global scale. Brief synopses of the objectives, data and methods used, findings, and evidence of income shifting by previous researchers is given to highlight the different approaches including sources that previous research has adopted.

3.2.1 Arpan (1972a, 1972b)

Arpan investigated the ITP practices of US-based subsidiaries of non-US MNEs and compared them to those of US MNEs to determine the environmental factors influencing ITP as well as cultural differences that MNEs perceive when determining ITP systems.

Arpan sent a letter to the largest or most representative wholly owned US based subsidiary of 145 foreign-owned companies. The parent companies were based in fifteen different countries and the size of the parent company (in terms of sales) ranged from under \$1 million to over \$500 million. From the 145 companies, 60

responses were received from the 15 selected countries. Of the 60 responses, 16 granted follow-up interviews. In addition, partners of international accounting firms were interviewed.

For very large MNEs, no significant differences were found for external variables on a parent nationality basis. Taxes proved to be one of the most important considerations for US, Canada, France and Italy, but not as important for Germany, Scandinavia or England. The main finding for internal variables was that non-US MNEs considered only roughly half as many internal parameters as their US counterparts. With regards to ITP methods, Arpan found that approximately 50% of firms used market pricing, 30% used cost-oriented pricing, while 20% used a combination of the two. He also found that: larger firms tended to use cost-oriented systems; the higher the level of market competition for a firm's product, the greater the likelihood that it would use market pricing; nationality and cultural diversity affected TP orientation; and, US systems are more cost oriented while non-US systems are more market oriented.

3.2.2 Kim and Miller (1979)

Kim and Miller's research investigated the factors influencing the ITP policies of US MNEs operating in eight developing countries. With a useable questionnaire response rate of 8.8% (30 out of 342 MNEs, with at least one subsidiary in two of the eight countries specified, listed in the 1978 edition of US Subsidiaries and Affiliates Abroad World Trade Academy Inc.), they proceeded to rank eight factors in the order of importance placed on them by respondents.

The two researchers found profit repatriation restrictions and exchange controls in the host country to be the two most important factors affecting ITP decisions. Other factors included joint venture constraints, tariffs/custom duties and income tax liability (in that order) in the host country.

As a follow-up to their 1978 research, Kim and Miller sought to establish a theoretical framework for worldwide transfer pricing for US MNEs with specific reference to subsidiaries in less developed countries (LDCs). Using survey and interview evidence, 30 US MNEs (out of 342 US parents listed in the World Trade Academy

Press, 1978) with subsidiaries in at least 2 out of 8 LDCs, rated the importance of 9 variables relating to the transfer pricing decision on a scale of 1 to 4. The average scores of these variables were ranked with profit repatriations considered as the most important and tax influences at numbering fifth and sixth.

Kim and Miller surmised that in the late 1960's and early 1970's income tax liability was probably the most significant factor, but by the late 1970's it was only one of several factors MNEs took into consideration when making transfer pricing decisions.

3.2.3 Tang and Chan (1979)

Tang and Chan endeavored to compare the ITP practices of US and Japanese MNEs at both domestic and international levels, determine important environmental variables considered by large US and Japanese MNEs when formulating their transfer pricing policies, and to find those environmental variables which discriminated between large US and Japanese MNEs.

They sent questionnaires to the controller, treasurer, financial vice-president, or secretary of 300 manufacturing and mining companies selected from the largest 1000 US industrial corporations, and to the president of 369 of the largest manufacturing and mining companies in Japan. In terms of responses, 145 out of 300 sampled US and 102 out of 369 Japanese companies were received. 76 US and 50 Japanese companies' responses were useable allowing an aggregate useable response rate of nineteen percent.

They found overall profitability to be the most important of twenty environmental factors affecting ITP decisions of both sets of MNEs. With regards to ITP practices, cost-based methods (particularly full production cost plus some allowance for profits) were revealed to be the most popular among both US and Japanese MNEs. Forty-six and forty-five percents of US and Japanese firms respectively use cost-based methods. Thirty-two and sixteen percents of US firms use market-based and negotiation-based pricing methods as compared to thirty-eight and eighteen percents of Japanese MNEs.

3.2.4 Wu and Sharp (1979)

Wu and Sharp investigated both domestic and international transfer pricing practices

of US firms to establish the dominant TP methods used in the presence or absence of market prices and to find out whether differences exist between domestic and international transfer prices. From their questionnaire they received 61 useable responses, spread over 11 industries, from all 500 firms listed in the Fortune 500.

From their statistical analysis, they found that where market prices were available, they were the predominant basis for pricing transfers. In their absence, full product cost plus a profit margin were most frequently used. While many firms encouraged negotiation as part of their TP method (especially as a means of settling disputes), little evidence was found for the use of mathematical programming and marginal costing approaches. Significant differences were found between domestic and international transfer pricing practices, which Wu and Sharp attributed to the fact that the economic environment for international transfers of goods was much more complex and perplexing than that for domestic transfers. For international transfers, due considerations were given to additional economic factors such as host country inflation, currency fluctuation and exchange control, foreign governmental regulations of income taxes, tariffs, dividend remittance and ownership by foreign parties, and host country's economic, social and political stability.

3.2.5 Burns (1980)

Burns aimed to improve the understanding of intracompany policies on transfer pricing decisions of US based MNEs. She sent a questionnaire to the senior financial officer of 210 US MNEs to assess the influence of 14 variables on the export pricing decision and select the five most important. Sixty-two useable responses were received.

Burns identified five factors (internal foreign environment, influences on cash flows, artificial barriers, taxes, and economic structure), each explaining more than five percent of the variance and eighty percent in total. Using factor analysis, she isolated ten variables with the greatest influence on the intra-firm pricing decisions of the respondents. Market conditions in the foreign country, competition in the foreign country, and reasonable profit for foreign affiliates, in that order, were found to be the three most influential factors in the TP decisions of firms.

3.2.6 Tang (1981)

Tang extended his previous work on US and Japanese firms (Tang, 1979; Tang and Chan, 1979) to British and Canadian MNEs in an attempt to investigate domestic and international practices with regards to methods and environmental factors.

With 80 (28%) and 192 (48%) useable UK and Canadian responses respectively, Tang found that UK MNEs showed similar preferences for both cost-oriented (34%) and market-oriented (34%) methods in pricing their international transfers. Twenty-seven percent of UK MNEs preferred negotiated pricing. Canadian MNEs, on the other hand, showed slightly greater preference for market-oriented pricing. With respect to ITP objectives, 44% of UK MNEs cited the maximization of consolidated after-tax profit as their most dominant ITP objective while 39% cited equitable performance evaluation of domestic and/or foreign divisions. These compared with 38% and 46% of Canadian respondents respectively. With regards to environmental factors affecting ITP, both sets of companies ranked overall profitability highest while the competitive position of subsidiaries in foreign countries was ranked second and third respectively by UK and Canadian companies. Opinions differ significantly between the two groups with regards to the ranking of the influence of custom duty rates and legislation. While UK companies ranked it eleventh out of twenty, Canadian companies ranked it second.

3.2.7 Czechowicz et al (1982)

The aim of this research was to document the ITP practices of US-based firms as part of a broad investigation of the performance evaluation practices of US and non-US MNEs operating in the US. Czechowicz et al sent out 300 questionnaires and received 88 useable responses from MNEs.

They found that cost-based methods were most often used by US firms while non-US firms preferred market-based methods. Negotiated pricing was more popular with non-US firms than with US MNEs who appeared to have equal preferences for central administration and negotiation of prices.

3.2.8 Tang (1982)

For this study Tang identified the environmental factors that UK MNEs consider in

formulating their transfer pricing policies. Tang sent questionnaires to the managing directors of 290 manufacturing and mining companies selected from the largest 500 UK companies in The Times 1000 Directory. Eighty companies returned useable responses of which forty-seven rated the importance of twenty environmental factors (on a five-point scale) in formulating their transfer pricing policies. He found that the overall profit to the company was ranked highest followed by the competitive position of subsidiaries in foreign countries.

3.2.9 Benvignati (1985)

The aim of Benvignati's research was to analyze the scope, uniqueness, method of pricing, and firm and industry characteristics for transfer pricing.

Using confidential corporate data from the US Federal Trade Commission's Line of Business program, 466 companies with 3186 lines of business were analyzed. Benvignati ran multiple regression analysis on the percentage of foreign transfers at market against twelve independent variables to test which variables were significant in the market versus non-market decision.

The higher the level of intra-firm exports the higher the proportion of non-market pricing. If firms were exporting to branches (rather than subsidiaries) this corresponded to higher levels of market-based pricing. Of the organizational variables, market-based pricing was significantly related to the size of the firm and also to the number of foreign subsidiaries.

The results were significantly different with 75% of foreign transfers compared to 50% of domestic transfers accounting for non-market pricing. The research suggested that differences in the market versus non-market pricing decision were due to inter-company differences rather than inter-industry differences.

3.2.10 Lecraw (1985)

Lecraw investigated MNEs from US, European, Japanese and other less developed countries with subsidiary operations in Thailand, Malaysia, Singapore, Indonesia or the Philippines to establish the extent of usage of market and non market-based TP methods by his respondents relative to their home country.

Through the use of responses from questionnaires he administered during interviews with top managers of 153 subsidiaries of 111 MNEs, he found the use of non market-based methods to be significantly greater among Japanese firms with seventy-five per cent of their transfers (inwards and outwards) priced on a non-market basis. US MNEs used market-based pricing for sixty-eight percent of their transfers compared to sixty-five percent and forty-five percent usage by MNEs from Europe and other countries respectively. Subsequent multiple discriminant analysis confirmed that Japanese MNEs tended to use non market-based transfer prices to a greater extent than the other MNEs.

Lecraw also found the use of non market-based TP to be strongly associated with attempts by MNEs to reduce duties and profit taxes, allocate capital between countries, reduce risk and circumvent government price and capital/profit remittance controls. Joint ventureship with local partners was found to significantly reduce the extent to which non market-based prices were used.

3.2.11 Al-Eryani (1987)

Al-Eryani identified, tested and explained similarities and differences in transfer pricing motives and tested the influence on company size and industry on a transfer pricing model for both affiliates in less developed (LDCs) and more developed countries (MDCs).

Questionnaires were sent to 791 MNEs identified by Dunn and Bradstreet's Billion Dollar Directory. Of those sent surveys, 164 US MNEs replied of which 88 had affiliates in LDCs and 76 had affiliates in MDEs. The questionnaire asked respondents to rate thirty-four environmental factors and fifteen transfer pricing methods using a five-point scale.

Al-Eryani found that the top four ranked environmental determinants for US MNEs operating in MDCs (and LDCs) were compliance with US tax and customs regulations, compliance with the tax and custom regulation of the host country, maximization of overall corporate profit, and minimization of overall corporate income taxes.

3.2.12 Wheeler (1988)

Wheeler sought to compare the rate of return on assets of US-based foreign-owned companies and their US-owned counterparts using Statement of Income data from the IRS. He found that the return on assets of all US-owned corporations was six times larger than those of foreign-owned US subsidiaries. He concluded that improper transfer pricing is the only potential explanation for these differences.

3.2.13 Al-Eryani, Alam and Akhter (1990)

These three researchers sought to examine the impact that both organizational and environmental factors have on the ITP strategies of US MNEs. Based on information obtained through a questionnaire-based survey of 164 US MNEs, Al-Eryani et al identified the key determinants of transfer pricing decisions.

Legal constraints and firm size were the most significant factors influencing the ITP strategies of US MNEs. In addition, larger firms tended to use market-based TP methods enabling them to comply with the laws and regulations of both home and host countries.

3.2.14 Kim and Lyn (1990)

Kim and Lyn compared the profitability of foreign-owned companies to those of US owned ones as part of a broad-ranging study of the power, performance, growth opportunities, risk, efficiency, etc. of foreign MNEs in the US.

A group of fifty-four foreign companies was compared with an unmatched group of fifty-four US companies using the average of five different ratios (earnings per share, return on equity before tax, return on equity after tax, gross profit margin and operating profit margin) for the years 1980 to 1984.

The unpaired univariate t-test statistics revealed significant differences between the two groups, thus Kim and Lyn concluded that foreign companies operating in the US earn lower profits than American companies. By using accounts receivable turnover, inventory turnover, and total asset turnover as measures of efficiency, they found that American-owned companies were more efficient than foreign-owned ones.

3.2.15 Business International Corporation and Ernst & Young (1991)

The aim of this study was to investigate how internal and external factors affect MNEs' ITP methodology and policy formulation processes. Ninety-six useable responses were received and interviews with a wide-range of professionals (lawyers, accountants, etc) were conducted.

Both environmental and organizational factors were found to affect impact respondent firms' TP policies. The two most important environmental factors were competitive pressures and tax/accounting rules changes, while the two most important internal factors were organizational structure and corporate strategy. With regards to ITP methods, market price or CUP ranked first for the transfer of tangible products by respondents, followed by modified market price, standard price and rate of return methods in that order. The descending order of method preference for intangibles was profit split method, exact comparable method and inexact comparable method respectively. Ensuring arm's length relationship, avoiding ITP audits, global tax minimization and profit maximization were found to be the most important TP objectives of respondents.

3.2.16 Grubert and Mutti (1991)

Grubert and Mutti investigated income shifting and tax planning opportunities used by MNEs as well as addressed a number of international taxation issues.

1982 data on a cross-section of 33 countries was used to determine whether income shifting would be supported by a negative correlation between the reported after-tax profit rate and the tax rate. Several regression models were run using different measures of tax (average effective tax rate; statutory tax rate), profitability (book income/sales net of purchases from the parent; book income/equity), algebraic relationship (linear or not), and with and without an adjustment for GDP growth rate. They found that tax rates were a highly significant determinant of reported profits. It was also suggested that the influence of the tax rate on reported profits was much more pronounced at the low end of the tax spectrum and that GDP was often a significant determinant.

3.2.17 Johnson and Kirsch (1991)

Johnson and Kirsch examined the ITP objectives of US-based MNEs through a survey-based study. Questionnaires were sent to 576 US-based companies identified from the Business Week Global 1000 and Fortune 500 lists. Out of the 576, 230 companies responded of which 79 used transfer pricing in an international setting.

Minimization of corporate taxes was the most important ITP goal of US companies. Other important goals were increasing overall corporate profit and simplicity/ease of application. Performance evaluation of subsidiaries' managers was the least ranked corporate objective. In addition, companies who claimed to use decentralized ITP policies ranked performance evaluation low.

3.2.18 Borkowski (1992a)

Borkowski strove to investigate the motivational criteria that US-based MNEs use to select an ITP method to determine whether the choice of an ITP method was affected by either organizational (internal) or international (external) variables.

Based on a selection of 7 overall internal variables, 7 overall external variables, and using the TPM as the dependent variables, Borkowski sent questionnaires to 301 manufacturing companies with international affiliates listed on either the Fortune 500 or Business Week 1000. Replies were received from seventy-nine companies, which transferred products internationally. Of the 79, 51.9% used a version off full-cost, 32.9% used market-based and 15.2% used negotiated price.

She found that the choice of TP method was affected by organizational variables such as size, conflict between parent and subsidiary, ease/cost criterion, degree of decentralization and performance evaluation. TP choice was also affected by international factors such as international tax and tariffs, economic stability of parent MNEs, favorability of the economy to parent, and SS 482 regulations.

3.2.19 Borkowski (1992b)

As a follow-up to her 1992a research, Borkowski sought to investigate the organizational and environmental factors affecting the ITP practices of US-based MNEs and the objectives of their ITP methods.

Using the data obtained from Borkowski 1992a, nonparametric tests (Chi-square test of goodness of fits and Wilcoxon paired sign-rank tests) were applied to 247 (39 matched) respondents. Differences were found in a number of organizational and environmental factors affecting their transfer decision-making process. These differences were, however, not reflected in transfer pricing choices. Most MNEs employed the same transfer pricing method for both domestic and international transfers in an attempt to achieve similar domestic and international objectives. In addition, the choice of TP method was contingent upon specific organizational and environmental characteristics rather than the nature of transfer.

3.2.20 Borkowski (1992c)

For this research Borkowski attempted to expand on her two previous studies (1992a, 1992b). Her findings were adapted to document the TP methods preferred by MNEs operating in the US.

Borkowski found that in relation to legally accepted TP methods, under SS 482 of the US Internal Revenue Service regulations, of the 128 useable responses received, 47% used cost plus, 33% used comparable uncontrolled prices (CUP), while 20% used the "fourth method". She also reported that most MNEs used their current method mainly to fulfill US legal requirements. Given the choice, the majority of the companies would shift to other methods they considered optimal.

3.2.21 Cravens (1992)

Cravens attempted to increase the understanding of the motivating factors involved for MNEs in setting transfer pricing policies using both qualitative and quantitative measures. In addition, she explored the causal relationship beginning with the extent to which situational determinants influence transfer pricing objectives which, in turn, influences transfer pricing policy thus influencing financial statements.

Cravens received 82 questionnaires out of a sample of 542 US-based MNEs to determine the objectives of their transfer pricing policies, the characteristics of these companies, and assess how well these companies achieved their stated objectives. She tested five main hypotheses – two on tax management, two on competitive position, and one on internal dimensions (performance evaluation, motivation and

goal congruence). These hypotheses were tested on the basis of objectives rather than pricing method on the grounds that firms following different objectives might still use similar pricing.

Cravens findings stressed that transfer pricing was viewed as an effective tool rather than merely a necessity. Cravens concluded that transfer pricing should play an active role in business strategy and could be used to achieve a variety of objectives such as managing the tax burden, maintaining competitive position, and promoting equitable performance evaluation.

3.2.22 Tang (1992)

In an update of Tang's 1977 study, Tang used the 143 replies from the largest 500 US industrial companies listed in the 1990 directory of Fortune 500 (80% of these respondents had at least one foreign subsidiary) to determine if the transfer pricing methods utilized by respondents in his 1977 were still found to be applicable.

Since the 1977 study, the respondents stated that market-priced methods were now used more than cost-based methods. In a direct comparison of the 1977 and 1990 rankings of environmental factors considered in formulating transfer pricing policies, overall profit to the company remained the most important environmental variable but "differentiation in income tax: rate and income tax: legislation among countries" rose from number four to number two.

3.2.23 Klassen et al (1993)

Klassen et al attempted to examine geographic income shifting by US MNEs in relation to worldwide changes in corporate tax rates between 1984 and 1990. Financial statement data from 191 US MNEs was used to determine changes in reported profitability for the period subsequent to a particular tax change.

They found that US MNEs shifted income to the United States from Canada and from the United States to Europe in 1985 and 1986, consistent with increasing Canadian rates and decreasing rates in Europe.

3.2.24 Harris (1993)

Harris compared US MNEs' US and worldwide income and investment activities both before and after the Tax Reform Act (TRA) of 1986, which reduced the corporate tax rate from 45% to 34% and reduced subsidies for capital investment.

Two hundred US manufacturing firms were randomly selected from the SIC3000 industry file on Compustat from 1984 to 1988. Compustat data (which includes the dependent variable -current taxes payable to the federal government net of investment tax credits) was supplemented by company annual reports. Regression analysis including dummy variables for location of subsidiaries as well as additional variables available on Compustat -- R&D expenses, investment tax credits, interest expense, number of employees were used.

Harris found evidence to suggest that US manufacturing companies engaged in income shifting. In the US-based tests, MNEs shifted more income into the US (and responded more quickly) after the TRA of 1986. In the foreign-based tests, the results supported MNEs shifting income from foreign jurisdictions into the United States in 1987 and 1988.

3.2.25 Tang (1993)

For this study, Tang investigated both domestic and international transfer pricing methods used by firms. Tang administered questionnaires to all the 500 firms listed in the 1990 edition of the Fortune 500 directory of the largest industrial corporations in the US. responses from 143 companies covering 24 industrial groupings were received.

He found that 41%, 46% and 13% of firms used cost-based, market-based and negotiation-based TP methods respectively for their international transfers, while 46%, 37% and 17% used the three methods respectively for their domestic transfers. His comparison of these findings with those of his earlier study (Tang, 1979) revealed a shift towards greater use of market-based prices by US companies for both domestic (from 32% in 1979 to 37% in 1993) and international (39% in 1979 to 46% in 1993) transactions. With regards to the influence of environmental variables on the TP decisions of companies, Tang found that overall profitability, inter-country

differentials in income tax rates and regulations and restrictions on the repatriation of profits and dividends by foreign countries (in that order) were the three most important variables considered by his respondents.

3.2.26 Crain and Stitts (1994)

Crain and Stitts compared the gross profit margin (GPM) of foreign-controlled firms operating in the US to their US-controlled counterparts.

Fifty-one foreign companies and fifty-one US companies were matched on the basis of SIC code and sales and the mean GPM was compared using matched-pair t-tests. They found that the mean GPM of the two groups were significantly different at the ten percent level. Foreign-controlled firms reported significantly lower GPMs than the US controlled firms.

3.2.27 Borkowski (1996)

Borkowski aimed to consolidate the findings of twenty-five transfer pricing studies of US MNEs using meta-analysis. Her main objective was to analyze whether there were any significant factors across the studies which affected the choice of ITP method.

One of the overriding findings was that there was very limited consistency between these studies in terms of sample size, response rates, variables studied and level of statistical analysis, making it difficult to use meta-analysis. Her findings suggested that many of the empirical studies over the last forty years had either been ad-hoc in nature, not attempting to ensure any consistency with previous research, or designed specifically to address shortcomings of previous research.

3.2.28 Cravens and Shearon (1996)

For this study Cravens and Shearon extended Cravens (1992) research on TP by applying an outcome-based approach to companies' ITP choices, concentrating on the financial consequences or outcomes of TP rather than TP methods.

Questionnaires were sent to 519 US-based MNEs yielding 82 useable responses. Cravens and Shearon developed and estimated multivariate regression models using financial outcomes (total tax burden and return on assets) as dependent variables.

It was found that 42% of firms used cost-based methods, 33% used market-based methods, 18% used negotiated pricing, while the remaining 7% used multiple methods.

3.2.29 Jacob (1996)

Following and extending the approach of Harris (1993), Jacob (1996) supplemented the data on taxes paid and geographic profits with information on volumes of inter-geographic trade.

The study examined two time periods, 206 US MNEs in 1982-84 and 289 US MNEs in 1988-90, and combined data gathered from both Compustat and annual reports.

The results for both periods, considering the differentials in corporate tax rates between the US and overseas, were consistent with global tax-minimization through transfer prices during both periods.

3.2.30 Borkowski (1997a)

For this study, Borkowski investigated whether organizational, environmental and financial factors influenced the transfer pricing choices made by Japanese and US MNEs.

Survey responses were received from 39 out of 241 Japanese MNCs and 28 out of 126 US MNEs. The survey data was mainly categorical (5 point Likert scale) and was analyzed using nonparametric statistics (Wilcoxon and Kruskal-Wallis).

Borkowski found that Japanese MNEs shifted from the use of cost-based methods market-based and negotiated pricing methods. Performance evaluation was a significantly more important organizational factor to Japanese MNEs than to US ones when TP choices are being made. In addition, there was a statistically significant difference in the TP methods used by both groups of MNEs.

3.2.31 Cravens (1997)

In a further expansion of her earlier research, she used the data collected in Cravens (1992) to examine the strategic role of TP among US-based MNEs listed in the World

Directory of Multinationals and on the US stock exchange.

She received 82 questionnaires out of a sample of 542 US-based MNEs to determine the objectives of their transfer pricing policies, the characteristics of these firms, and assess how well these firms achieved their stated objectives.

Twenty-eight percent of her respondents listed the management of the tax burden and other related issues as the primary objective of their ITP system. Other variables of importance include maintenance of the competitive position of subsidiaries and the promotion of equitable performance evaluation.

3.2.32 Munday & Peel (1997)

Munday and Peel undertook a wide-ranging comparison of the performances of Japanese owned manufacturing companies operating in the UK with those of their UK owned counterparts.

With a matched sample of 97 companies, they compared both groups' performance and efficiency, among other characteristics, using annual financial and non-financial details for 1994 as provided by the FAME database.

They found that Japanese-owned companies significantly underperformed UK-owned ones with respect to profitability, asset efficiency, stock efficiency and credit risks. The findings suggested that Japanese companies may have engaged in ITP strategies which had the effect of minimizing liability to UK corporate tax.

3.2.33 Collins and Shackelford (1998)

Collins and Shackelford examined the effects of taxes on cross-border payments of dividends, interest, royalties and management fees, between US MNEs' foreign affiliates.

Their study used 1990 tax return information based on US Form 5471 since US MNEs are required to file a separate Form 5471 to the IRS for each foreign subsidiary. The form disclosed information on cross-border payments of dividends, interest, royalties and management fees (with the precise recipient/payer of the flows

not identified) for the largest 7,500 foreign subsidiaries (by total assets).

Their findings supported the assertion that for cross-border payments of dividends, interest, and royalties, but not management fees, US MNEs coordinated their non-US activities to mitigate foreign taxes.

3.2.34 Oyelere and Emmanuel (1998)

The aim of this study was to determine whether the profitability (performance) and dividend (post-performance) distribution of foreign-owned domestic companies (FoDCs) operating in the UK revealed evidence of the use of ITP for income shifting. The study investigated the link between reported profitability and dividend distributions of UK-based FoDCs and UK-controlled enterprises (UKCEs) to determine whether ITP was used for income-shifting purposes.

Sample FoDCs were matched with sample UKCEs on the basis of capability (total assets), and consequently, a comparison of the reported profitability (performance) and dividend (post-performance) distributions of the two samples was undertaken. A sample of 36 FoDCs operating in the UK were matched with 36 UKCEs on the basis of total assets value.

Their findings revealed significant divergence in the performance and post-performance distributions of the two samples. They found an unusual relationship between the profitability and distribution of FoDCs, suggesting that ITP was used to shift income from the UK.

3.3 Limitations

In addition to the limited theoretical bases and the various focuses of previous research, one of the limitations of the findings of previous studies is that the explanation for the results is limited to the influences of tax (i.e., income shifting, transfer pricing). The studies usually do not consider alternative explanations for observed effects or even the total tax regime such as corporate strategy and regulatory requirements with the exception of Emmanuel (1999). As the aim of this research is to test whether comparables under different regulations allows greater or lesser discretion, this research provides an evaluation of the new profit methods (TNMM

and CPM) within the transfer pricing regulatory framework, building upon previous research (Lecraw, 1985; Wheeler, 1988,1990; Kim and Lyn, 1990; Crain and Stitts, 1994; Chan and Chow, 1997; Munday and Peel, 1997; Oyelere and Emmanuel, 1998; Tworowski, 1999) while, at the same time, computing comparables that can be used for profit based methods and support transaction based methods.

The limitations of previous research vary according to the aim of the research, research method, statistical tests, etc. In addition, the limitation of the previous empirical studies lie in the data used. The majority of income shifting studies analyze US MNEs reflecting the predominance of US studies and further illustrating that there is more access to informative data (both accounting and tax data) in the US where ITP research is more welcome compared to other countries.

Although in the UK access to quality, publicly available data remains available, research on transfer pricing is limited with the majority of empirical evidence being US based and a limited amount UK based. Small empirical studies (Munday & Peel, 1997) were conducted based on 1993-1994 data before the introduction of profit based methods and (Oyelere and Emmanuel, 1998) did not focus on comparables. Empirical US evidence was monitored under different tax systems than the UK and was subject to substantial changes i.e. 1986 IRS Tax Changes. Through the use of UK data, this research increases the understanding of the degree of discretion that can be provided under different regulations and the extent to which the ownership effect on profit and taxes can be detected. This study opens a new avenue for ITP research which stresses issues on whether comparables give wide discretion calculation, and to what extent control is exercised over abuse.

3.4 Summary and Justification for Current Study

After reviewing the relevant literature, it is apparent that there is a lack of non-US studies in this area. The income shifting literature relates to either tax regime change (mainly in the US) or was conducted prior to the introduction of comparables. The absence of empirical tests on companies discretion on comparables and the limited theoretical bases justifies this research and attempts to go beyond previous work in testing whether current regulations allow MNEs discretion in terms of compliance by providing an evaluation of the most recent OECD TNMM and US IRS CPM. Under

the new regulations, it can be observed that all the transfer pricing methods and documentation relates to comparables. This study compares the profitability of foreign-owned UK companies to UK companies and tests the reported taxes by foreign-owned and domestic companies. Although indirect observation of income shifting has its limitations, due to data access it is perhaps the only feasible approach. This work is not primarily concerned with income shifting but whether or not the new ITP profit-based methods and comparables, TNMM and CPM, curb discretion.

Chapter 4
ITP Regulations

4.1 Introduction

This chapter highlights the relevance of the ITP legislation, provides a brief background on each of the main players in the ITP studies, and explains the main features of the 1995 OECD Guidelines, 1998 UK transfer pricing regulations self assessment, 1994US IRS section 482 Regulations, and 1986 Japan Special Taxation Measures Law 66-4 (STML). The focus on mainly of ITP methods, the hierarchy of methods adopted by these regulations, and the differences between these regulatory bodies. This chapter represents an introduction to the complex world of transfer pricing and highlights the fact that different countries are subject to different rules, regulations, and recommendations from their tax authorities and governments. This chapter demonstrates that the exercise of discretion may be country oriented and/or facilitated by methods chosen.

4.2 The Relevance of ITP Regulations

Each time a MNE sets transfer prices, as it must when members of the group in different countries do business with each other, the group is determining the income subject to the income tax of each country involved. A relatively small percentage change in the transfer prices of a large volume of exports or imports can make a significant difference in a country's taxable income. As trade between related parties in different countries grows, the stakes become even higher. According to previous research, MNEs have a motive for setting their transfer prices in such a way as to reduce the amount of income in high-tax countries and, concomitantly, to increase the amount of income in low-tax countries.

Therefore, under the laws of most countries including the UK, the tax administration is given the authority to review and, if appropriate, to adjust the transfer prices of their taxpayers for the purpose of determining the income subject to tax, specifically in the case of transactions with related parties in foreign countries.

Having determined that, in order to protect the income taxable income, the tax administration needs the authority to review and adjust transfer prices and determine the standard to be applied. Throughout the world, the "arm's length" standard has become the accepted benchmark for transfer pricing. The arm's length standard is mandated by OECD Guidelines and reflects the international consensus on transfer

pricing and the transfer pricing rules of most countries including the UK and US, but excluding Japan which has not expressly addressed the issue. Under the arm's length principle the prices charged in transactions between commonly controlled parties must be consistent with the consideration in, or results of, similar transactions between uncontrolled taxpayers.

Transfer pricing issues typically arise in two different contexts. According to Cole (1999), the first scenario is transfer pricing between a taxpayer in a high-tax country and a related party in a low- (or no-) tax country. A country could be low-tax generally, it may provide tax holidays (or partial tax holidays) for certain types of activities, or the related party may have loss or other carryovers so that, for a time, it effectively is subject to a low rate of taxation. Such cases are of particular concern to tax authorities of high-tax countries as the MNE derives a benefit to the extent that it can allocate income away from the high-taxed taxpayer to the low-taxed related party.

The second scenario includes circumstances where the related party is also in a high-tax jurisdiction and where the MNE as a whole has not avoided taxes (taking into account taxes it paid to all jurisdictions).

In general, transfer pricing rules have become more strict and transfer pricing enforcement more intense over the past two decades as related party international trade has increased, and as more countries have focused on the enormous amount of tax revenue that is linked to transfer pricing. This trend toward expanded rules and tighter enforcement has been led by the US (Cole, 1999).

Since the mid 1980s, the US has been the prime instigator of the introduction of more onerous and punitive transfer pricing rules and regulations, culminating in Section 482 final regulations released July 1994. At the same time the OECD revised its own draft guidelines. Since then the OECD and the US have been refining their guidelines and regulations, respectively, and many fiscal authorities around the world have responded by introducing their own transfer pricing rules and regulations. Deloitte Touche Tohmatsu (1999) summarized the current transfer pricing positions in selected countries as of 1 January 1999. (See Table 4-1)

Table 4-1: Transfer pricing issues in selected countries (extract from Deloitte Touche Tohmatsu (1999))

	<i>OECD</i>	<i>Japan</i>	<i>UK</i>	<i>USA</i>
Tax authority	Not applicable	National Tax Administration	Inland Revenue	Internal Revenue Service
Regulations, Rulings Guidelines	Transfer pricing Guidelines for Multinational Enterprises and tax Administrations	STML- Enforcement order 39-12 STML- Circular 66-4-1 – 66-4-9	Sch 28AA, Taxes Act of 1998	Reg s1.482s, 1994 Reg s1.6662-6#
Documentation requirement	Pricing decision should be documented in accordance with prudent business practices reasonable for tax authorities to expect taxpayers to prepare and maintain such material no contemporaneous obligation	No statutory requirements, but strongly recommended for audit defense no contemporaneous obligation	Taxpayers should keep records needed to deliver a correct and complete return in practice, burden shifting to taxpayer to demonstrate reasonable transfer pricing certain documents are required to be prepared and retained contemporaneous documentation is expected	Must include certain principal documents, as well as supporting documents contemporaneous documentation required
Tax return disclosure	Should be limited to information sufficient to allow tax administration to determine which taxpayers need further examination	Schedule 16-4: Detailed statement concerning foreign affiliated persons	No separate disclosure required (i.e. on signing tax return taxpayer will be implicitly confirming compliance with arm's length principle)	Forms 5471 and 5472 require disclosure of detailed information on controlled transactions with foreign entities

Table 4-1 gives selected extracts for the OECD, Japan, UK and US. The first two rows present the tax authority and the regulations, rulings and guidelines which are applicable in each country. The third row demonstrates how onerous documentation requirements have become globally and the importance of MNEs' ability to support

their transfer pricing policies with the appropriate documentation. The fourth row presents the variety of requirements concerning the transfer pricing information which should be disclosed on the tax return. In relation to disclosure, the UK is the least onerous, but there is a presumption that all transactions are at an arms' length and can be supported (Elliott and Emmanuel, 2000). For accounting periods ending on or after 1 July 1999, transfer pricing falls within the corporate tax self-assessment system. This means that taxpayers are required to: ensure their computation of taxable profits reflects arm's length prices; justify the transfer pricing policy; and, maintain sufficient and appropriate contemporaneous documentation. In addition, penalties might apply to certain tax adjustments based on non-arm's length pricing for selected countries (See Table 4-2).

Table 4-2: Penalties on Transfer Pricing Assessment (Deloitte & Touche strategy matrix for Global Transfer Pricing (as of June 2000)

	<i>Penalty</i>	<i>Size of Penalty</i>	<i>Comments</i>
OECD	✓	10-200%	Notes that civil monetary penalties are frequently calculated as a percentage of the tax understatement
Japan	✓	10-40% + 14.6 p.a.	Ordinary penalties of 10-40% of additional tax plus delinquency tax of 14.6% per annum
UK	✓	Up to 100%	Up to 100% of unpaid tax. No penalty if taxpayer has made an "honest and reasonable" attempt to comply
USA	✓	20% or 40%	20% or 40% of additional tax for adjustments exceeding objective thresholds

4.2.1 Legislation to Minimize Tax Avoidance Practices

Tax authorities remain aware of the incentive for transfer pricing manipulations by MNEs. Transfer pricing provisions were first introduced at the time of World War I (Pagan and Wilkie, 1993) in an attempt to counteract them. With war resulting in higher levels of taxation, there was the need to discourage tax avoidance by overseas associates who desired to keep their profits away from tax authorities in high-tax nations. The UK's 1915 pioneering start in this direction was closely followed by the US in 1917. Minimal activity however took place on the transfer pricing front between 1915 and the mid-1960s. Transfer pricing only became an issue of much general concern in the mid-1960s when international trade and investment began to reach new levels. This is not to suggest that international businesses made no use of

transfer pricing to transfer profits abroad. Despite the broad powers which many countries gave their tax authorities in the 1920s and 1930s, transfer prices were manipulated to shuffle profits internationally (probably to avoid what was considered unfair or double taxation) with British firms having subsidiaries in the US claiming, when pressing the government for a tax treaty in 1944 that high US taxes on dividends have forced them to repatriate profits by "unsatisfactory expedients such as invoicing goods at higher prices" (PRO file FO371/38588 reported in Picciotto, 1992; p. 770).

4.2.2 Background - OECD

The Organization for Economic Cooperation and Development (OECD), was founded in 1960. Its current members include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Korea, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. The OECD is governed by a Council comprised of member representatives with its work mostly accomplished by committees of member country representatives, the OECD's "main tax policy body" the Committee on Fiscal Affairs (1995 OECD Guidelines, Preface, para. 10). Technically, the OECD Transfer Pricing Guidelines are a report of the Committee on Fiscal Affairs that has been approved for publication by the Council.

The present Guidelines are a successor to a 1979 report of the Committee on Fiscal Affairs entitled "Transfer Pricing and Multinational Enterprises." Between the publication of the 1979 report and the publication of the present Guidelines, the Committee issued three other reports that addressed transfer pricing issues: a 1984 report entitled "Transfer Pricing and Multinational Enterprises-Three Taxation Issues," a 1987 report entitled "Thin Capitalization," and a 1993 report on the then-proposed U.S. transfer pricing regulations entitled "Tax Aspects of Transfer Pricing within Multinational Enterprises: The United States Proposed Regulations." According to the Committee on Fiscal Affairs, the current Guidelines are "intended to be a revision and compilation" of the 1979, 1984, and 1987 reports, which "also draw upon" the 1993 report (1995 OECD Guidelines, Preface, paras. 13-14).

4.2.3 Background - United Kingdom

In the UK, Inland Revenue (IR) is less specific as to the acceptable methods for arm's length pricing although a provision to tax a foreign parent on the basis of percentage of the turnover of the business undertaken by its UK subsidiary. S. 485 of the Taxes Management Act, 1970 (now S. 770 of the Income and Corporate Taxes Act 1988) empowers the Board of Inland Revenue to adjust the taxable income of a UK resident involved in artificial pricing to a figure that would have resulted if the parties to the transaction had been unrelated. The legislation was drafted to cover a wide range of transactions, both tangible and intangible, including lettings and hiring of property, grants and transfers of rights, interests or licenses and the giving of business facilities of whatever kind [S. 773(4)].

Once in a while, IR issues guidance notes stating its interpretation of transfer pricing rules. One of these, *The Transfer Pricing of Multinational Enterprises: Notes by the UK Inland Revenue*, issued in a press release in January 1981, provides guidance on the IR's interpretation of UK's TP legislation. Another note, *Transfer Pricing New OECD Report: Guidance on Revenue Procedures*, issued as IR Tax Bulletin Issue No. 25 in October 1996, reflects IR's position on OECD (1995). IR upheld the arm's length principle as laid down in the (OECD) Guidelines and stated that their application of domestic legislation will be guided by the Guidelines.

In October 1997, IR issued a consultative document, *Modernization of the TP Legislation*, which serves as a basis for revamping UK's cumbersome transfer pricing legislation. The document, which includes draft rules applied from 1999, was necessitated by the need to reform the system to fit into the new self-assessment regime operating for UK taxpayers and the increased level of cross-border intra-group trading by MNEs (Rolfe, 1997). In 1998 Finance Act introduced a comprehensive modernization of the United Kingdom's transfer pricing legislation. These changes were part of a wider reform of the Corporation Tax regime, which included the introduction of self-assessment for companies. For accounting periods ending on or after July 1, 1999, and years of assessment 1999/2000 et seq., sections 770 to 773 of the Income and Corporation Taxes Act (ICTA) 1988 have been replaced by sections 108-111 and Schedule 16FA 98. The full text of the basic rule now appears as Schedule 28AA ICTA 1988.

The document proposed to bring the OECD Transfer Pricing Guidelines and Article 9 of the OECD Model Tax Convention directly into UK statutory rules. For the first time in the history of UK transfer pricing law enforcement, penalties of up to 100% became imposable on adjustments for transfer pricing errors caused by fraud or neglect. Due to the continued importance of this regulation, more analysis of the effect of the new UK transfer pricing legislation will be provided in Chapters 6 and 7.

4.2.4 Background - United States

The US IRS' principal weapon up to 1990 had been S. 482 of the Internal Revenue Code which is the same as the old S. 45 of the Revenue Act of 1928. Approved in 1968, it provided the basis for the US IRS's monitoring of transfer prices for two decades without substantial changes. It authorized the IRS to "distribute, apportion, or allocate gross income, deductions, credits or allowances between or among organizations, trades, businesses" in any case involving two or more organizations, trades or businesses owned or controlled directly or indirectly by the same interests if the service determines that such distribution, apportionment or allocation is necessary to:

- a. clearly reflect the income of any of the organizations, trades or businesses; and,
- b. prevent the evasion of taxes.

Section S. 482 required the transfer price to be at an arm's length price and which unrelated parties would charge and accept in the transaction. It is specified for each of five major categories of transaction that the primary test would be the comparable uncontrolled price (CUP), the amount that was charged or would have been charged in an independent transaction with or between unrelated parties dealing at arm's length. This was considered to be the arm's length pricing principle which was first promulgated for the valuation of inter company transactions by the Treasury Department in 1934. The relative insignificance of MNE intra corporate trade however made the section and its requirements almost redundant at that time.

Attempts were made by different countries in the early 1950s to early 1970s to attack the aggressive use of tax havens by domestic corporations through the introduction of the controlled foreign corporation (CFC) provision, an anti-avoidance legislation that

attributes profit accumulated in offshore subsidiaries back to the parent company.

US authorities, fully aware that the arm's length principle needed to be internationally agreed to substantially increase its level of potency, was actively involved in international meetings of professional bodies and intergovernmental organizations (Picciotto, 1992). This, among other factors, probably accounted for the continued popularity of the arm's length principle with international attempts at regulating transfer pricing along with the difficulty encountered in attempts to enforce the principle.

The 1980s saw a strong push by the US to reform and upgrade TP regulations. The period 1986 to 1996 witnessed eleven years of additional provisions, commencing with the broadening of the legal provision, followed by the upgrading of compliance requirements, penalties for under-filing, interest deduction restrictions, issuance of new temporary regulations involving complex methodology, and ending with the enactment of final regulations released July 1994.

4.2.5 Background - Japan

Japan's transfer pricing environment has been shaped by its historical, political, and cultural influences. This can be seen in the tax authorities' often apparent desire to retain in Japan the profits of foreign affiliated Japanese corporations operating in the heavily regulated Japanese economy. The following provides a comprehensive overview of the historical, legislative, and practical aspects of Japan's transfer pricing environment.

When comparing Japanese tax practices with those of other jurisdictions, it is important to note that notwithstanding the volume and entirety of the Japanese tax regulations, and administrative guidance, there still remains a great deal of uncertainty as to the precise manner of its application. Accordingly, Japanese tax authorities have considerably more discretion in the imposition and collection of taxes than their peers in other major industrialized nations (notably the United States) where the laws and regulations are more precisely laid out as to provide greater certainty for both the taxpayer and the enforcing tax administration. Therefore in recognition of the generally vague nature of Japanese legislation, within the Japanese tax environment,

practical experience in the manner in which the tax authorities apply the tax law and regulations is paramount (Feinschriber, 2000).

The corporate tax system is essentially a self-assessment system. Taxable income is based on the accounting profits of the company, with net profit before tax adjusted for items that are not tax deductible and for items such as special allowances and tax losses brought forward. The tax year is the corporation's annual accounting period and can be a calendar year or a fiscal year, but cannot exceed 12 months (Kato et al, 1994).

4.3 OECD

4.3.1 Introduction

The OECD has recommended to its member countries that their tax administrations follow the guidance contained in the OECD's "Transfer Pricing Guidelines for Multinational Enterprises and National Tax Administrations" set forth in 1995. Similar to US transfer pricing regulations, the OECD Guidelines adhere to the arm's-length standard and recommend the use of uncontrolled comparable transactions and specific transfer pricing methods to determine a range of arm's length prices for a controlled cross-border transaction. While OECD Guidelines acknowledge that taxpayers should base their controlled transfer prices on a sound analysis and should document the basis on which such prices are set, the amount of effort called for by OECD Guidelines is markedly less than what US regulations would require to avoid a tax penalty on a large transfer pricing adjustment (Feinschriber, 2001).

Most OECD member countries, including major international traders such as the United Kingdom, have never issued detailed transfer pricing regulations. In those countries, the Guidelines may serve as the local transfer pricing regulations. Even when a member country has issued detailed regulations, the Guidelines will serve as the common point of reference for negotiations with the competent authorities of tax treaty partners over the proper allocation of taxable income from cross-border transactions (Feinschriber, 2001).

4.3.2 Arm's Length Principle

A principal purpose of the Guidelines is to endorse continued application of the arm's-

length standard in determining whether the results of cross-border transfer pricing should be adjusted by national tax administrations. According to the Guidelines, the arm's-length standard permits adjustments only insofar as the conditions that obtain between associated enterprises differ from those that would have obtained "between independent enterprises in comparable transactions and comparable circumstances" (OECD, 1995, Chap 1, para. 1.6). The Guidelines cite Article 9 of the OECD Model Tax Convention as authority for this principle (OECD, 1995, Chap. 1, para. 1.6).

The Guidelines identify certain administrative practices as departures from the arm's-length principle and recommend against their use. A comparison of controlled and uncontrolled transactions requires a consideration of all of the differences that might have affected the price charged in the uncontrolled transactions. Accordingly, the use of "unadjusted industry averages" to adjust the results of controlled transactions is expressly criticized (1995 OECD Guidelines, Chap. 1, para. 1.16). Restructuring a transaction into something other than what the associated enterprises actually undertook is described as an arbitrary and inequitable exercise unless either of two situations apply: (1) the substance of the transaction varies from its form or, (2) the form varies so far from what uncontrolled enterprises would have undertaken that it impedes the determination of an arm's-length price (1995 OECD Guidelines, Chap. 1, para. 1.37).

4.3.3 Comparability (OECD & US IRS)

The Guidelines hold that the results of uncontrolled transactions can serve as a useful benchmark for adjusting the results of controlled transactions only if the "economically relevant characteristics" of the controlled and uncontrolled transactions are "comparable" (OECD, 1995, Chap. I, para. 1.15). For this purpose, transactions are considered to be comparable only if: (1) any differences would have no material effect on the results or (2) any material effect can be eliminated by adjustments (OECD, 1995, Chap. I, para. 1.15).

The attributes of a transaction that may affect comparability are as follows:

- The specific characteristics of the product or service being sold;
- The functions performed by the parties;

- Any contractual terms;
- The economic circumstances of the parties; and,
- The business strategies of the parties. (OECD, 1995, Chap. I, para. 1.17)

These attributes are essentially the same as the factors identified by US transfer pricing regulations as relevant to comparability. One purely formal distinction between the Guidelines and US IRS regulations is that US regulations treat the risks assumed by the parties as a separate factor, while the Guidelines treat risk as part of the functional analysis (OECD, 1995, Chap. I, para. 1.23).

As to contractual terms, the Guidelines reflect US regulations in cautioning that substance may vary from form in a controlled transaction and that the national tax administration should analyze comparability based upon the true terms of the transaction (OECD, 1995, Chap. 1, para. 1.29). Among the relevant "economic circumstances" listed in the Guidelines are the levels (wholesale vs. retail) and geographic location of the markets in which the controlled and uncontrolled transactions take place (OECD, 1995, Chap. 1, para. 1.30), factors also emphasized in the U.S. regulations. Among the relevant "business strategies" listed in the Guidelines are "market penetration schemes," whereby a taxpayer may charge lower prices than uncontrolled enterprises in order to enter or expand into a new market (OECD, 1995, Chap. I, para. 1.32). Similar to US transfer pricing regulations, the Guidelines affirm that lower prices do not warrant an adjustment if the market penetration strategy is plausible and reasonably limited in time (OECD, 1995, Chap. I, para. 1.35).

4.3.4 Arm's Length Range (OECD & US IRS)

The Guidelines specify that a range of prices or profit results may qualify as arm's length. It also observes that a range may be particularly appropriate when the transactional net margin method is applied. Substantial deviations within the range may reflect variations in the reliability of data supporting the various points within the range. By contrast, US regulations suggest that such deviations may reflect a lack of complete comparability. The Guidelines do not follow the US approach of adjusting for suspiciously wide ranges by applying statistical methods such as the inter-quartile range which consists of the results for which there is a 75 percent probability of a result falling below the upper end of the range and a 75 percent probability of a result

falling above the lower end of the range, but rather simply proposes "further analysis." Moreover, while US regulations provide that controlled transactions that fall without the arm's-length range will ordinarily be adjusted to the midpoint of the range, the Guidelines simply note that there are arguments both for adjusting to the midpoint and for adjusting to the nearest end point (OECD, 1995, Chap. I, paras. 1.45-1.48).

Adjusting the arm's length range is one of the major differences between the OECD and the US IRS. This research tests the adjustment of the range on the applications of TNMM and CPM. According to previous research, a wide range exists even after applying statistical methods such as the inter-quartile range. Horst (Cole et al, 1999) investigated return on assets of US independent wholesalers. Horst found that the 25th percentile average for the return on assets was 2.6%, while the 75th percentile was 15.4%. Thus, the inter-quartile range between 2.6% and 15.4%.

4.3.5 Transfer Pricing Methods

Priority of Methods

OECD Guidelines recognize five transfer pricing methods as potentially consistent with the arm's-length principle: the CUP method, the resale price method, the cost plus method, the profit split method, and the transactional net margin method. The traditional transaction methods are the three methods that were specifically endorsed in the 1968 US transfer pricing regulations. Under those regulations, other methods were to be applied only if the traditional methods could not be used. This priority of methods was abandoned in current US regulations, but it is preserved in the Guidelines, which describe the profit split and transactional net margin method as methods "of last resort" to be applied only when the complexities of real life business situations place practical difficulties in the way of application of the traditional transaction methods (OECD, 1995, Chap. II, para. 2.49; Chap. III, 3.1).

The introduction of the profit based methods in the US was mainly due to the increase of the number of transactions among the national affiliates of a multinational company typically involve unique products or occur at different levels of the market from arm's length transactions, taxpayers or tax administrators could not identify or obtain pertinent information about comparable uncontrolled transactions and so could not apply anyone of the three traditional specified methods. By default, "fourth"

methods were widely applied in actual cases, but with no regulatory guidance as to what specific methods were or were not appropriate (Cole, 1999).

This significant deficiency in the 1968 Regulations would likely have continued indefinitely were it not for the amendment of Section 482 in 1986 to require that for transfers of intangible assets, the royalty or other consideration received by the owner of the intangible should be commensurate with the income attributable to the intangible. In the 1988 White Paper on Transfer Pricing (A Study of Inter-company Pricing Under Section 482 of the Code, IRS Notice 88. 123,1988-2 C.B. 458), the US Treasury Department and the Internal Revenue Service concluded that in cases where no comparable uncontrolled transaction could be identified and the licensee had not itself developed or otherwise acquired valuable, non-routine intangibles, the commensurate with income royalty should be computed by allowing the licensee to earn a "basic arm's length return" (the BALR method). Under the BALR method;

“the royalty would soak up any excess profits of the licensee, so the licensee's rate of profit would be comparable to the profits of comparable independent companies that owned only routine intangibles” (Cole, 1999, Pg.9-3).

In January 1992, the US Treasury Department and the IRS proposed Regulations (1992 Proposed Regulations) that included what has come to be called the comparable profits method (CPM). Confronted by a firestorm of criticism by foreign governments and U.S. taxpayers (including foreign-based multinational corporations) of the constructive profit interval as formulated in the 1992 Proposed Regulations, the US Treasury Department and the IRS scaled back the application of CPM in the Temporary Regulations promulgated in January 1993 (1993 Temporary Regulations) and further still in the final Regulations promulgated in July 1994 Regulations (Cole, 1999).

4.3.5.1 Comparable Uncontrolled Price Method

The CUP method compares the price charged for controlled transfers to the price charged for comparable uncontrolled transfers. When comparable uncontrolled transactions can be identified, it is considered "preferable over all other methods" and can be applied to tangible property, intangible property, and services (1995 OECD Guidelines, Chap. II, paras. 2.6, 2.7, 2.11, Chap. VI, para. 6.23, Chap. VII, para.

7.31). Under US regulations, the CUP method applies only to transfers of tangible property. The regulations provide an analogous method for transfers of intangible property called the comparable uncontrolled transaction (CUT) method. US regulations presently contain nothing analogous to the CUP method for services.

4.3.5.2 Resale Price Method

The resale price method determines an arm's length price for an enterprise's controlled purchases of property by subtracting from the uncontrolled resale price an appropriate gross margin (the "resale price margin"). The appropriate resale price margin can be determined from uncontrolled purchases and resales by the enterprise or from uncontrolled purchases and resales by independent enterprises. The OECD Guidelines note that the activities of a reseller may range from a mere forwarding function to full ownership of the inventory and full responsibility for a variety of connected services such as advertising and guaranteeing the products, and that the level of activity will influence the size of the appropriate margin (1995 OECD Guidelines, Chap. II, paras. 2.14, 2.15, 2.24).

The resale price method tolerates larger differences between the products sold in controlled and uncontrolled transactions than does the CUP method, and greater weight may be given to functional comparability. The method may be difficult to apply when the reseller adds substantially to the value of the product. The 1995 OECD Guidelines contemplate using the resale price method for both tangible and intangible property, the latter when the property is sublicensed to third parties (1995 Guidelines, Chap. VI, paras. 2.19, 2.22, 6.23). By contrast, US regulations contemplate its use only for tangible property.

4.3.5.3 Cost Plus Method

The cost plus method determines the arm's-length price for a controlled sale by adding an appropriate markup to the costs incurred by the seller. The appropriate markup is ideally determined from uncontrolled sales by the enterprise, but markups realized by independent suppliers can also be used. As with the resale price method, product comparability is generally less critical than functional comparability (1995 OECD Guidelines, Chap. II, para. 2.32-2.34). While the US regulations limit the cost plus method to sales of tangible property, the Guidelines also contemplate its use for the

sale of services (1995 OECD Guidelines, Chap. VII, para. 7.31). Consistent with the aversion of the Guidelines to the use of net profits methods, adjustments in expenses are allowed if they reflect functional differences, but not if they reflect only different efficiency (1995 OECD Guidelines, Chap. II, para. 2.38).

4.3.5.4 Profit Split Method

The profit split method determines the division of profits from controlled transactions in accordance with how profits would have been divided between independent enterprises (1995 OECD Guidelines, Chap. III, para. 3.5). What the Guidelines refer to as "contributions analysis" allocates profit in accordance with the relative value of the functions performed by the parties. What the Guidelines refer to as "residual analysis" first assigns a basic market return to each party and then divides the residual profits, presumably attributable to unique and valuable assets based upon an analysis of the facts and circumstances (1995 OECD Guidelines, Chap. III, paras. 3.17, 3.19).

4.3.5.5 Transactional Net Margin Method

The transactional net margin method compares the net profit margins from controlled and uncontrolled transactions relative to an appropriate base such as sales, costs, or assets. Similar to the cost plus method, it is ideally applied to controlled and uncontrolled transactions of the tested enterprise but can also be applied using the margins on comparable transactions of an independent enterprise. More detail is provided on TNMM in the following chapter.

4.3.6 Documentation (OECD & US IRS)

Chapter V of the OECD Guidelines is devoted entirely to the subject of documentation and advocates an approach that sharply contrasts with US requirements in several particulars. The Guidelines hold that taxpayers should price controlled transactions in accordance with the arm's-length principle and should document their efforts in case the prices are examined. The Guidelines note that the documentation obligations of a taxpayer will depend in part upon where the burden of proof rests under domestic tax law, but conclude that even where the burden rests upon the tax administration, the taxpayer may be obligated to produce sufficient documentation to permit an examination of the taxpayer's transfer prices (OECD, 1995, paras. 5.2-5.4).

The Guidelines recommend against requiring production of documents that became available only after the controlled transaction took place (OECD, 1995, Chap. V, para. 5.8). A premise of the documentation recommendations of the Guidelines is that taxpayers are not expected to take account of information that becomes available only after a controlled transaction has occurred (OECD, 1995, Chap. V, paras. 5.3, 5.28).

In relation to the disclosure, the Guidelines recommend against requiring production of transfer pricing documents when the return is filed beyond the minimum necessary to identify taxpayers needing examination (OECD, 1995, Chap. V, para. 5.11). An example of this would be a requirement to disclose on the return which transfer pricing methods were used by the taxpayer.

4.4 United Kingdom

4.4.1 Introduction

There has been transfer pricing provisions in the UK tax code for more than 50 years. Transfer pricing changes were overhauled in 1998, as the 1998 Finance Act introduced a comprehensive modernization of the United Kingdom's transfer pricing legislation. These changes were part of a wider reform of the Corporation Tax regime, which included the introduction of self-assessment for companies.

For accounting periods ending on or after July 1, 1999, and years of assessment 1999/2000 et seq., sections 770 to 773 of the Income and Corporation Taxes Act (ICTA) 1988 have been replaced by sections 108-111 and Schedule 16 FA 98. The full text of the basic rule now appears as Schedule 28AA ICTA 1988.

The introduction of the 1998 legislation began with the publication of a Consultative Document on 9 October 1997 in which the UK government unveiled its plans to update the laws on transfer pricing. The consultation was largely limited to peripheral matters and the main body of the proposed legislation went unchanged into Schedule 28AA ICTA 1988. The alignment with Corporation Tax Self-Assessment (CTSA) was cited as the impetus behind the changes, but the 1998 legislation was clearly designed to protect the tax base from further erosion in an environment where other fiscal authorities were aggressively policing compliance with their own domestic transfer pricing rules. The Inland Revenue wished to level the playing field and to halt

the perceived migration of profits out of the United Kingdom to those fiscal jurisdictions where rules were tighter and aggressively policed. Inland Revenue believed the changes in the tax regime should not only promote voluntary compliance and fairness, but also minimize compliance costs (Feinschriber, 2001).

The 1998 legislation contains a specific requirement that profits be calculated in accordance with the arm's length standard. Previously, there was no requirement to adhere to the arm's length standard in calculating profits for inclusion in a tax return. Instead, Inland Revenue had the power to replace transfer prices. This process was burdensome and included the issuance of formal Directives by the Inland Revenue Board to replace transfer prices. The IR Board addressed transactions that had resulted in the understatement of profits in the United Kingdom through non-arm's length pricing (Feinschriber, 2001).

No penalties could ordinarily be attached to the tax on pricing increases made by the Inland Revenue since there was no statutory requirement to return profits calculated in accordance with the arm's length standard. The transfer pricing regime remained totally reactive for 50 years. Everything has changed for accounting periods ending on or after 1 July 1999, for which Schedule 28AA ICTA 1988 is now in effect.

4.4.2 Implementing OECD Principles

The 1998 UK transfer pricing rules are aligned with the OECD Transfer Pricing Guidelines and Article 9 ("Associated Enterprises") of the OECD Model Tax Convention. The new rules were to be interpreted in such a manner as best secures consistency with the OECD Model and Guidelines. This approach, of course, effectively imports the interest and meanings of the OECD text to the 1998 UK statute (Section 2 Schedule 28AA).

The basic assertion of the arm's length principle is found within Article 9 of the OECD Model, the subject of which is the application of this principle. Article 9 states that adjustments can be made to dealings between certain parties if one of those parties participates directly or indirectly in the management, control, or capital of the other party (or other parties do so in both companies), and the terms and conditions between them are not at arm's length. The OECD did not define indirect control, but

Inland Revenue has attempted to define indirect control in a wide manner for the purposes of the 1998 legislation. Prior to the new rules, Inland Revenue had in the past, attempted to use Article 9 when unsuccessful under other articles, especially Article 11, which pertains to interest. Inland Revenue sought to impose a UK tax charge using Article 9 in conjunction with section 788(3)(c) TA 1988. There, deficiencies with the old transfer pricing law have prevented adjustment. Inland Revenue was only partially successful with this approach, mainly in the context of negotiated settlements (Feinschreiber, 2001).

4.4.3 Definitional Issues

Schedule 28AA raises a number of definitional issues pertaining to provision, transaction, and the like.

Provision

The arm's length provision can be applied where dealings are between connected parties and where the actual provision has conferred a potential tax advantage on one or both of the persons. The provision may be made or imposed by means of a single transaction or series of transactions. The transfer of assets, creation of legal relationships, and the assumption of liabilities are all seemingly within the new rules, as well as mutual practices that are not legally enforceable. The wording of the legislation may enable Inland Revenue to raise two arguments:

1. That a particular arrangement is not at arm's length; and,
2. That a series of arrangements of which the arrangement forms one part is not at arm's length (Section 1 of Schedule 28AA).

Returns must be made on a yearly basis and each must be considered separately.

Transaction

Transaction encompasses transactions for which no price has been set and transactions that would not have taken place between third parties. The 1998 rules include a series of transactions. Schedule 28AA includes transactions without cost price. Taxpayers contended that interest-free loans were not within the legislation (Paragraph 3 of Schedule 28AA).

Inland Revenue takes the approach that it can ignore a transaction that, in its opinion, would not have taken place between third parties, an approach prone to difficulties

and which introduces subjectivity. Under the old law, Inland Revenue could not simply hypothesize a transaction that was different in form from the one that had taken place. Inland Revenue was, instead restricted to assigning an arm's length price to the actual transaction, however unusual the transaction may have appeared to them.

The transfer pricing provisions include a series of transactions in which only one of the parties is involved, or transactions in which neither party is involved. These provisions would catch those situations wherein third party funding is provided say by a bank, but is guaranteed by a connected party. The transfer pricing provisions would seem to apply to those transactions that would have been carried out between the parties but are instead performed by others, perhaps even unconnected parties, interposed in the chain (Paragraphs 3(3) and (4) of Schedule 28AA).

4.4.4 Joint Ventures

A potential major participant may include joint venture participants. The UK tax law widens the control net such that certain joint ventures are included. Most significantly, joint ventures that previously relied on a 50-50 split are now within the purview of the tax law. Neither party in the joint venture may exercise control, an arrangement that is common in many commercial situations. Under the 1998 rules, any joint venture in which the parties each have a minimum 40 percent of the relevant interests, rights, and powers in or over the joint venture will now have to ensure that all their dealings with the joint venture are at arm's length. The joint venture participants must document the transactions as arm's length.

A party is considered to have a 40 percent interest in the joint venture if, at any time in the future, the party is entitled to acquire or become entitled to acquire sufficient rights or powers. The party is considered to have this interest if another person can exercise sufficient rights or powers on the parties' behalf, under the parties' direction, or for the parties' benefit. This transfer pricing rule may be of concern to those companies that have only 40 percent interest in another company, but have little control over the pricing policy laid down by the major participant (Ernst & Young, 2000).

As a part of the investigation on the performance of foreign-owned companies

compared to UK companies, this study contains a test of the impact of joint ventures on the performance of foreign-owned companies. This research used individually matched Japanese/UK (Japanese joint venture), US/UK (US joint ventures), and UK/Other (UK joint ventures).

Due to time and resource constraints which did not permit investigation of individual joint venture companies' percentages of interest, this research defined a foreign-owned joint venture as a foreign company (Japanese- or US-owned) with at least one British company as shareholder. A joint venture UK company is defined as a UK company with at least one foreign company as shareholder (excluding Japanese or US companies).

4.4.5 Penalties

These transfer pricing penalty provisions apply to the submission of an incorrect return or where there is fraudulent or negligent conduct on the part of the person making the return. Under the 1998 rules, a person will be considered to have been negligent if he or she fails to consider whether the transfer pricing arrangements are in accordance with the arm's length principle. That person must have made a reasonable attempt to comply with the condition and maintain appropriate records to demonstrate that they have not been negligent. Inland Revenue stated that they believe taxpayers will want to document what they do to the extent necessary to enable them to sustain the arm's length nature of their arrangements and prices in any subsequent discussions with Inland Revenue. Inland Revenue further stated that taxpayers who act in accordance with the published guidance on documentation should not face penalties on account of fraudulent or negligent conduct. However, Inland Revenue has confirmed that detailed documentation will not in itself free them from penalties if the documentation does not show that the taxpayers had good grounds for believing their arrangements and pricing to be in accordance with the arm's length principle (Ernst & Young, 2000).

The Inland Revenue Board has the power to mitigate the 100 percent maximum, and the board will have regard to the size of the business, gravity of the acts, disclosure, and cooperation. Inland Revenue has issued some guidance as to the practical application of the mitigation criteria. This guidance was centered almost entirely on

size and gravity and a good deal of uncertainty remains. Thus, an MNE's best protection against penalties is a transfer pricing policy fully documented as arm's length in line with Inland Revenue's published guidance (Feinschriber, 2000).

4.4.6 UK Documentation

Documentation becomes important as penalties can reach up to 100 percent where the taxpayer has neglected the due consideration of a pricing policy such as the arm's length requirement. Documentation needs to demonstrate due process to Inland Revenue in affirming adherence with the arm's length standard. Inland Revenue has chosen to rely on the issue of Guidelines, which it published in final form in its October 1998 Tax Bulletin rather than on prescriptive rules and regulations on what is to be kept.

4.5 US IRS

4.5.1 Introduction

The Treasury Department in the US adopted final income tax regulations under Internal Revenue Code (IRC) Section 482 on July 8, 1994 which included all transaction-based and profit-based methods. In January 1992, the US Treasury Department and the IRS proposed Regulations (1992 Proposed Regulations) that included the comparable profit method and profit split method. The US Treasury Department and the IRS limited the application of CPM in the Temporary Regulations promulgated in January 1993 (1993 Temporary Regulations) and further still in the final Regulations promulgated in July 1994 Regulations (Cole, 1999).

The final regulations allow for substantially greater flexibility in determining whether an inter-company transaction has been conducted at an arm's-length price. However, that flexibility is achieved at a cost. Multinational groups face greater uncertainty under the final rules because they must apply the "best method" of the various pricing methods which could be applicable. Taxpayers must be prepared to support transfer pricing policies with thoughtful economic analysis based on accurate data regarding the group's business. The regulations impose enhanced compliance requirements, which appear in the penalty provisions of regulations issued under Internal Revenue Code Section 6662(e) and (h) (Feinschriber, 2001).

4.5.2 Methods

Transfer pricing in the US focuses on pricing or net income allocations among affiliated entities, primarily corporations with very little attention being paid to branches or divisions from a transfer pricing perspective. Transfer pricing focuses primarily on the legal ownership and control of legal entities, but US transfer pricing provisions permits the IRS to examine contractual relationships, corporate partnerships, and other relationships. Nevertheless, the US transfer pricing rules that define related parties are often narrower than the scope of related parties as defined in other national jurisdictions. Transfer pricing in the United States is perceived as having two, often conflicting objectives:

1. Determining an equitable share of the profits between taxing jurisdictions; and,
2. Determining equitable prices for inter-company transactions (Feinschreiber, 2000, pg. 11-2).

(a) Comparability Analysis

US transfer pricing rules do not establish transfer pricing priorities or the selection of transfer pricing methods. Instead, the taxpayer and the IRS undertake the following comparability analysis to determine the “best” transfer pricing method:

- Functions
- Contract terms
- Risks
- Economic conditions
- Property or services

The detailed explanation of each of these steps were explained in the OECD comparability section.

(b) Pricing Methods

The transfer pricing regulations in the United States establish the following transfer pricing methods:

- Comparable uncontrolled price (CUP) method
- Resale price method
- Cost plus method

- Comparable uncontrolled transaction method
- Additional transfer pricing methods described below

These methods are similar to the OECD methods with minor differences.

(c) Profit Split Methods

Profit split methods focus on the entire activities of the transaction or group of transactions across international borders:

- The comparable profit split method
- The residual profit split method
- Global dealing transfer pricing method

(d) Comparable Profits Methods

CPMs focus on US activities of the business in seeking comparative data between ostensibly similarly situated companies in the US. The CPM is similar to TNMM, detailed in section 5.2 in the following chapter.

A number of adjustments are made to establish the CPM. These adjustments include the following:

- Inventory adjustments
- Accounts receivable
- Accounts payable
- Foreign exchange risk

(e) Implementing the Standard Industrial Classification System

Transfer pricing regulations in the US require the taxpayer to use the "best" transfer pricing method. In practice, both the taxpayer and US IRS auditors often deviate sharply from applying the best method analysis. The taxpayer or the US IRS auditor often applies the CPM procedure by using the steps that involve the Standard Industrial Classification (SIC) code:

- Use the Standard Industrial Classification (SIC) code for the business or division most typically a four digit SIC code;
- Include other businesses in that SIC code; and,

- Prepare and utilize CPM comparative formulas” (Feinschriber, 2002, pg.11-3).

For this research as detailed in Chapter 6, four-digit SIC codes were applied to determine the activities of the comparable company sets. The SIC approach to transfer pricing is fraught with difficulty. The following are the six most serious problems for the taxpayer or IRS examiner:

1. The initial selection of SIC may be determined by a staff person in the company who is unfamiliar with the ramifications of SIC selection;
2. Such individual may not be familiar enough with the operations of the business to adequately select the SIC code;
3. A four-digit SIC code is too broad-based and encompasses activities vastly different from the taxpayer's under examination;
4. The SIC process does not adequately reflect changes in the taxpayer's business. Many businesses continue on with the SIC code by habit, rather than by further analysis;
5. The SIC process does not contain an established process for changing a business's SIC code; and,
6. The SIC code may become obsolete as high-technology moves rapidly. Multiyear data might not be available in any event (Feinschriber, 2000).

4.5.3 Contemporaneous Documentation

A taxpayer can avoid a detailed transfer pricing audit under Section 482, and foreign-owned U.S. corporations can avoid audit under section 6038A and section 6038C by preparing and retaining primary documents and background documents. The documents are part of the "contemporaneous documentation" provisions and must be prepared as a matter of course, not prepared specifically for audit. Contemporaneous documentation are of two types:

1. Principal documents-applies to foreign-owned U.S. corporations; and,
2. Background documents-applies to foreign-owned U.S. corporations and transfer pricing transactions.

Principal documents include business overview; organizational structure; Section 482

documentation; method selection; rejected methods; controlled transactions; comparables; and, general index.

4.5.4 Penalties

The US has a complex transfer pricing penalty regime that is separate from penalties that could apply to taxpayers in other contexts and from the special penalty rules that could apply to foreign-owned US corporations. These penalties are not deductible in determining gross income. There are, in fact, two transfer pricing penalties:

1. The transaction penalty; and,
2. The net adjustment penalty.

There are two penalty levels:

1. The substantial valuation misstatement penalty (20 percent); and,
2. The gross valuation misstatement penalty (40 percent).

All penalties apply to Section 482-related tax underpayments. Each type of penalty can apply at either of the two levels mentioned above. The penalty applies to the tax, not to underpayment itself. Tax underpayment is the difference between the result reflected on the tax return and the results as finally determined. The substantial valuation misstatement penalty applies if the price stated is twice as much as the true price or is half as much as the true price.

Many foreign governments, in their direct discussions with US Treasury and the IRS and through the OECD Committee on Fiscal Affairs, strongly criticized even the scaled-back version of CPM in the 1993 Temporary Regulations and final 1994 Regulation as contrary to the arm's length standard and urged its elimination from the final Regulations. According to Horst (Cole, 1999 pg. 9-4):

“the foreign governments' harsh criticism of the scaled-back version of CPM was based on a naive and ultimately insupportable assertion that the traditional transfer pricing methods could be applied in most cases”.

Given the frequent difficulty of identifying closely comparable transactions, taxpayers and tax administrators both benefit from being able to rely on a specified method (CPM) that can be used when the critical input to other transfer pricing methods is

missing (Cole, 1999). Similar to OECD methods with the exception of the priority of the method and the differences

4.6 Japan

4.6.1 Introduction

The Japanese transfer pricing environment is unique and is fashioned to operate within the Japanese political, legislative, and economic context. Due to the nature of Japanese transfer pricing legislation and supporting regulations, the tax authorities retain a considerable degree of discretion in the manner of the imposition and collection of tax. Accordingly, despite the fact that Japan does not have a formal documentation policy enforced by a significant penalty regime, it is essential within the Japanese transfer pricing environment to have full and detailed documentation in place. Failure to undertake such documentation and planning in advance of a transfer pricing investigation places the taxpayer at a significantly increased risk of receiving transfer pricing assessment.

Japan is a member of the OECD and actively participated in the drafting of both the 1979 OECD Report (Organization for Economic Cooperation and Development. "Transfer Pricing and Multinational Enterprises," and the 1995 OECD Guidelines (Organization for Economic Cooperation and Development. "Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations," As such, the Japanese tax authorities advocate the theory and practices set out by the OECD, including the OECD's arm's length principle.

Japanese domestic transfer pricing legislation is based on the 1979 OECD Report rather than the later and more comprehensive OECD Guidelines. This arguably anachronistic feature of the Japanese domestic legislation results from the fact that the Japanese legislation was enacted in 1986 and has not been subsequently amended to incorporate the features of the 1995 OECD Guidelines. Unlike other transfer pricing guidelines or rules, including OECD Guidelines, the use of an arm's length range had not been expressly mentioned as acceptable in Japan.

4.6.2 Use of Secret Comparables

Japanese tax authorities place heavy reliance on comparable transactions as opposed

to comparable company financial performance, given the tax authorities' practice of reviewing transfer prices on a transaction specific basis. In most cases, these comparables are external uncontrolled comparables obtained by reverse audit of the taxpayer's competitors, who remain undisclosed throughout the audit process. In this situation, the taxpayer is immediately and significantly disadvantaged, because without knowing the source of the external comparable, the taxpayer stands little chance of assessing comparability and making meaningful adjustments between its own transactions and the comparable transactions (Feinschreiber, 2000).

4.6.3 Importance of the Japanese Intangibles

The term "Japan Intangible" is the description given to the aggregate of a number of economic and business factors to which the Japanese tax authorities attach particular importance during a transfer pricing audit. The two main factors that have been commonly referred to in connection with the Japan Intangible are as follows,

1. The Japanese entity's contribution to the development of the Japanese market for the goods it sells (e.g, Japan-specific marketing, Japan-specific product development, the results of research and development performed in Japan, the relationships with key customers, etc.); and,
2. The economic benefit derived by foreign-owned companies from the relatively high prices in Japan's often regulated markets.

4.6.4 Methods

Methods Specified for Inventory Goods

Japan has adopted the methods for computing the arm's length price outlined in the 1979 OECD Report. SMTL Article 66-4(2) provides three transactional methods and two "other methods" for calculating the arm's length price for "tested" (i.e., controlled) transactions involving inventory goods, namely:

- Transactional Methods
- Comparable uncontrolled price (CUP) method
- Resale price method
- Cost plus method

Other Methods

- A method similar to the above three methods (the quasi methods)

- **Methods prescribed by Cabinet Order (the profit split method)**

The legislation does not recognize either the US-style CPM or the OECD TNMM as an acceptable basis for establishing transfer pricing in Japan. However, it is thought that the transactional net margin method may be included in the legislation in the future in order for Japanese rules to maintain full consistency with the 1995 OECD Guidelines.

There is no priority among the three transactional methods, or concept of the "best method" as required by the US Internal Revenue Code's 482 or the concept of the or "last resort" as adopted by OECD guideline. The other methods are to be used only as a last resort in the event that the traditional three methods cannot be used.

4.6.4.1 Comparable Uncontrolled Price Method

The CUP method establishes a comparison between the prices employed in actual transactions between unrelated parties that are similar in terms of the products or services handled, the transactional level, transactional quality, transactional time, and other criteria.

The transactions to be used for the purpose of comparison under the CUP method could be either internal transactions (i.e., transactions by one of the persons engaged in the tested transaction) or external transactions (i.e., transactions between two unrelated persons, neither of which is involved in the tested transaction).

4.6.4.2 Resale Price Method

The Japanese resale price method establishes the amount of "normal profit" to be deducted from the resale price of the purchaser. The Japanese legislation refers to the "normal profit margin," defining this as the amount computed by multiplying the resale price by a normal profit ratio to be prescribed by Cabinet Order. (SMTL article 66-4(2)(i)(b)) The normal profit ratio prescribed by Cabinet Order is the ratio of gross profit to the total amount of sales revenue of a reseller from a similar transaction under similar circumstances with an unaffiliated person (SMTL EO, article 39-12(6)). Either internal or external comparable transactions can be used to assess the arm's

length nature of the tested transaction as in the CUP method. These ratios are sometimes referred to as the internal profit margin and external profit margin respectively.

In practice, many of the transfer pricing audits conducted in Japan have involved foreign-owned Japanese taxpayers whose primary functions are the marketing and distribution in Japan of products manufactured and developed outside Japan. The tax authorities have been particularly aggressive in pursuing companies that possess a large market share and high brand profile. In these cases, it has been usual to employ the resale price or quasi-resale price method (Borstell, et al, 1997).

When using the resale price method, it is typical for Japanese tax authorities to apply an external comparable transaction for determining the appropriate gross margin. The tax authorities frequently obtain this information from the taxpayer's competitors through a reverse audit. SMTL Article 66-4(2)(i)(b) specifically requires the tax authorities to make adjustments for the differences between the taxpayer's transaction and the comparable transaction(s). However, in practice, it is very difficult for the taxpayers to even identify the differences, due to the anonymity of the source of the external comparable (Borstell, et al, 1997).

Taxpayers are able to surmise the external comparable transaction(s) used by the tax authorities in some cases. The number of third-party transactions similar to the taxpayer's transaction are often extremely limited and are familiar to businesses competitors within a narrow field. However, even in these cases, taxpayers are still disadvantaged due to the lack of access to comprehensive financial information and contractual terms relating to the external comparable(s) (Borstell et al, 1997). Furthermore, in some cases, the adjustment process amounts to a battle between tax authorities who claim that the taxpayer's large market share and high total sales volumes are due to the onshore party's unique marketing intangibles, and the taxpayer's contrary claim that their success in the Japanese market is due to product intangibles developed by the foreign affiliated party outside Japan (Borstell, et al, 1997)

4.6.4.3 Cost Plus Method

The Japanese cost plus method establishes the arm's length price as the amount computed by adding to the costs of the seller to acquire, manufacture, or perform other acts as to the inventory assets the normal profit margin (SMTLArt.66-4(2)(i)(c)). As with the resale price method, the normal profit margin is defined as the amount computed by multiplying the cost of goods by a normal profit ratio to be determined according to the Cabinet Order (SMTLArt.66-4(2)(i)(c)). The Cabinet Order then defines the normal profit margin as the ratio of the gross profit margin to the total amount of costs incurred by the seller when the same or similar assets are sold to an unaffiliated person. (SMTLEO 39-12(7)). As with the resale price method, either an internal profit ratio or external profit ratio can be utilized.

Japan's National Tax Administration (NTA) has not published any formal statement that would suggest particular markups that would apply to specific situations or business activities. This approach is consistent with the general transaction-specific approach of the Japanese tax authorities. However, it places taxpayers at a disadvantage because they do not have any guidance as to the acceptability of their transfer prices until subject to a transfer pricing investigation (Roach et al, 1999). In practice, there are two main issues encountered in the application of the cost plus method in Japan. The first is the appropriate markup level to be used when applying the cost plus margin. The second issue is the appropriateness of the cost base that should be used in applying the cost plus markup.

The cost plus method is normally used to assess the arm's length nature of transactions where the tested party is the manufacturer of tangible assets, and the tested party provides services to its foreign affiliated person, This approach is specifically relevant for a foreign-owned taxpayer. Language and cultural barriers to developing business in Japan have led to the common business structure in which many foreign companies, who sell their products directly to Japanese customers, have established a local service company to provide their foreign parent with services such as market research and liaison activities (Brostell et al, 1997).

Buckley and Hughes (1996) suggested that the Japanese overseas subsidiary is not regarded as profit centre in its own right, therefore there is no incentive to increase

subsidiary profits. Buckley and Hughes explain the low profitability among Japanese companies operating overseas was due to the target costing system widely used by Japanese companies. An Investigation of the performance of the Japanese-owned companies compare to their UK counterparts is conducted as apart of this research.

4.6.4.4 Other Methods

It is possible to use other methods in the event that none of the traditional methods can be utilized. These other methods may either be a method corresponding to a prescribed transactional method or any method prescribed by Cabinet Order. (SMTL article 66-42(2)(i)(d)). The law or regulations provide no details in defining a "method corresponding to a proscribed transactional method." In practice, the Japanese tax authorities have been known to cite the "quasi-resale price" in the official Notice of Assessment when significant adjustments were required to account for differences between the tested transaction and the comparable transaction(s). This practice is sometimes referred to by commentators as the Japanese tax authorities' practice of employing "loose comparables." (Feinschriber, 2000)

Japanese tax authorities have placed much greater emphasis on reviewing profit splits. This is so not only for foreign-owned companies in Japan, but also for Japanese MNEs. In many cases the outcome from applying the profit split approach can be markedly different from applying the comparable profits method adopted by the US (Kato et al, 1994).

The profit split method is generally utilized by Japanese tax authorities during the field audit stage when conducting a transfer pricing investigation of Japanese multinationals. In such cases, the Japanese taxpayer holds all the essential cost data and the Japanese tax officials have access to the information necessary to evaluate the total system profit. This information is generally very difficult to access when the taxpayer is a foreign-owned Japanese subsidiary with an offshore parent. (Borstell et al, 1997). Nevertheless Japanese tax authorities focus on the profit split for foreign-owned companies in Japan. The authorities routinely request information to review how much profit is earned by foreign affiliates from transactions with Japanese affiliates (Kato et al, 1994).

4.6.5 Penalties

Penalty taxes are imposed on the additional corporate taxes at the rate of 10 percent for additional taxes equal to the amount originally reported and 15 percent for additionally assessed taxes in excess of the amount originally reported. In the event of fraud, the penalty tax is increased to 40 percent. These penalties are not deductible and will not be waived, even where there was no intentional manipulation demonstrated by the taxpayer.

Full understanding of the evolving transfer pricing regulatory environment, taxpayers and transfer pricing practitioners is important. Although Japanese transfer pricing rules are considered outdated and growing at a slower pace compared to the US and OECD, over the past few years circulars and small NTA guidelines have expanded significantly. Japanese transfer pricing rules are clearer and more easily applied, with the general consensus being that transfer pricing rules will continue to evolve (Horiguchi, 2002).

4.7 Summary

Globalization provides MNEs with more opportunities to manipulate transfer prices. An increased desire on the part of tax authorities faced with tight fiscal situations to protect and enhance their revenue base, has resulted in tightened regulatory frameworks, presumably due to the fact that individual fiscal jurisdictions are concerned that ITP abuse results in unfair profits being reported and tax revenues being reduced. Each jurisdiction allows profit methods and hence the need to compute comparables. Whether or not profit method is adopted, comparison of comparables may be prudent in order to justify and support the use of transaction methods. Different countries are subject to different rules, regulations, and recommendations from their tax authorities and governments and the exercise of discretion may be country oriented and/or facilitated by methods chosen. Hence, a focus on comparables under different regulations is deemed appropriate when determining whether MNE discretion is limited or safeguarded.

Chapter 5

Comparables and TNMM vs. CPM

5.1 Introduction

This chapter provides a comparison between the OECD's TNMM and the US IRS' CPM, including the main features of each of these profit-based methods as well as their applications. These alternative regulations raise an important issue as to whether any of these regulations can reflect a real adjustment of function and risk differences. FDI theories suggest that MNEs have competitive advantage although the regulations reinforce that they should be equivalents. This chapter demonstrates the attempts made by various regulations to control function and risk differences. Additionally, this chapter defines comparables in relation to transfer pricing methods in general, and to the research method adopted by this study.

5.2 OECD Transactional Net Margin Method (TNMM) vs. US IRS Comparable Profit Method (CPM)

The transactional net margin method (TNMM) is a transfer pricing methodology adopted by the OECD in 1995. TNMM approximates arm's length conditions when traditional transaction methods cannot be reliably applied alone or, in exceptional circumstances, when these traditional methods cannot be applied at all. Unlike TNMM, CPM is a transfer pricing method adopted by the US IRS section 482 and can be used similar to any other transfer pricing method under the best method rule.

5.2.1 Transactional Net Margin Method (TNMM)

The transactional net margin method examines the net profit margin relative to an appropriate base (e.g., costs, sales, assets) that a taxpayer realizes from a controlled transaction (OECD, 1995). TNMM is based on the concept that returns earned by firms operating in the same industry and under similar conditions tend toward equality over a reasonably long period of time. If one firm is earning higher returns than its rivals, it should be able to expand its production or sales at the expense of the less-efficient competitors. In the long run, the firm's competitors will either go out of business or become more efficient and thus increase their returns. Economic theory predicts what will happen in equilibrium over the long run, but is unspoken about the time needed to achieve equilibrium or what the rates of return ought to be in the interim.

In TNMM, the profits earned by a taxpayer in a controlled transaction (or a group of

transactions that can be aggregated under the principles of Chapter I of the OECD Guidelines) are compared with the same measure of profitability from arm's-length uncontrolled transactions. As the Guidelines state, "The net margin of the taxpayer from the controlled transaction...should ideally be established by reference to the net margin that the same taxpayer earns in comparable uncontrolled transactions. Where this is not possible, the net margin that would have been earned in comparable transactions by an independent enterprise may serve as a guide" (OECD, 1995, B.3.26). TNMM is based on the net profit margin, rather than the gross profit margin on which both the resale price and cost plus methods are based. The net profits are expressed relative to sales, costs, or assets with the most commonly employed measures being return on sales and return on assets.

Only one party to the controlled transaction is analyzed when applying TNMM. The choice of which party to examine depends on the availability of comparable data. In general, TNMM is applied to the least complex entity involved in the inter-company transaction. There is usually more comparable data in existence for the least complex entities, and fewer adjustments will be required to account for differences in function and risk between the controlled and uncontrolled transactions. Substantial differences in intangible property ownership generally render a potential comparable unusable for TNMM, as well as for all other methods (Feinschriber, 2001).

"TNMM can be used to determine transfer prices at the time those prices are set, or it can be used to test the reasonableness of transfer prices established by some other means. Tax authorities are likely to use TNMM as a test of reasonableness to determine whether a transfer pricing audit should be initiated" (Feinschriber, 2001, pg. 24). For this purpose, it is necessary to determine what profits will be analyzed before applying TNMM.

When applying TNMM the following steps are required:

- Performing a functional analysis;
- Identifying comparables;
- Choosing a profit measure;
- Determining the appropriate time period for analysis; and,

- Testing the reasonableness of results.

Performing a Functional Analysis and Identifying Comparables:

The first step in applying TNMM is to analyze the functions performed by the affiliate in question and the risks borne by that affiliate, and to determine whether the affiliate owns valuable intangible property.

The second step is to identify potentially comparable transactions or companies. OECD Guidelines recommend using internal comparables, which are uncontrolled transactions in which the affiliate participates. Transactions in which the taxpayer is not involved should be used only if there are no internal comparable transactions. The OECD Guidelines approach is consistent with Section 482 of US IRS regulations. Companies have much more detailed information about transactions in which they participate than unrelated transactions in which they do not participate. As a result, the comparability of the transactions can be evaluated with more accuracy than when data are limited to publicly available information from third-party transactions.

A function and risk assessment should be performed once the comparables have been identified, whether the comparables are internally generated or the company is relying on external comparables. This function and risk analysis is necessarily less thorough for external comparables than for analysis of the affiliated party. Since the goal is to obtain the "correct" arm's-length answer, great care must be taken to ensure that all differences that can affect profitability are identified and accounted for through adjustments to the comparables.

OECD Guidelines do not discuss adjustments for differences in functions and risks in much detail. Instead, they emphasize the need to carefully choose comparables that are as similar in function and product as is possible. "Where differences in characteristics of the enterprises being compared have a material effect on the net margins being used, it would not be appropriate to apply the transactional net margin method without making adjustments for such differences" (OECD, 1995, B.3.53).

After deciding which comparables are to be used, and whether to make adjustments

for differences in functions and risks, it is necessary to choose a particular measure of profitability in applying TNMM. OECD Guidelines are not very specific regarding the profit measures that can be employed. From the point of view of this study, it is feasible to employ more than one profitability measure, using one to test the reasonableness of the others. Using this additional measure to test the selected method provides additional assurance that the transfer pricing is reasonable, assuming, of course, that the other method yields a result consistent with the original method chosen. All the profit-level measures used in TNMM are based on operating income, which is net profit margin. Typically, return on assets (operating income/assets) or return on sales (operating income/net sales) are the two profit-level measures analyzed to determine transfer prices.

OECD Guidelines state that "net margins are less affected by transactional differences than is the case with price, as used in the CUP method." OECD Guidelines further state, "The net margins also may be more tolerant to some functional differences between the controlled and uncontrolled transactions than gross profit margins (1995 OECD Guidelines, B.3.27). In addition, the net margin may be less sensitive to differences in generally accepted accounting practices across countries and by companies within a country.

Once the profit measure or measures have been chosen, they must be computed for each of the comparables and for the controlled transaction. The number of years of financial data that should be considered is open to question. OECD Guidelines provide no specific advice, merely stating, "Multiple year data should be considered to take into account the effects on profits of product life cycles and short-term economic conditions" (OECD, 1995, B.3.44). There are many approaches in determining the appropriate number of years to be used in applying TNMM. The profitability amount is affected by the business cycle; sometimes it will vary significantly within the business cycle. In this situation, it is necessary to use the entire business cycle to determine the range of net margins under the transactional net margin method (Feinschriber, 2001).

Multiple-year data provide many advantages. Companies are subject to one-time events that create an abnormal change in company profits. The use of multiple years

evens out the results and in general eliminates the short-run issues that may lead taxpayers or tax collectors to reach inappropriate conclusions regarding the adequacy of transfer pricing policies.

Another advantage of using multiple years concerns companies that use market penetration strategies. During the market penetration period, profits of the company will be lower than normal. Ordinarily, it is expected that a company engaged in a market penetration strategy will earn above-normal profits after the market penetration period to provide a return on its investment, that is, the below normal profits it earned during the penetration period. However, sometimes the market penetration is merely market maintenance and is pursued to allow the company to remain in business in the face of intense competition. In such cases, no return to the investment accrues to the company because the market conditions do not allow it. In these cases, a multiple-year analysis may be required to adequately assess the company's transfer pricing policies (Feinschreiber, 2001).

An average can be computed in several ways using multiple-year data. Margins can be computed for each company, across time, with a simple average being calculated. Alternatively, margins can be computed using a weighted average, so that years with higher sales will have more weight. By contrast, a yearly average of all comparables (either simple or weighted) could be computed, with these averages then averaged across time. The method of averaging depends on the reasons for using multiple-year data. If the overall business cycle is considered, averaging the individual results for each year may be the preferred method. In this case, company-to-company differences within a year are covered up, so that the overall profitability across time becomes clearer.

While the Guidelines do not stress the importance of testing the reasonableness of the resulting transfer pricing policy, this is considered essential. The final step in determining transfer prices using TNMM (or any other method) is to check the reasonableness of the results using alternative measures or methods. If the true arm's-length range has been determined, it will be supported by alternative pricing measures. If significant differences occur in application of multiple methods, it is almost always the result of errors in either the comparables selection or application of

the method.

5.2.2 Comparable Profits Method (CPM)

CPM evaluates whether the amount charged in a controlled transaction is arm's length, based on objective measures of profitability (profit-level indicators), which are derived from uncontrolled taxpayers that engage in similar business activities under similar circumstances (Treas. Reg. § 1.482-5(a)) Profit-level indicators are "ratios that measure relationships between profits and costs incurred or resources employed (Treas. Reg. §1.482-5(b) (4)). Several profit-level indicators can be used, depending on the facts and circumstances of the tested party. Common profit-level indicators include rate of return on assets and financial ratios such as operating profits to sales or gross profits to operating expenses. The taxpayer must decide which profit-level indicator is most appropriate, or if a combination of profit-level indicators should be used. If a combination is used, the taxpayer must then determine the weights given to the various indicators.

The taxpayer must also decide which party to the transaction should be used as the tested party. The tested party is the participant in the controlled transaction whose operating profit attributable to the controlled transactions can be verified using the most reliable data and requiring the fewest and most reliable adjustments, and for which reliable data regarding uncontrolled comparables can be located (Treas. Reg. §1.482-5(b)(2)(i)). Generally, the tested party will not own valuable intangible property or have other attributes that would differentiate it from uncontrolled comparables.

Profit-level indicators are applied to the tested party's actual financial data associated with the controlled transactions under study. The tested party's profit-level indicators are then compared to those of uncontrolled comparables. Adjustments may be needed if there are wide discrepancies between the tested party and the comparables or among the comparables

In applying CPM, Wright (2000) notes that some practitioners believe that selection of broadly similar companies does not require function and risk differences to be accounted for prior to determining the arm's-length range. CPM and TNMM are

identical from the standpoint of adjustments to account for function and risk differences. In this case, the U.S. regulations require the use of the inter-quartile range for setting transfer prices. Wright (2000) also mentions that other practitioners view function and risk adjustments as mandatory, if a true arm's-length range is to be determined. If adjustments are made, US regulations allow the use of the entire range.

5.2.3 Comparison of TNMM and CPM

MNEs should be interested in achieving a common worldwide approach to transfer pricing. Without a common approach, the probability of double taxation is unacceptably high and between TNMM and CPM can lead to double taxation. The main issue when comparing TNMM and CPM is the priority of these methods. While the 1994 US IRS regulations kept CPM and subjected the choice of methods to the best method rule, OECD guidelines issued in 1995 contained TNMM and specified that TNMM is a case of last resort.

The principal distinction between TNMM of the OECD Guidelines and the CPM of the US regulations is their approach to aggregation of financial data about controlled and uncontrolled transactions. The CPM requires that the analysis be based on the "most narrowly identifiable business activity" for which financial data is available. By contrast, the OECD Guidelines start from the presumption that transactions are ideally analyzed individually and that each level of aggregation must be justified. Critics of the CPM in some OECD countries are concerned that "the most narrowly identifiable business activity" may exceed the degree of aggregation that would be acceptable under the OECD Guidelines (Taly, 1996).

There are substantial similarities between TNMM and CPM. Highlights of the two methods are shown in Table 5-1. One minor difference is between TNMM and CPM is that OECD Guidelines recommend using uncontrolled transactions entered into by the taxpayer (internal comparables) to determine margins, if possible, before using comparable transactions between unrelated parties whereas US IRS regulations have no such suggestion. The use of internal comparables is certainly consistent with US regulations and, no doubt, would be determined to be more reliable as defined by the US regulations than would purely third-party data (external comparables).

A second difference between TNMM and CPM is that US IRS regulations specifically recommend using three years of data, whereas OECD Guidelines merely suggest the use of multiple years. This difference, likewise, should not be fatal to efficient worldwide tax administration as US regulations are broad enough to allow the use of an appropriate number of years so long as they are adequately explained.

Table 5-1: Comparison of Comparable Profit Method (CPM) and Transactional Net Margin Method (TNMM)

	<i>US IRS – CPM</i>	<i>OECD – TNMM</i>
<i>Profit-level indicators</i>	Three specified: <ul style="list-style-type: none"> • Operating income/ operating assets • Operating income/sales • Gross profit/operating expenses Others allowed	None stated explicitly Numerator can be net margin Denominator can be <ul style="list-style-type: none"> • Sales • Assets • Costs
<i>Years of data used</i>	Recommended current plus two previous years	Recommended multiple years
<i>Preferred comparables</i>	Nothing stated	Uncontrolled transactions of taxpayer, then third-party comparables.
<i>Arm's length range</i>	Use of inter-quartile range if no adjustments are made	Full range of results
<i>Adjustment point</i>	To median, or mean, if outside range	None

A third difference between TNMM and CPM is that OECD Guidelines require the numerator of all the profit-level indicators to be the net margin, whereas the US IRS regulations propose the ratio of gross profit to operating expenses as one of the profit level indicators (Berry ratio). The US IRS thus allows an additional profit indicator that can be helpful when comparables have different levels of operating expenses or when data from many countries are being used to determine transfer prices.

The more substantive differences between OECD Guidelines and US IRS regulations lie in their treatment of ranges. OECD Guidelines state that it is important to take into account a range of results when using the transactional net margin method (OECD, 1995, B.3.45). The use of the range in this context could help reduce the effects of differences in the business characteristics of associated enterprises and any independent enterprises engaging in comparable uncontrolled transactions, because the range would permit results that occur under a variety of commercial and financial conditions.

For example, suppose the range of acceptable returns on assets for a manufacturer is three to seven percent of assets. If a tax authority, following OECD Guidelines, audited a manufacturing company in a year in which the company's actual return fell outside that range, the tax authority might be willing to consider arguments that would place the controlled manufacturing company at one or the other extreme within the range. For example, the tax authority might consider arguments that the appropriate return is 3 percent during weak years (that is, when the company was seeking to penetrate or maintain a market), while the appropriate return might be 7 percent during good years. The US IRS, on the other hand, according to the language of US Treasury Regulation Section 1.482-1(e)(2), requires the adjustment to the midpoint of the range (mean or median) under all circumstances. This difference can be extremely important and should be reconciled by the two taxing bodies. (More details will be forthcoming in the methodology and data analysis chapters 7 and 8.)

A further, important difference between TNMM and CPM is the use of the inter-quartile range, which excludes the top and bottom 25 percent of the range. The inter-quartile range is in US IRS regulations, but not OECD Guidelines. In essence, the US IRS allows taxpayers to use comparable data without adjustments for differences in functions and risks. In this case, the taxpayer is limited to the inter-quartile range for determination and evaluation of transfer prices with three issues arising as a result:

1. Whether reliable results that may determine an arm's length price occur when no adjustments are made for function and risk differences;
2. Whether narrowing the range to the inter-quartile range achieves the same results as would have occurred had the appropriate adjustments been made; and,
3. Whether narrowing the profit range results in an arm's length price that increases/decreases companies' discretion.

5.3 Comparables

5.3.1 Overview

OECD Guidelines hold that the results of uncontrolled transactions can serve as a useful benchmark for adjusting the results of controlled transactions only if the "economically relevant characteristics" of the controlled and uncontrolled transactions are "comparable" (OECD, 1995, Chap. I, para. 1.15). For this purpose, transactions

are considered to be comparable only if: (1) any differences would have no material effect on the results; or, (2) any material effect can be eliminated by adjustments (OECD, 1995).

The attributes of a transaction that may affect comparability are as follows:

- The specific characteristics of the product or service being sold;
- The functions performed by the parties;
- Any contractual terms;
- The economic circumstances of the parties; and,
- The business strategies of the parties. (OECD, 1995, Chap. I, para. 1.17)

These attributes are essentially the same as the factors identified by US transfer pricing regulations as relevant to comparability. One purely formal distinction between OECD Guidelines and US IRS regulations is that US regulations treat the risks assumed by the parties as a separate factor, while OECD Guidelines treat risk as part of the functional analysis (OECD, 1995, Chap. I, para. 1.23).

As to contractual terms, OECD Guidelines reflect US regulations in cautioning that substance may vary from form in a controlled transaction and that the national tax administration should analyze comparability based upon the true terms of the transaction (1995 OECD Guidelines, Chap. 1, para. 1.29). Among the relevant "economic circumstances" listed in OECD Guidelines are the levels (wholesale vs. retail) and geographic location of the markets in which the controlled and uncontrolled transactions take place (1995 OECD Guidelines, Chap. 1, para. 1.30), factors also emphasized US regulations. Among the relevant "business strategies" listed in OECD Guidelines are "market penetration schemes," whereby a taxpayer may charge lower prices than uncontrolled enterprises in order to enter or expand into a new market (1995 OECD Guidelines, Chap. I, para. 1.32). Similar to US transfer pricing regulations, OECD Guidelines affirm that lower prices do not warrant an adjustment if the market penetration strategy is plausible and reasonably limited in time (1995 OECD Guidelines, Chap. I, para. 1.35).

The use of comparables, by definition, means that one is using historical data to

determine a transfer price. A comparable transaction is a transaction between independent parties involving similar products/services and taking place under similar conditions. Comparables consist of two main types (See Figure 5-1):

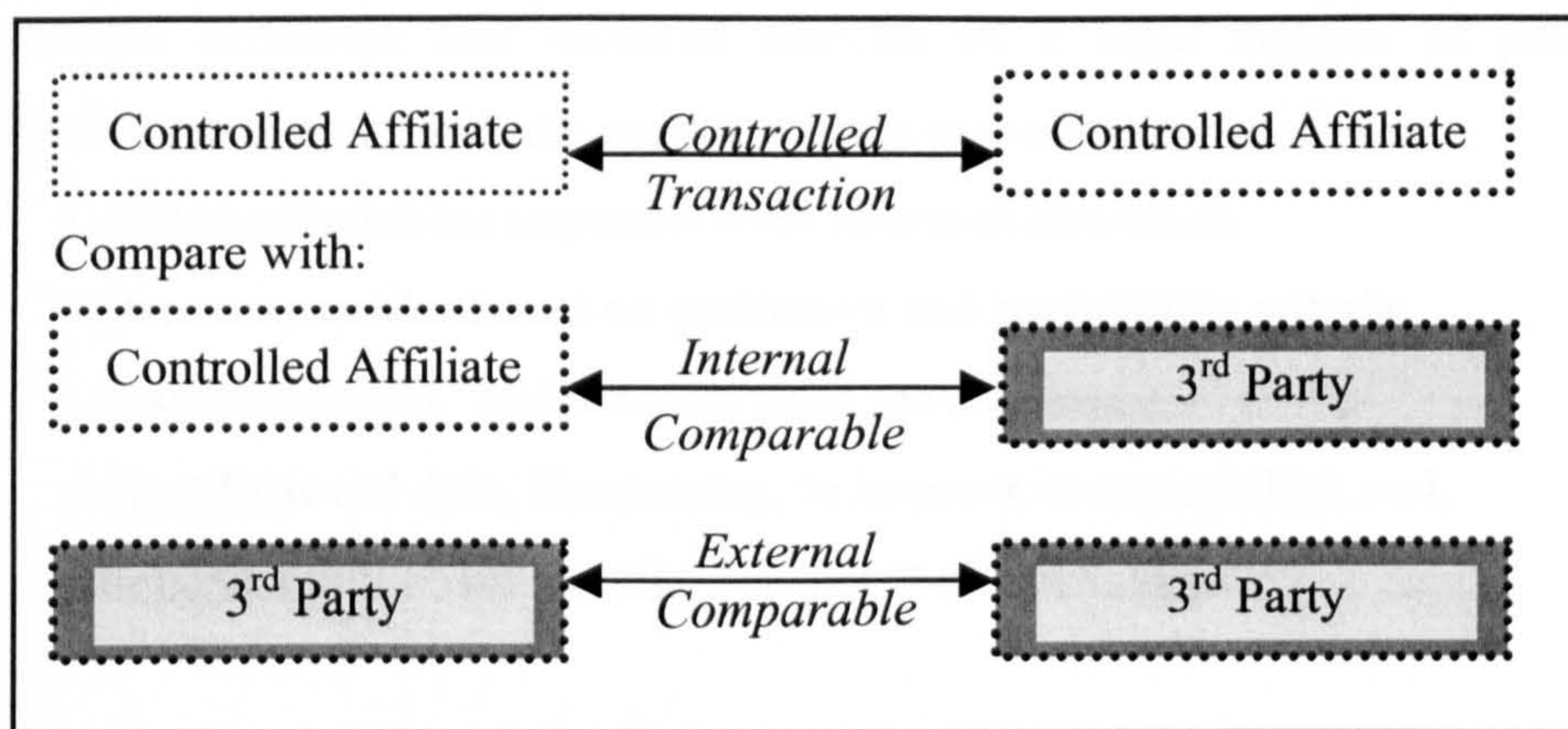
1. Internal comparable transaction – a transaction that takes place between the tested party and independent third parties which are used to make comparisons to a transaction that takes place between the tested party and its affiliates. Usually it contains information about the comparable transaction provided by the client, occurs within the context of the tested party's business and applied to the CUP method, but also applicable to the other transactional methods.
2. External comparable transaction – a transaction that takes place between unrelated third parties which are used to make comparisons to a transaction that takes place between the tested party and its affiliates. It often contains information found via external sources (e.g., commercial databases, standardized financials, US SEC filing, trade journals, internet, etc), comparable search selection is subjective, and is normally applied when using the resale price, cost plus, profit split and transactional net margin methods.

When companies consider which method allows the best result from the variety of methods for computing arm's length transfer pricing, they should consider the degree of comparability between controlled and uncontrolled transactions that could be assessed by functions performed, contractual terms, risk undertaken, economic conditions, and nature of goods and services supplied. In addition, the quality of the available data could be assessed for completeness and accuracy, the quality of the assumptions in terms of their reliability should be considered, and the sensitivity of the results to deficiencies in either data or assumptions should be taken into account (Tyrrall et al., 1999).

When the controlled transaction can be compared to a transaction between independent parties, the arm's length price is determined by a transactional analysis. Since comparability between a controlled and uncontrolled transaction is rarely exact, the uncontrolled transaction must ordinarily be adjusted to provide a reliable measure of an arm's length result. Alternatively, when comparable uncontrolled transactions cannot be identified, a profit-based analysis is used, comparing the profitability of a

transaction or a group of transactions to the profitability of similar uncontrolled companies. In such a case, the MNE does not search for comparable transactions, but rather for comparable companies.

Figure 5-1: Types of Comparables Transactions



It is impossible to prescribe exactly how comparables are determined, especially since every transaction and every company is so different that even transfer pricing regulations themselves do not offer specifics on the process for obtaining comparable sets which, according to Horst (Cole, 1999) remain vague. In addition, the transfer pricing method chosen will determine, to a large extent, how the search will be developed.

Developing comparables may have two main problems. The first is simply that comparable prices and profits may have been higher or lower in previous years. The second is that the number of potential comparables may be distorted such as where companies cease trading and evidence either fails to enter public record or is deleted from publicly available databases. The latter is particularly problematic when dealing with transfer pricing investigations. If a comparable company ceased trading or fell into bankruptcy during a certain period, the comparable data in publicly available databases when the tax audit had started would only be that relating to companies that had survived. Thus while it is possible in hindsight to look for comparable data over the same years as those covered by an audit, the evidence may be somewhat distorted and distorted to the disadvantage of the taxpayer.

Problems may also arise when using commercially available databases to apply thresholds to determine whether a company will be included in the comparable set. Two of these thresholds are function and risk which include factors that should be considered such as size, industry, activity, profits, and others.

Searching for comparable companies is a process that requires both qualitative and quantitative economic and financial analysis of a large number of potentially comparable companies with the overall process summarized as follows:

1. Locate comparable companies from financial databases;
2. Filter comparables based on qualitative and quantitative criteria;
3. Obtain companies' full accounts from the databases;
4. Adjust financial data, if necessary, to improve comparability; and,
5. Establish a multi-year average (Casley et al, 2002, pg. 139).

Before answering questions regarding the availability of data and its use, it is first necessary to consider the question of comparability. If a company does not have comparable transactions with third parties or when a comparable uncontrolled transaction cannot be found and there is no suitable open market price, one must find data on comparable companies. Utilizing the OECD's definition of "comparable transactions or companies" accepting data, comparable companies may be used if:

- There are no differences which would significantly affect the price or profit margin; or,
- There are such differences, where reasonable adjustments can be made to eliminate their effect. (OECD, 1995, Chap. I, para. 1.15).

5.3.2 Company Size

One of the major factors to be considered when developing comparable companies is obtaining data for a group of companies similar in size and nature to the "tested party". If a tested party has a higher level of sales, the results can be adjusted by removing those companies, previously considered comparable, with a materially lower level of sales. If on the other hand the tested party has a lower level of sales, further work is required to determine to what extent the range obtained is the correct result or whether the results are distorted.

The most compelling reason for excluding companies with the lowest levels of turnover is that they may be owner-managed businesses and thus run for the benefit of the owner, who may prefer to take dividends rather than salary. Therefore, all companies with particularly low levels of turnover ought to be excluded. The question of what an appropriate cut-off might be must be determined on a case-by-case basis and depends on the nature of the industry. Therefore, reviewing the industry involved remains good practice regardless of concerns about profitability (Casley et al, 2002).

By excluding companies with low turnover and assets, much of the distortion that may result from the inclusion of smaller companies is removed. It then becomes a matter of judgment as to whether further elimination is necessary. Given that what is being sought in line with OECD recommendations is often a range (OECD, 1995, Para. 1.45), the question is not whether one company's results are right or wrong but whether the range is materially affected.

5.3.3 Companies Ceasing/Starting to Trade

It is important that when a company ceases to be included in publicly available databases, all of its results are removed from the dataset. Performing a search for comparables for a specified year might include a listing of companies that have ceased to trade. The company may have filed for bankruptcy, ceased to trade (activity change; industry classification change; name change, etc.), or its results for a particular year when reported the following year have fallen below the thresholds for inclusion. For this reason, this research only included companies active and not newly formed, in the search for comparables.

Whichever of these circumstances applies, the fact remains that there may be comparable companies whose results for the year will not be reported because their profits or profitability is too low. The same does not hold true in reverse. Companies with higher levels of turnover and higher profits will never be excluded in this manner.

Another factor which may distort results is the arrival of companies which have started to trade or have formed new subsidiaries, such as those with start-up losses, or lower profitability. It is expected in the normal run of business that when some

companies exit a market others enter. Other than during periods of recession, problems that arise by companies ceasing to trade should be offset by that of companies entering the market (Casley et al, 2002).

5.3.4 Matching Years

The final problem to be considered in relation to comparable data is that of the results reported by comparable companies for the years prior to an economic condition and the presumably lower/higher results which would be appropriate for a specified year. If current prices were set prospectively on the basis of budgets or projections that do not predict the effects of economic conditions, then the effects of future economic conditions may generate the correct result. Specifically, if a gross margin was set using comparable data and was expected to give a particular return, lower sales or the greater effort required to make constant sales will result in lower profits.

Other issues can be considered in the situation companies face when setting prices for a specified year when an economic condition is upon them, but in the absence of much of the detailed data for the previous year. To alleviate this problem, the OECD recommends the use of multiple year data (OECD, 1995, Para. 1.49) to examine data over a complete business cycle, or for as much of it as there is data to be found. Business cycles, however, can be long (possibly ten years from peak to peak) and the amount of data required to do this in full can be overwhelming. In many cases, however, it may not be necessary to collect data for the full cycle since half the cycle should eliminate any major imbalances in the data reported and give a fair result. Taking the assumption of a ten-year cycle for a given industry, in general terms this would imply that three to five years of data would give a reasonably reliable result. The effect of using multiple year data is that profits will be lower than they would otherwise be in a prosperous year and will be somewhat higher than they would be in a poor one.

5.4 Applying TNMM and CPM

5.4.1 Classification

In selecting broadly comparable companies, both TNMM and CPM emphasizes the functions and risks of the tested party relative to those of the uncontrolled companies. These function-based and risk-based comparability standards are relatively relaxed,

and allow more flexibility for product comparability compared to traditional transaction-based methods (comparable uncontrolled price method, resale price method, and cost plus method).

The focus on operating profitability makes CPM less sensitive to accounting classification differences than the traditional transaction-based methods. Therefore, CPM may be more appropriate than other methods in cases in which the financial data of the uncontrolled comparables are not sufficiently detailed to make reliable judgments about differences in accounting classifications between the uncontrolled comparables and the tested party.

Classification differences are only one example of a data issue that taxpayers may face when testing their transfer prices. Taxpayers operating in countries outside of OECD member countries, specifically in countries that lack stringent financial reporting requirements, may find themselves dependent on erroneously reported financial data or reported information that lacks sufficient relevant income statement, balance sheet, and financial ratio data to perform a CPM or TNMM analysis using local comparables (Feinschriber, 2001). In addition to including companies with similar size in the datasets, this research uses four-digit SIC (standard industry classification) code and considers the business activity description of each company in order to obtain valuable comparable sets.

5.4.2 Adjustment

It is required that appropriate adjustments should be made for differences in functions, risks, economic conditions, and other factors for which reliable adjustments are possible, before performing comparisons. OECD and US IRS regulations do not provide specific formulas for incorporating adjustments into the analysis. Practitioners typically adjust for differences in terms of payment and inventory, as measured by relative accounts payable, accounts receivable, and inventory ratios. Based on the availability of reliable data and the relevance to the functions performed by the tested party, adjustments based on additional financial statement items may be incorporated into the analysis (Feinschriber, 2001). The adjusted data for the comparable companies establish the arm's-length range. The arm's-length range may consist of the results of all of the uncontrolled comparables that meet the following conditions:

“The information on the controlled transaction and the uncontrolled comparables is sufficiently complete that it is likely that all material differences have been identified, each such difference has a definite and reasonably ascertainable effect on price or profit, and an adjustment is made to eliminate the effect of each such difference” (Treas. Reg. § 1.482-1 (e)(2)(iii)(A)).

OECD Guidelines specify that a range of prices or profit results may qualify as arm's length. It also observes that a range may be particularly appropriate when TNMM is applied. Substantial deviations within the range may reflect variations in the reliability of data supporting the various points within the range. By contrast, US regulations suggest that such deviations may reflect a lack of complete comparability. OECD Guidelines do not follow the US approach of adjusting for suspiciously wide ranges by applying statistical methods such as the inter-quartile range, but rather simply proposes "further analysis." Moreover, while US regulations provide that controlled transactions that fall without the arm's-length range will ordinarily be adjusted to the midpoint of the range, OECD Guidelines simply note that there are arguments both for adjusting to the midpoint and for adjusting to the nearest end point (OECD, 1995, Chap. I, paras. 1.45-1.48).

Where differences in the characteristics of the companies being compared have a material effect on the net margins being used, it would not be appropriate to apply TNMM without making adjustments for such differences. OECD Guidelines emphasize that the methods are applied to "particular controlled transactions" out of concern that the methods might otherwise be applied on the basis of aggregate financial data of controlled and uncontrolled enterprises without sufficient regard to differences that may exist between their actual transactions (OECD, 1995, Chap. III, paras. 3.5, 3.53).

US IRS transfer pricing regulations suggest that, if it is not possible to make all adjustments, the arm's-length range should be statistically reduced to increase the reliability of the analysis. One method to statistically reduce the range that is presented in the regulations involves using an inter-quartile range (Treas. Reg. § 1.482-5 (e)(2)(iii)(B)). The inter-quartile range includes the 25th to the 75th percentile of the results derived from the uncontrolled comparables (Treas. Reg. § 1.482-5 (e)(2)(iii)(C)). Under this method of statistical reduction, the arm's length range for

the tested party's profitability is the inter-quartile range of the PLIs calculated using the financial data of the comparable companies.

When employing CPM, transfer pricing regulations suggest that PLIs should be derived from data covering a sufficient period of time (multiple-year data) "to reasonably measure returns" to those parties (Treas. Reg. § 1.482-5 (B)(4)). The time period generally recommended is at least three years, including the taxable year at issue. The use of multiple-year data may help to adjust for the effect of short-term variations unrelated to transfer prices that may affect a company's operating profitability.

Following OECD, US IRS and practitioner guidelines, full ranges and quartile ranges were developed for this research sample (detailed in Chapter 6). In addition, five different PLIs, recommended by OECD Guidelines and the US IRS, were selected (detailed in 5.4.4).

5.4.3 Performing a Functional Analysis and Identifying Comparables

The first step in applying TNMM and CPM is to analyze the functions performed by the affiliate in question and the risks borne by that affiliate, and to determine whether the affiliate owns valuable intangible property. The second step is to identify potentially comparable transactions or companies. OECD Guidelines recommend using internal comparables, which are uncontrolled transactions in which the affiliate participates. Transactions in which the taxpayer is not involved should be used only if there are no internal comparable transactions. The OECD Guideline's approach is consistent with Section 482 of US IRS regulations. Companies have much more detailed information about transactions in which they participate than unrelated transactions in which they do not participate. As a result, the comparability of the transactions can be evaluated with more accuracy than when data is limited to publicly available information from third-party transactions. For the purpose of this research, all data was gathered from publicly available sources due to the restrictive nature of internal data.

A function and risk assessment should be performed once the comparables have been identified, whether the comparables are internally generated or the company is relying

on external comparables. This function and risk analysis is necessarily less thorough for external comparables than for analysis of the affiliated party. Since the goal is to obtain the "correct" arm's-length answer, great care must be taken to ensure that all differences that can affect profitability are identified and accounted for through adjustments to the comparables.

OECD Guidelines do not discuss adjustments for differences in function and risk in much detail. Instead, they emphasize the need to carefully choose comparables that are as similar in function and product as is possible. "Where differences in characteristics of the enterprises being compared have a material effect on the net margins being used, it would not be appropriate to apply the transactional net margin method without making adjustments for such differences" (OECD, 1995, B.3.53).

In applying CPM, the selection of broadly similar companies does not require function and risk differences to be accounted for prior to determining the arm's-length range. CPM and TNMM are identical from the standpoint of adjustments to account for function and risk differences. In this case, US regulations require the use of the inter-quartile range for setting transfer prices. Function and risk adjustments are viewed as mandatory if a true arm's-length range is to be determined.

Due to the absence of a tested party and the lack of defined information, this research uses four-digit SIC codes and qualitative descriptions of the companies in order to control for functions of the companies in the comparable datasets.

5.4.4 Choosing Profit-Level Indicators (Profit Measures)

After deciding which comparables are to be used, and whether to make adjustments for differences in functions and risks, it is necessary to choose a particular measure of profitability in applying TNMM and CPM. OECD Guidelines are not very specific regarding the profit measures that can be employed. In general, it is a good idea to employ more than one profitability measure, using one to test the reasonableness of the others. Using this additional measure to test the selected method provides additional assurance that the transfer pricing is reasonable, assuming, of course, that the other method yields a result consistent with the original method chosen. The choice among profit level indicators generally depends on the nature of activities of

the tested party, the reliability of available data, and the extent to which the profit level indicators produce a reliable measure of an arm's length result (Treas. Reg. § 1.482-5 (b)(4)). All the profit-level measures used in TNMM are based on operating income, which is gross profit less operating expenses. Typically, return on assets (operating income/assets) or return on sales (operating income/net sales) are the two profit-level measures analyzed to determine transfer prices.

OECD Guidelines state that "net margins are less affected by transactional differences than is the case with price, as used in the CUP method." The Guidelines further state, "The net margins also may be more tolerant to some functional differences between the controlled and uncontrolled transactions than gross profit margins" (OECD, 1995, B.3.27). In addition, the net margin may be less sensitive to differences in generally accepted accounting practices across countries and by companies within a country.

OECD Guidelines list several considerations to take into account when deciding which profit measure to use, including "how well the value of assets employed in the calculations is measured" (e.g., to what extent there is intangible property, the value of which is not realized on the books), and "the factors affecting whether specific costs should be passed through, marked up, or excluded entirely from the calculation" (OECD, 1995, B.3.41). The language does not provide much guidance as to the choice of a profitability measure, with the measure chosen possibly having a significant impact on the validity of the transfer prices. Profit margin might be a good measure when evaluating a distributor (or other type of selling company) and can be justified to use for other similar activities in determining an arm's length profit range.

To establish an arm's-length range of operating profitability, CPM examines the PLIs achieved by companies whose function and risk are broadly similar to those of the tested party. These comparisons are typically performed on a period-weighted average basis, using multiple-year data for both the broadly comparable companies and the tested party during the same time period.

CPM presents specific examples of PLIs that may provide a reliable basis for comparing operating profits of the tested party and uncontrolled comparables in the transfer pricing regulations. These measures are the return on capital employed, the

net margin (operating margin), and the Berry ratio.

Transfer pricing regulations also allow the use of other PLIs appropriate to the facts and circumstances of the controlled company and its inter-company transactions. Specifically, transfer pricing regulations permit the use of other PLIs if such measures reliably indicate the income that the tested party would have earned had it dealt with companies at arm's length (Treas. Reg. § 1.482-5 (b)(4)(iii)). Under this provision, any measure of profit based on objective measures of profitability, derived from uncontrolled comparables that engage in sufficiently similar business activities under similar risks and circumstances, may be employed.

Transfer pricing regulations do not express a strong preference for choosing among PLIs. However, consistent with selecting the best method of analysis under the regulations, a critical factor to consider in selecting an appropriate PLI is the extent to which that PLI is likely to produce a reliable measure of an arm's-length result. This may be determined based on the criteria described under the best method rule for CPM (Treas. Reg. § 1.482-5 (C)(2)). Factors that may affect the reliability of the results achieved may include the functions performed by the tested party and the reliability of the available tested party data relative to the data of the uncontrolled comparables (Treas. Reg. § 1.482-5 (C)).

Several profit-level indicators can be used, depending on the facts and circumstances of the tested party. Common profit-level indicators include rate of return on assets and financial ratios such as operating profits, sales or gross profits, operating expenses, and others. The taxpayer must decide which profit-level indicator is most appropriate, or if a combination of profit-level indicators should be used. If a combination is used, the taxpayer must then determine the weights given to the various indicators. For the purpose of this research, five different profit measures (PLIs) based on recommendations by OECD Guidelines and the US IRS and used by practitioners were obtained (Tyrrall et al, 1999). The rationale for selecting multiple PLIs being to provide a more in-depth analysis to demonstrate how the five PLIs perform within each comparable set (detailed PLI descriptions and formulas provided in 5.4.4.1-5)

5.4.4.1 Profit margin

Profit margin %, calculated as follows:

Average 3-year (1998-2000) profit before tax / Average 3-year (1998-2000) turnover

Profit before tax = Turnover – Total expenses + other income – Interest paid +/- Exceptional Items

5.4.4.2 Profit margin on sales

Profit margin on sales %, calculated as follows:

Average 3-year (1998-2000) operating profit / Average 3-year (1998-2000) turnover

Operating profit = Turnover - Cost of Sales

5.4.4.3 Net margin

Net margin (%), calculated as follows:

Average 3-year (1998-2000) operating profit / Average 3-year (1998-2000) total cost

Operating profit = Turnover - Cost of Sales

Total Cost = Cost of Sales + Other Expenses

5.4.4.4 Berry ratio

Berry ratio (%), calculated as follows:

Gross profit average (1998-2000) / Cost of sales average (1998-2000)

Gross profit = Turnover - Cost of sales average

5.4.4.5 Return on assets

Return on assets, calculated as follows:

Profit before tax average (1998-2000) / Assets 3-year average (1998-2000)

Profit before tax = Turnover – Total expenses + other income – Interest paid +/- Exceptional Items

5.4.5 Determining the Appropriate Time Period for Analysis

Once the profit measure or measures have been chosen, they must be computed for each of the comparables and for the controlled transaction. The number of years of financial data that should be considered is open to question. OECD Guidelines provide no specific advice, merely stating, "Multiple year data should be considered to take into account the effects on profits of product life cycles and short-term economic conditions" (OECD, 1995, B.3.44). For the purpose of this study the most recent and comprehensive data was used covering the years 1998, 1999, and 2000.

(A) Decision to Use Multiple Years

Multiple-year data provide many advantages. Businesses are subject to one-time events that create an abnormal change in company profits. The use of multiple years evens out the results and in general eliminates the short-run issues that may lead taxpayers or tax collectors to reach inappropriate conclusions regarding the adequacy of transfer pricing policies.

Another advantage of using multiple years concerns companies that use market penetration strategies. During the market penetration period, profits of a company will be lower than normal. Ordinarily, it is expected that a company engaged in a market penetration strategy will earn above-normal profits after the market penetration period to provide a return on its investment, that is, the below normal profits it earned during the penetration period. However, sometimes the market penetration is merely market maintenance and is pursued to allow the company to remain in business in the face of intense competition. In such cases, no return to the investment accrues to the company because the market conditions do not allow it. In these cases, a multiple-year analysis may be required to adequately assess the company's transfer pricing policies. These advantages are factored in the design of this research and averages are developed for the selected period. In addition, a more in-depth analysis of low profitability (average operating losses) companies will be provided in Section 3 of Chapters 6 and 7 due to the large number of companies with operating losses identified.

(B) Determining the Average or the Range

An average can be computed in several ways using multiple-year data. Margins can be computed for each company, across time, with a simple average being calculated. Alternatively, margins can be computed using a weighted average, so that years with higher sales will have more weight. By contrast, a yearly average of all comparables (either simple or weighted) could be computed, with these averages then averaged across time. The method of averaging depends, to some degree, on the reasons for using multiple-year data. If the overall business cycle is considered, averaging the individual results for each year may be the preferred method. In this case, company-to-company differences within a year are suppressed, so that the overall pattern of profitability across time becomes clearer.

Averaging results within a year is not as meaningful if the profitability of companies within an industry is highly affected by the product life cycle and different companies are in different portions of the product life cycle in any given year. The two techniques will give the same answer if simple averages are employed. For the purpose of this research, a simple three-year (1998-2000) average has been calculated using the yearly data from the companies' annual accounts.

5.4.6 Selecting the Appropriate Data Source

The effect of selecting TNMM or CPM is usually driven largely by the nature of the data available. Both TNMM and CPM require the availability of a great deal of data on a wide range of private and public companies in addition to a high level of disclosure and detailed data. In the US, gross margin data is quite likely to be available in both public and private companies but not at a transactional level, nor even by product line or business segment. The UK recognizes the US position (and the OECD's concern) that small differences in product or level of the market are likely to have a greater effect on prices and gross margins than they have on operating margins. Operating profits, defined as turnover less cost of sales, for suitably comparable companies may well be the most reliable data a taxpayer has available.

Two factors distinguish the UK (OECD) position from the US (IRS) position. First, in the absence of the level of detail available in the US it is often impossible to apply TNMM in quite the precise way the OECD seems to envisage in its Guidelines. Of necessity, then, the mechanism by which TNMM is applied looks very similar to the US application of CPM. Specifically, the operating profits of a number of companies are reviewed and a range of results is determined which is then used to set prices and/or evaluate the effects of transfer prices set.

The second factor is one that renders the result of this process, similar to CPM, closer to the OECD's explanation of TNMM. Since there is a great deal of data available on the profitability of private as well as public companies it is possible to ensure that the companies being used for the purposes of comparison are not the larger and more diverse businesses which are generally quoted on a stock market exchange. In practice then, it is likely that the use of private company data in the UK means that the application of this process does indeed conform to the narrower profitability analysis

which the OECD recommends (Casley, 1999).

The use of private company data is not without its problems. There is, for example, a risk that results will be affected by non-arm's length transactions with shareholders. These non-arm's length transactions may take the form of inter-company transactions or appropriations in the form of salaries. This factor is common to all countries where private company data is available but in the UK at least, accounting standards are tightening up in this area requiring greater disclosure of such transactions. In addition, the risk is greatest in relation to small and mid-size companies that have turnover less than £11.2m; balance sheet total less than £5.6m; and, less than 250 employees. For this study, these smaller and mid-size companies have been excluded from the comparables analysis.

Because MNEs need to provide documentation on the property being transferred, as well as on the economic and market conditions surrounding the controlled versus uncontrolled transactions and the contractual terms that have been agreed upon, the use of databases has become noticeably more important in the search for comparables by MNEs. Databases are useful tools since they contain information from public disclosures on a large number of sectors and companies. In addition, the dependent and independent transactions need to be evaluated in terms of the functions performed, risks assumed and intangibles held by the parties involved (Cools, 1999).

Searching databases for comparables usually starts on very general terms with an initially broad sector definition resulting in a large number of potentially comparable companies. More specific industry codes can then be used to gradually refine the delineation of the sector and to eliminate all companies which are not concentrated in the defined activity. A number of suggested criteria (Cools, 1999; Tyrrall et al, 1999) were used by this study to filter a small selection of the most similar companies. First, companies engaged in a variety of different activities are excluded from the comparables group. Second, companies lacking important financial data can be eliminated. The similarity of the products transferred by the comparable company is another factor to evaluate, as is the maturity of the comparable company, its size (in terms of sales volume, earnings levels or number of employees), growth prospects and competitive position.

Functional similarity (in terms of the activities carried on, the assets owned and the risks undertaken by the relevant parties) of the remaining companies should be incorporated explicitly in the documentation which is maintained for the tax authorities. The final aspect of the search for comparables often consists of a review of the annual reports (Must be consistent with UK GAAP) of the potential comparables. The resulting selection should consist of companies engaged in activities which approximate as much as possible the activity which is the subject of the search. Available prices and margins will be used as comparables. Based on all relevant evaluation points, necessary adjustments can be made to the comparable sets and ratios in order to construct an arm's length range.

“In the context of comparables and functional analysis, the information elements included in a database are very important. While some databases focus on annual reports, others offer descriptive business information or provide shareholder links. The presentation of financial statements varies significantly from database to database. Complete accounts are sometimes reported, along with precalculated financial ratios, while other databases report only abstracts from annual accounts. Consolidated and separate income statements per company product line are sometimes provided.” (Cools, 1999, pg. 169).

When developing comparables for this research, the search for an appropriate database was conducted in order to obtain independent private and public companies that fulfilled the minimum requirements: annual financial statements for the years ended 1998-2000; description of business activity; standard industrial classification (SIC) code; unconsolidated accounts; and, other qualitative and quantitative information.

There are several sources of third party comparable data available for developing comparables in the UK. By way of comparison it is worth noting that whilst a typical US database would contain data on roughly 15,000 companies, the principal databases used in the United Kingdom contain data on over 200,000 (Casley, 1999). Thus, the large number of companies available offers the answer to the problem of detailed disclosure. Examining TNMM and CPM on UK data provides a comprehensive analysis as it ensures coverage of large numbers of companies. It is necessary to obtain a sufficiently large sample to ensure that the resulting range is not materially distorted by a few companies which are not truly comparable.

“The practical effect of these considerations is that CPM and TNMM, carefully applied, are not so far apart in the UK as might be the case in other jurisdictions. As a result, TNMM is increasingly used by taxpayers to set or evaluate transfer prices. Inland Revenue is not permitted to disclose data obtained from other taxpayers meaning that they could not use it in tax court proceedings. The practical effect of this is that "secret comparables" are not used in the UK although IR is quite adept at transferring the experience it gains in dealing with one taxpayer to its investigation of the next.” (Casley, 1999, pg. 6)

If the distinction between CPM and TNMM is that a TNMM analysis is performed on a narrower income statement, then it would appear that the nature of the data available in the UK goes a long way towards ensuring that the main concerns of the OECD are largely met. Whether it is called CPM or TNMM, any method which selects a suitable profit level indicator and establishes a range of results from a reasonably sized sample of companies is, in fact, an acceptable method.

5.5 Summary

The transactional net margin method endorsed in OECD Guidelines and the comparables profit method used by the IRS are conceptually the same method of determining transfer prices. The differences between the two methods lie in the nuances of their application, particularly the priority in applying these methods (best method rule vs. last resort) and the US IRS emphasis on the inter-quartile range and adjustment to the midpoint. Several factors must be carefully considered when applying TNMM and CPM. Many of the same factors must be considered in applying any transfer pricing method.

In theory, comparables face tension which would suggest that MNEs have a competitive advantage whereas the regulations reinforce that they should be equivalents. Given this theoretical tension, the comparable should include function and risk of indigenous company and data. The conceptual implication of examining different methods of creating comparables should relate to the function and risk profile. That raises the question whether different methods of creating comparables comply to a greater or lesser extent to function and risk?

By more closely inspecting comparable ranges by differing regulations among

different industries, testing performance of foreign-owned companies (profit and taxes), and examining the loss making companies which are ignored under the new profit methods, this study helps to answer whether the new methods curb MNE discretion. Even if discretion is safeguarded, the regulations may change MNE behavior in respect of taxes. Thus, contemporaneous documentation may cause existing methods to be re-evaluated.

Chapter 6
Research Method and Methodology

6.1 Introduction

One of the main lessons to be drawn from different regulatory frameworks adopted by different countries as discussed in Chapters Four and Five is that different countries are subject to different rules, regulations, and recommendations from their tax authorities and governments. The exercise of discretion may be country based and can be possible by methods chosen. The importance of comparables and comparables data is strengthened through the adoption of profit based methods.

The lack of experience with the application of transactional profit methods across a representative number of OECD member countries makes it difficult to precisely fix all the limitations on the use of these methods. Transactional profit methods are being recognized as methods that assist in determining cases of last resort whether transfer pricing complies with the arm's length principle. In addition, testing profit-based methods will illuminate the quality of the recommended documentation including comparables that companies are required to prepare under the new UK requirements corporation tax self-assessment. This chapter addresses the methodology adopted throughout this research and provides a detailed description of each of the four sections of this research including the related hypotheses for each individual section, and an explanation of each of the relevant statistical tests used.

6.2 Research Methodology

This research adopts a more positivist methodological paradigm. It is structured upon the ontological position that reality is external and objective (Easterby et al, 1996), and that the patterns and regularities that are exhibited in society are not simply random (Rose & Sullivan, 1996). This study is primarily faced with the task of identifying the causal explanations and the fundamental laws that underlie these regularities in human social behavior. Nearer to the objectivist end of the subjective-objective continuum put forward by Morgan and Smircich (1980), this research takes on a methodological approach that is principally based on the ontological assumption that the social world is an evolving process, concrete in nature, but ever-changing in detailed form. Everything is seen as interacting with everything else, making as such the endeavor to find determinate causal relationships between constituent processes an extremely difficult task.

Within this ontological context, human beings are seen as existing in an ongoing interactive relationship with their contextual world, influencing and being influenced by it. The process of exchange that operates between the individual and the environment is essentially a competitive one; the individual is seen as seeking to interpret and exploit the environment to satisfy important needs, and hence survive. Following classic empirical social sciences research, and on the premises of the theory-testing, hypothetico-deductive approach, this study begins with theory - seen as a form of selective focusing, a means of separating out from a complex, confusing world those elements of social reality that warrant special attention and investigation, and then aims, on the basis of the selected theory, to deduce and further test hypotheses about relationships which ought to exist if the theory is correct. It is specifically within this positivist methodological context of theory statement, concept operationalization, and hypothesis testing via prediction and empirical observation, that the present research endeavour progresses (Figure 6-1).

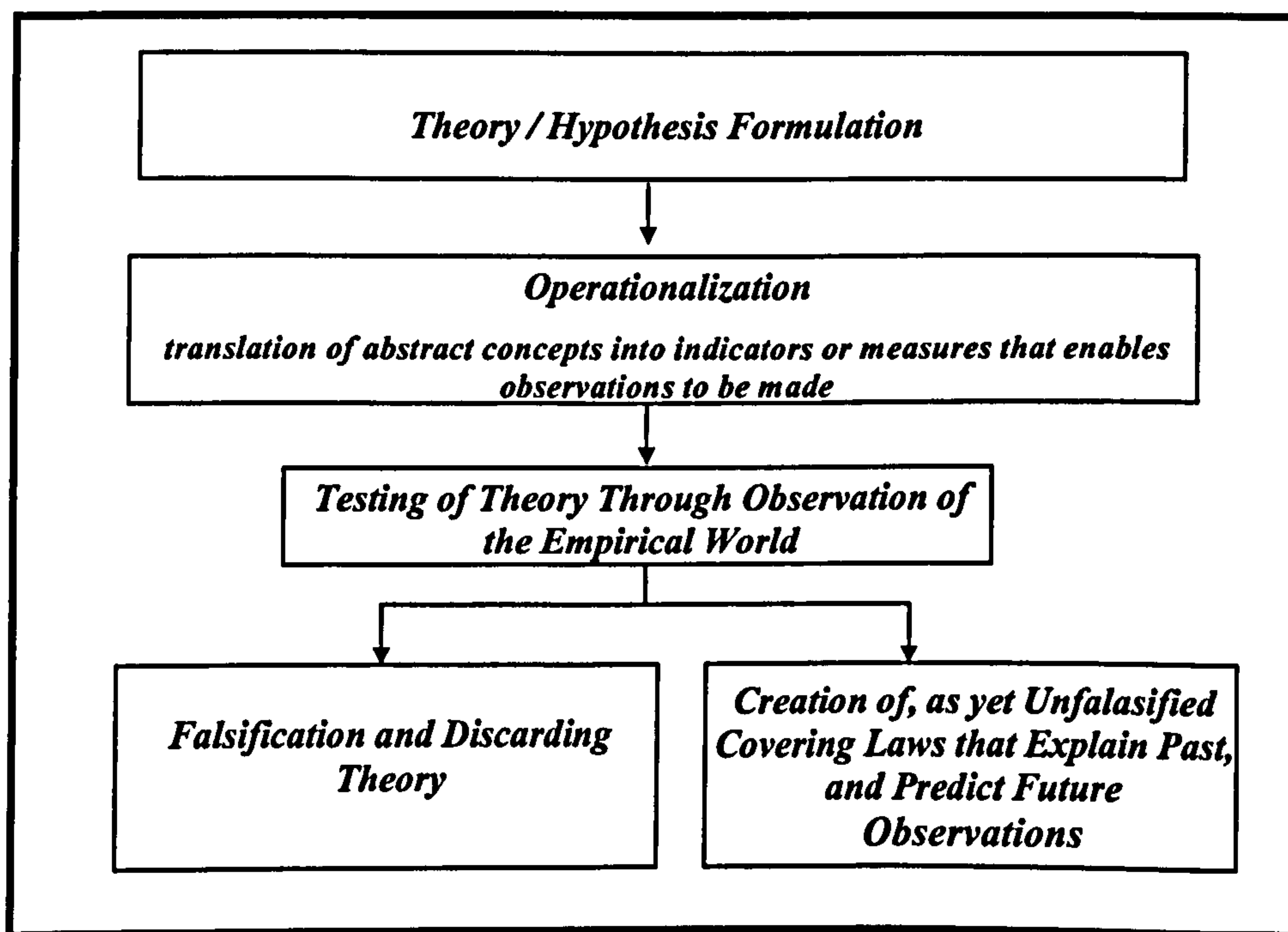
This study seeks to investigate the phenomenon of comparables of the profit-based method of ITP, profits and losses of foreign-owned companies (Japanese- and US-owned) compared to domestic owned companies in the UK and, tax payments of foreign-owned companies (Japanese and US-owned) compare to domestic companies in the UK through the use of the secondary data source FAME database. In the course of this study, and within the selected methodological path:

1. An initial research problem has been identified.
2. The theoretical concepts that form the propositions have been initially clarified (operational definitions of the concepts involved, each conceptual proposition of the previous stage has been usefully restated in testable terms in order to develop a set of research hypotheses).
3. On the basis of the concept operationalization, and by means of observation, relevant data have been collected, processed and analysed in an attempt to falsify the stated hypotheses, that is, in an attempt to reach a conclusion about whether or not (and to what extent) the results obtained lend support to the hypotheses.

4. Finally, an effort has been made, so that the conclusions drawn from the findings, as well as any further insights gained in the overall process of the study, are brought to bear on the initial research problem.

In addition to the main research method, this study conducted interviews to check the validity of the findings. As defined by Denzin (1970) triangulation is the combination of methodologies in study of the same phenomenon. Denzin argues multiple and independent methods, especially if investigating the same problem and reaching the same conclusion, have greater validity and reliability than a single methodological approach to a problem.

Figure 6-1: The process of deduction



Source: (Gill, J. – Johnson 2002, Pg. 39)

While the methodological core of this research for Section 1 is limited to the rules and recommendations of OECD and US IRS regulations, the remaining three sections are based on the shortcomings of previous empirical studies. Data was collected by means of electronic database (FAME) and was designed to obtain measurements of:

- Profit ranges (PLIs);
- Size;

Within this ontological context, human beings are seen as existing in an ongoing interactive relationship with their contextual world, influencing and being influenced by it. The process of exchange that operates between the individual and the environment is essentially a competitive one; the individual is seen as seeking to interpret and exploit the environment to satisfy important needs, and hence survive. Following classic empirical social sciences research, and on the premises of the theory-testing, hypothetico-deductive approach, this study begins with theory - seen as a form of selective focusing, a means of separating out from a complex, confusing world those elements of social reality that warrant special attention and investigation, and then aims, on the basis of the selected theory, to deduce and further test hypotheses about relationships which ought to exist if the theory is correct. It is specifically within this positivist methodological context of theory statement, concept operationalization, and hypothesis testing via prediction and empirical observation, that the present research endeavour progresses (Figure 6-1).

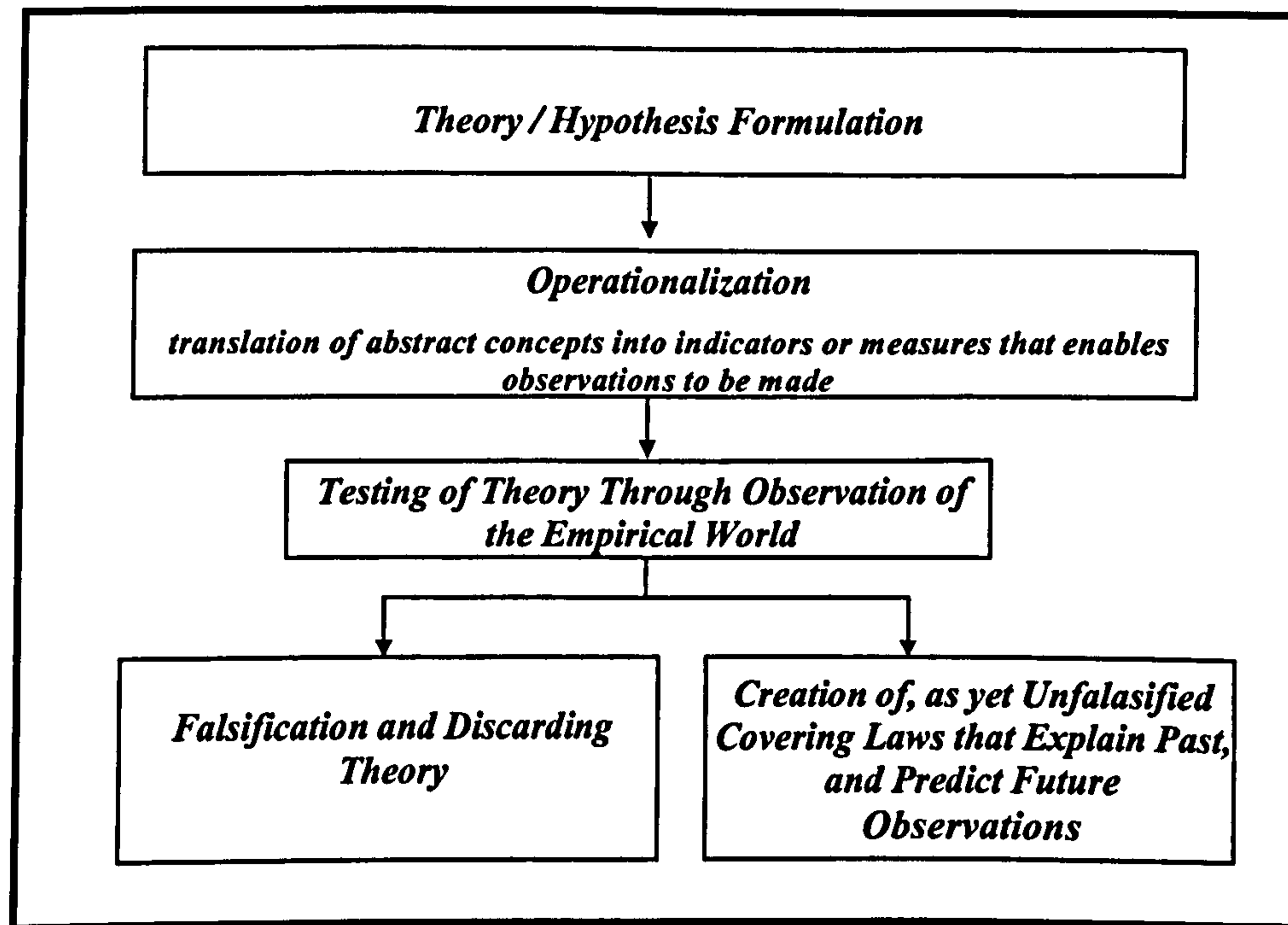
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- Profit ranges (PLIs);
- Size;

- Operating performance,
- Ownership; and,
- Taxation.

The research design only considers null hypotheses. Alternative hypotheses such as Japanese subsidiaries reporting lower profits than their UK counterparts could not be adequately tested by this research at this time for a number of reasons. Most empirical evidence is US-based with a limited number of UK-based studies. In addition, very few empirical studies (Munday & Peel, 1997) were conducted based on 1993-1994 data (before the introduction of profit based methods), while others (Oyelere and Emmanuel) did not focus on comparables. US evidence was monitored under different tax systems than the UK and was subject to substantial changes i.e. IRS 1986 Changes.

This research tests comparables based on PLIs suggested by profit methods. Alternative hypotheses might require different profit measures than the ones used by comparable methods. It is entirely possible that other elements such as government policy could influence whether higher or lower profits were reported overseas or at home. As noted from Chapter Three, empirical studies are limited in testing MNEs' discretion. Although alternative hypotheses have been recognized, there is no foundation either theoretically or empirically to test them in UK settings.

The FAME database was chosen as the most suitable method given the particular characteristics and ends of the research endeavour. One strong argument for the employment of a database with annual accounts data is to test the profit-based methods TNMM and CPM, which requires data on a wide range of private and public companies in addition to a high level of disclosure and detailed data. Financial information is necessary to examine comparables and the performance of foreign-owned companies.

From a methodological point of view, the use of secondary data (financial statements) carries a number of advantages. Because it is formalized and published, secondary data often comes to be attributed with an exaggerated status of 'truth'. Its objectivity

is taken at face value, and its reliability is considered equivalent to that of the publication in which it appears. Thus greater integrity is accorded to information from a recognized and accepted source such as the FAME database which obtain the data from records filed at Companies House, consistent with UK GAAP, accepted by the IR, and used by practitioners.

According to Thietart et al, (2001), formalization of data in a ready to use format can lead researchers to take the validity of this data, which they are manipulating, for granted. Similarly received ideas exist about the impact secondary data has on the research's internal validity. The apparently strict organization of available data can suggest that it would be easier to control the internal validity of research based on it.

However, internal validity should be demonstrated through the validity of the constructs it uses, that is, by clarifying and justifying the connections between the construct and the operational procedure through which it is manipulated (Stablein, 1996). Podsakoff and Dalton (1987) found that only 4.48 percent of authors provided proof of the validity of their constructs in the published articles they examined. The formalization of secondary data can thus be wrongly assimilated to an intrinsic soundness. This last received idea leads researchers to believe their research will somehow be made secure by the use of secondary data. But, by attributing an a priori degree of confidence to the secondary data they manipulate, researchers are in fact simply externalizing (by passing this responsibility to others) the risks connected to the internal validity of their work (Thietart et al, 2001).

The same shortcomings apply to the use of secondary data to increase the validity of results and their generalization. External validity is also conditioned, by the validity of the work the secondary data has been drawn from.

“The greater accessibility of secondary data is another disputable received idea. Such a belief can give researchers an impression of the completeness of their research, convinced they have had access to all available data. The apparent ease of accessing secondary data can lead researchers either to be quickly inundated with too much data, or to be too confident that they have 'gone over the whole question' (Thietart et al, 2001, pg.75).

Parallel to the common acceptance that secondary data is fairly inflexible (thus

making such data difficult to manipulate), which can in turn cause researchers to believe that secondary data must be more reliable than primary data. This is, however, a naive belief as the fact that secondary data is fixed and formalized does not in any way signify that the phenomena it describes are similarly fixed and formalized. As shown previously in Chapter Five, developing comparables and obtaining data on different group of companies is complicated and involves researcher judgment. In other words, the use of secondary data such as databases can bring with it greater exposure to a maturation effect.

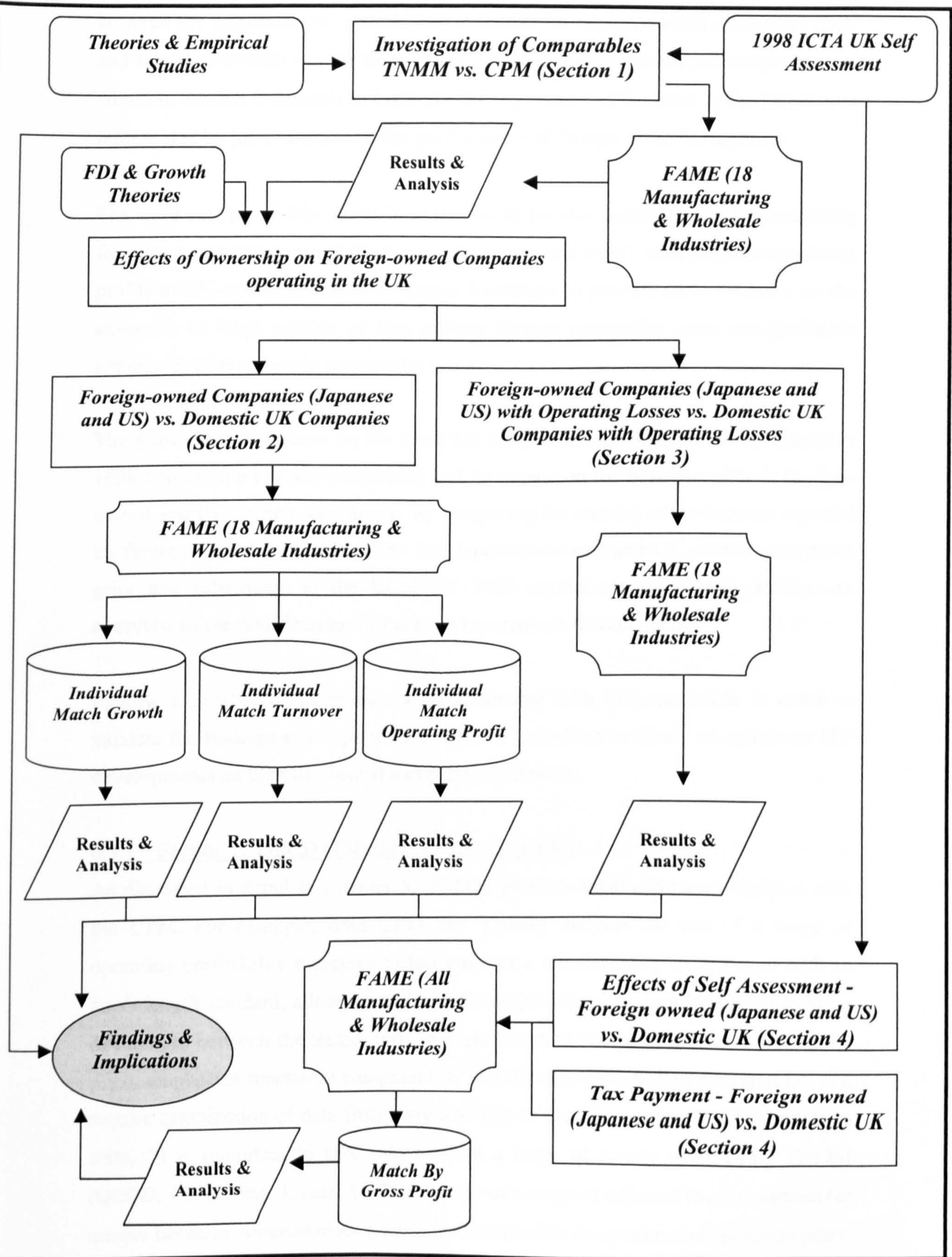
To increase the study's ecological validity, this research collected data from a primary source by the mean of series of interviews that could enrich and provide triangulation for and authentication of the findings that emerged from the use of the database. The participants were mainly consultants and tax and ITP experts.

6.3 Research Design

The research design consists of four different sections: a comparison of the OECD'S TNMM and the US IRS' CPM; a comparative analysis of foreign-owned vs. UK-owned companies; an analysis of operating losses, and, a tax analysis. Figure 6-2 outlines the main research questions, identifies the sequence of the research questions, states the data obtained and the matching criteria for each research question, and presents the linkage between the research questions and the findings.

The first section provides an investigation of comparable companies in the UK. By applying profit-based methods of transfer pricing (TNMM and CPM), Section 1 highlights OECD profit ranges and compares them to US IRS profit ratios using the same data sets. It also presents the variation between these two methods in practice and offers comparisons between profit measures for the purpose of providing comparable ranges. Finally, Section 1 provides analysis of the PLIs for each of the sample industries in an attempt to draw a conclusion on TNMM and CPM in terms of the alternatives they provide for MNEs' compliance.

Figure 6-2: Research Map



The second section extends previous research by presenting a comparative analysis between the performances (profitability measures) of foreign-owned companies (US- and Japanese-owned) against the performance of domestic UK-owned companies. In addition, Section 2 attempts to highlight the importance of the form of the investment represented by joint ventures on the performance of foreign-owned companies.

The third section of this research endeavors to provide some lessons by comparing foreign-owned companies (US-owned and Japanese-owned) with negative operating profits to UK-owned companies. Section 3 attempts to provide some evidence on the existence of large number of loss making foreign companies since non-profitable companies cannot remain perpetually active.

The fourth section focuses on the latest UK transfer pricing regulations introduced in 1998 corporation tax self-assessment and its impact on the behavior of both foreign-owned and UK-owned companies. By comparing the amount of tax expense reported by foreign-owned companies (US- and Japanese-owned) and UK-owned companies prior and subsequent to the latest UK 1998 regulations, Section 4 provides an overview of the ramifications of the contemporaneous documentation.

Finally, a number of interviews were conducted with ITP specialists in order to validate the findings in the prior four sections as well as to obtain an update on ITP developments on both theoretical and practical matters.

6.3.1 Section 1: OECD (TNMM) vs. US IRS (CPM)

As discussed in detail in Chapter 5, TNMM shares several common principles with the CPM. For example, both CPM and TNMM indicate the use of a range of operating profitability measures to test whether a transfer price is consistent with an arm's length standard, allow for the use of multiple-year data, require adjustments for differences between the tested party and uncontrolled comparables that would affect price, emphasize functional comparability in selecting uncontrolled comparables, and require examination of data from only one side of the transaction. OECD Guidelines state, "it is important to take into account a range of results when using TNMM (OECD, 1995, Chap. I, para. 1.45). The use of a range of adjusted results controls for unique business circumstances among the comparable companies and the tested party.

CPM similarly suggests the use of a range of results derived from all comparable companies identified, once appropriate adjustments have been incorporated. CPM discussion in the transfer pricing regulations recommends the statistical reduction of the range of observations of the comparables if it is not possible to make all adjustments, and provides the inter-quartile range as an example of a statistical reduction method. TNMM also does not prescribe a specific method for narrowing the range of comparables identified. OECD Guidelines acknowledge "because transfer pricing is not an exact science, there may be many occasions when the application of the most appropriate method or methods produces a range of figures which are relatively reliable." (OECD, 1995, Chap. I, para. 1.45).

OECD Guidelines, similar to US IRS transfer pricing regulations, suggest that multiple-year average data be examined for both the controlled and uncontrolled parties to the extent that operating profitability is compared using a profit-based method such as TNMM or CPM (OECD, 1995, Chap. III, paras. 3.44). Use of multiple-year data provides information about relevant business or product cycles that may have a material effect on transfer pricing conditions assessed in determining comparability. TNMM, similar to CPM, is more tolerant of functional differences than transaction based methods because "differences in functions performed between enterprises are often reflected in variations in operating expenses." (OECD, 1995, Chap. III, para. 3.27). Therefore, a set of independent companies may display wide disparities in PLIs but similar levels of operating profits.

TNMM also recommends the use of several financial ratios in establishing an arm's-length range. The financial ratios presented in the TNMM discussion in OECD Guidelines include the return on capital employed (referred to as the "return on assets"), operating income to sales (which is equivalent to the net margin described in the CPM discussion), and other possible measures of net profit (OECD, 1995, Chap. III, para. 3.27).

Similar to CPM, under TNMM, the choice of financial ratios is based on available financial data. For example, the extent to which the value of the assets employed in the business activities may be measured is essential to the application of the return on assets. If the income, costs, and assets of the relevant business activity and the other

activities cannot be isolated, OECD Guidelines state that:

The principal distinctions between TNMM and CPM are the application of method (TNMM (last resort) vs. CPM (best method)) and their approach to aggregation of financial data concerning controlled and uncontrolled transactions. CPM requires that the analysis be based on the "most narrowly identifiable business activity" for which financial data is available. By contrast, OECD Guidelines begin on the presumption that transactions are ideally analyzed individually and that each level of aggregation must be justified. "Aside from the issue of when it is appropriate to use, a careful application of CPM is fully consistent with the TNMM rules of the OECD Guidelines" (Cole, pg, 9-35). Critics of CPM in some OECD countries are concerned that "the most narrowly identifiable business activity" may exceed the degree of aggregation that would be acceptable under the Guidelines (Taly, 1996).

6.3.1.1 Hypotheses - Section 1

UK based Companies that incurred 3-yr. (1998-2000) average operating losses, or maintained consolidated accounts (in the case of a group of companies with a common parent company) were eliminated from this test.

Hypothesis 1: Full Profit Range vs. Inter-Quartile Profit Range

The two methods of regulating transfer price are the OECD's TNMM and the US IRS's CPM. The OECD describes TNMM as computing the appropriate net profit on particular transactions or groups of transactions. TNMM is usually applied when comparing the net margin resulting from a group of related party transactions with the net profit margins of independent companies that are engaged in broadly comparable transactions. Under CPM, the profitability of the user affiliate's closest competitor (operating in the same or similar market as the user affiliate but without the intangible) is used to compute a "normal" profit for the user affiliate. The user affiliate's profitability net of royalty payment must be equal to the profitability of its closest competitor which does not have the intangible. Essentially the principle underlying this arm's length return concept is that a user affiliate may earn the same return (or profitability) as a competitor who does not have the intangible.

This section attempts to answer several issues that arise as a result of the OECD's adoption of TNMM and the US IRS' adoption of CPM including, whether there are, in fact, substantial differences between TNMM and CPM; how TNMM and CPM is applied in practical situations; the relative strengths and weaknesses of TNMM and CPM. This leads to the question of whether OECD and US IRS international transfer pricing (ITP) regulations as represented by TNMM and CPM, where applied, are able to determine the arm's length price? To help answer this research question, a null hypothesis is stated as follows:

H01: There are no differences between OECD profit ranges (represented by a full range) and IRS profit ranges (represented by inter-quartile ranges).

Hypothesis 2: Profit Level Indicators (PLIs) in All Industries Combined

After deciding which comparables are to be used, and whether to make adjustments for differences in functions and risks, it is necessary to select a particular measure of profitability in applying TNMM and CPM. OECD Guidelines are not very specific regarding the profit measures that can be employed. In general, it is feasible to employ more than one PLI or profitability measure. Using this additional measure to test the selected method provides additional assurance that the profit range is reasonable, assuming, of course, that the other method yields a result consistent with the original method chosen.

Several profit-level indicators can be used, depending on the facts and circumstances of the tested party. The taxpayer must decide which profit-level indicator is most appropriate, or if a combination of profit-level indicators should be used. If a combination is used, the taxpayer must then determine the weights given to the various indicators. For the purpose of this research, five different PLIs were obtained from recommendations by OECD Guidelines and the US IRS as follows: profit margin; profit margin on sales; net margin; Berry ratio; and, return on assets. The underlying principle for selecting multiple PLIs being to provide a more in-depth analysis to demonstrate how the five PLIs perform within each comparable set (detailed PLI descriptions and formulas provided in 5.4.4.1-5.4.4.5). The argument that can be put forward is whether there is any difference in using one PLI over another? Additionally, do different PLIs result in different profit ranges and,

therefore, a different arm's length price? To answer these two questions, a null hypothesis is stated as follows:

H₀2: There are no differences between profit measures in different industries.

Hypothesis 3: Profit Level Indicators (PLIs) in Individual Industries

Lall (1979) suggested that transfer pricing problems differ greatly in scope and intensity amongst different industries. Potential manipulation of transfer pricing is greater in industries where there is advanced technology and products are highly specialized as open market prices are either unavailable or difficult to determine. To evaluate the comparable data sets across individual industries and to examine different PLIs at the individual SIC level, the main question is whether comparables for individual industries provide profit ranges that result in an arm's length price? To answer this question, a null hypothesis is stated as follows:

H₀3: There are no differences between profit measures when providing a comparable range.

6.3.1.2 Data Sample - Section 1

Due to the importance of both regulatory frameworks for MNEs worldwide, this research focuses on the OECD's TNMM and the US IRS's CPM by applying the two methods using the same data in order to uncover the practical variation. The sample consists of UK based companies that are used to obtain profit measures that might be used in their internal pricing. This can be done through consulting firms that provide client companies with profit measures that can be used when pricing internal transfers. For the purpose of this research, quantitative data and non-quantitative data used, including financial data and key profit level indicators for the UK-based companies, were obtained from Jordan's FAME database.

The information on Jordan's FAME database has been compiled from records filed at Companies House in Cardiff, London and Edinburgh. Companies House provides both the legal framework within which all companies operate and the means by which those companies are formally registered (incorporated) and dissolved. Jordans has put

together one of the largest and most complete financial databases of British companies. Its financial database of the Major Public and Private British Companies is contained on the Fame database. The database has been compiled from records filed at Companies House and supplemented with information taken from the London and Edinburgh Gazettes. The information included on the Fame database has been carefully checked by the financial analysts at Jordans.

As suggested by Lall (1979), an effective investigation of transfer pricing should focus on large public and private companies as they account for a substantial proportion of intra-firm trade. The data obtained to develop the comparables sets excluded all small and medium size companies and included companies which satisfied two of the following three criteria:

1. Turnover more than £11,200,000;
2. Balance sheet total exceeding £5,600,000; and,
3. Number of employees exceeding 250.

This research initially used the database to eliminate small and medium size companies in the UK within the randomly selected 12 manufacturing and 6 wholesaling industries. Manufacturing and wholesaling industries were chosen to be consistent with previous research undertaken in the US (Collin et al, 1997; Tworkowski, 1999). US Congress concerns of abuses associated with tax haven manufacturing using US developed intangibles had led the Congress to amend Section 482 in 1986 with respect to intangibles (H.R. Rep. No.99-426, at 420, 1985 (as reported by Cole, 1999, pg. 1-6)) and the perception in US Congress of abuses in the transfer prices of foreign manufacturers selling to their US subsidiaries resulted in a congressional suggestion in the 1986 legislative history that Treasury reviewed its transfer pricing Regulations generally (H.R. Conf. No.99-841, vol. II, at II 637, 1986 (as reported by Cole, 1999, pg. 1-6)). This research furthers previous studies by examining whether transfer pricing abuses are also prevalent in the UK within the manufacturing and wholesale industries.

Since large companies are more likely to involve transfer pricing practices in their operations and are usually not owner-managed businesses, this research used large

companies within the twelve manufacturing industries and six wholesale industries selected. The database was consequently used to obtain comparable companies and profit measures for UK companies.

The application of TNMM and CPM involves a search for independent UK-based companies with a key requirement being that these UK-based companies were functionally similar. In developing comparables, this research ensured that companies:

1. had active business operations;
2. had not been newly formed (active for a minimum of four years) ;
3. were independent;
4. had not been acquired in the period;
5. did not license products to third parties;
6. did not have another company as shareholder;
7. had sufficient accounts for a range of years;
8. had no average 3-yr. (1998-2000) after tax losses; and,
9. had activities similar to their four-digit SIC classifications.

After locating comparable companies through the FAME database, the second stage grouped comparable companies within the selected 12 manufacturing and 6 wholesale industries based on qualitative and quantitative criteria to obtain relevant PLIs (Comparables set for SIC 2416 - Manufacture of plastic in primary forms in Table 5 in Appendices).

For this research, averages for the three-year period 1998-2000 were calculated following OECD guidelines and US IRS regulations. Full ranges and quartile ranges were then developed for the sample. Five different PLIs recommended by OECD Guidelines and the US IRS were developed as mentioned earlier. Through the acquisition of the full OECD profit ranges and US IRS inter-quartile profit ranges, this research intends to evaluate OECD Guidelines as well as US IRS regulations on profit-based methods to determine the level of discretion they provide in terms of assessing the arm's length price.

6.3.2 Section 2: Foreign-Owned vs. UK-Owned Companies

There have been a number of studies concerning the economic impact of Japanese FDI in the UK. For example, previous research has examined the spatial distribution of Japanese investment in the UK (Taylor, 1993), trends in subsidiary growth (Morris et al., 1993), and the impact of increased competition from Japanese subsidiaries on domestic firms (Brech and Sharp, 1984; Strange, 1993). Studies have also investigated the contribution of Japanese FDI to both regional and national development for example, in terms of job creation, skill development and technology transfer (Trevor, 1985; Dillow, 1989; Munday et al., 1995; Morris, 1988; Strange, 1993).

Research on the relative performance of Japanese enterprises in the UK has proceeded in several directions. A number of studies have examined the general productivity of Japanese plants in the UK in comparison to plants located in Japan (Dunning, 1986; Strange, 1993). A further line of research has investigated the financial characteristics and marketing performance of Japanese subsidiaries located in the UK. For example, using UK cross-sectional data, Doyle et al. (1992) examined the characteristics of matched samples of 90 US, Japanese and indigenous subsidiaries in the consumer goods, industrial goods and financial services sectors.

Doyle et al. also reported that the increased commitment of Japanese firms to long-term performance objectives created greater support and confidence in employees within their subsidiaries. The managers of UK and US firms tended to view cost-cutting as a means of improving productivity, whereas Japanese managers perceived increases in market share as a key strategy to reduce costs and increase productivity. Further evidence of the commitment of Japanese firms in the UK to longer-term strategic objectives comes from the research of Bromwich and Inoue (1994), who in a 1991 interview survey of Japanese subsidiary managing/finance directors reported that the most important strategic objectives in their sample firms were return on sales and increasing market share. The study also reported that in terms of the achievement of stated objectives, the managers interviewed were most satisfied with their sales growth, and least satisfied with earnings growth and return on investment. On a similar theme, the KPMG (1996) survey of the managers of 70 of the 'top' Japanese manufacturing subsidiaries operating in the UK reported that 53% of respondents

considered their subsidiary was characterized by 'low' profitability, with none considering their company's profitability to be 'high'.

In summary, a number of research approaches have been used to examine the performances of foreign-owned companies in the UK: macro-level and regional studies, comparisons at the company and micro-level (plant level) studies using primary data drawn from questionnaires and/or case studies. This research extends previous research, by examining the comparative performance of Japanese-owned, US-owned companies and UK domestic companies within manufacturing and wholesale industries with reference to a wide range of profit level indicators. UK-owned companies and US-owned companies were selected in an effort to obtain a better comparable basis as UK-owned companies would provide a suitable match for home-based companies, while US-owned companies would provide a suitable match for foreign-based companies.

This section focuses on performance as measured by the same five PLIs used in Section 1 on individually matched foreign-owned (Japanese- and US-owned) companies and UK companies.

6.3.2.1 Hypotheses - Section 2

Hypothesis 4: Performance (PLIs) of Foreign-owned Companies (Japanese and US) vs. UK Companies

Most of the MNE theories reviewed in Chapter 2 and others such as Hymer, 1960; Vernon, 1971; Buckley and Casson, 1976, 1991; Magee, 1977 suggest that the main pre-condition for the propagation of FDIs is the ability of a company to internalize certain advantage(s), transport them across national boundaries and translate them into returns that are over and above what an indigenous company in the host country can make. This higher return is necessary to compensate the foreign MNE for developing, internalizing and transporting the advantage(s). The theory therefore supports a superior level of performance by foreign-owned companies. Available empirical evidence however points in the opposite direction. Wheeler (1988, 1990) was able to show that indigenous companies in the US outperform their foreign-owned counterparts six times over in terms of return on assets. Munday and Peel

(1997) also reported similar evidence in the UK. Their study related to Japanese-owned companies with the suggestion that research could be extended in future studies to cover foreign-owned companies of other nationalities and for periods extending beyond one year. The main concern is whether UK-owned companies substantially out-perform foreign-owned (Japanese and US owned) companies. Are the reported profits of large UK-owned companies significantly and consistently greater than those of foreign-owned (Japanese and US) companies of similar size and industry? To answer the above questions, a null hypothesis is stated as follows:

H₀4: There are no differences between the performances (profitability measures) of foreign-owned companies (Japanese and US) and their domestic counterparts.

Hypothesis 5: Performance (PLIs) of Joint venture (Japanese/UK and US/UK) companies vs. UK/Other Companies

The form of investment in the host countries has been considered in the literature as one of the organizational factors influencing MNEs transfer pricing policies. Several empirical studies (Kim and Miller, 1979; Tang and Chan, 1979; Tang, 1981) rank the interests of local partners of a foreign subsidiary as an important variable in the abuse of transfer pricing. A local partner in a joint venture plays a monitoring role which restricts the latitude of transfer pricing strategy practiced by the foreign investor (Lecraw, 1985; Emmanuel and Mehafdi, 1994).

The influence of a local partner as a factor on transfer pricing decisions is however, not conclusive and is difficult to generalize, depending on the management role of a local partner in the joint venture. The presence of local partners may motivate foreign investors to use transfer pricing to reduce the abuse in reported profits of the joint venture, which partially accrue to the local partners (Lall, 1973; Lyn et al., 1993; Emmanuel and Mehafdi, 1994). Another effect of having local partners is that they may have political influence to shield the joint venture from tax audits. As found by Chan and Chow (1997), absence of the local partner is one of the factors that most triggers tax audits.

As mentioned earlier in Chapter Four Section 4.4.4, time and resource constraints did

not permit investigation of individual joint venture companies' roles, interests, rights, and powers within the joint venture. This research defined foreign-owned Japanese joint venture as a Japanese company with at least one British company as shareholder (Japanese/UK) and foreign-owned US joint venture as a US company with at least one British company as shareholder (US/UK). A joint venture UK company is defined as a UK company with at least one foreign (not Japanese or US) company as shareholder (UK/Other).

A major concern is whether foreign-owned joint venture (Japanese and US) companies with at least one British company as shareholder substantially underperform UK joint ventures companies with at least one foreign company shareholder (UK/other). Thus, are the reported profits of large UK joint ventures companies significantly and consistently greater than those of foreign-owned joint ventures (Japanese- and US-owned) of similar size and industry? To answer, a null hypothesis is stated as follows:

H₀₅: There are no differences between the performances (profitability measures) of joint venture foreign-owned companies (Japanese/UK- and US/UK-owned) and the performances of UK/other-owned companies.

6.3.2.2 Data Sample - Section 2

Of the 1602 Japanese-owned companies listed, 1309 were active. From the 1309 active companies, 512 were selected based on their size as measured by turnover in addition to the availability of data. These 512 companies were then grouped according to 1992 four-digit SIC codes. These 512 companies were classified by four-digit SIC codes based on their primary activity in order to obtain the best possible match of companies' functions. It can be noted that the top Japanese companies were disproportionately represented within the SIC code classification. This research focused on developing comparisons of the performance as measured by profits in a manner similar to that used in developing comparables in Section 1. Twelve manufacturing and six wholesale industries were selected due to the large presence of Japanese-owned companies within these industries. Of the Japanese-owned companies, 512 were represented within the 44 selected industrial sectors. Through further elimination based on whether a company had: active business

operations; not been acquired in the period; not been newly formed; not licensed products to third parties; independent ventures; sufficient accounts for a range of years; no 3-yr. Average (1998-2000) after-tax losses; and, activities similar to their SIC classifications, 76 Japanese-owned companies and 58 Japanese joint ventures (companies that have at least one UK company as a shareholder) were represented in eighteen industries (see Table 6-1).

Table 6-1: Classification of the Sample Companies

No.	SIC 92	UK	UK-Other	JPN	JPN-UK	USA	USA-UK	Total	Without Loss Making
1	2416	46	8	2	2	1	6	65	51
2	2466	19	13	3	3	4	6	48	42
3	2524	29	5	2	3	9	6	54	44
4	2862	22	1	0	4	1	7	35	24
5	2875	44	15	2	2	11	21	95	72
6	3002	27	4	6	4	15	3	59	39
7	3162	39	10	10	8	17	20	104	75
8	3210	33	10	12	4	12	8	79	51
9	3220	22	14	3	0	3	4	46	31
10	3230	8	5	4	3	2	3	25	15
11	3320	40	6	2	1	13	13	75	58
12	3410	15	10	2	1	2	7	37	24
13	5142	45	8	3	1	5	2	64	38
14	5143	45	7	10	13	9	10	94	70
15	5146	33	14	3	3	4	6	63	45
16	5155	18	11	3	3	4	1	40	32
17	5164	20	3	4	1	3	5	36	27
18	5165	10	3	5	2	5	3	28	21
Total		515	147	76	58	120	131	1047	759

The FAME database was consequently used to obtain companies comparable for the Japanese-owned companies. UK-owned companies and US-owned companies were selected in an effort to obtain a better comparable basis as UK-owned companies would provide a suitable match for home-based companies, while US-owned companies would provide a suitable match for the foreign-based companies.

Unlike some of the previous studies which used unmatched companies to compare the performance of foreign-owned companies with domestic-owned companies, this

section of the research evaluates the performance of MNEs using three different matching methods as follows:

1. Individually matched by growth in turnover (+, - 2.5%) over the 3-yr period 1998-2000, factoring in similar strategies, product cycles, etc;
2. Individually matched by operating profit over the 3-yr average 1998-2000 (+, - 10%), factoring in similar profitability levels, cost of goods sold, ability to make profit, etc; and,
3. Individually matched by turnover (similar to Munday and Peel, 1997) over the 3-yr average period 1998-2000 (+, - 10%), factoring in similar size of operations, market, share, etc.

The basis for choosing matching criteria to compare the performance of foreign-owned (Japanese and US) companies to UK-owned companies being that each of the matching criteria had its limitations and through the use of multiple matching factors the quality of the sets would increase (a sample of the matched companies in Table 6 in Appendices).

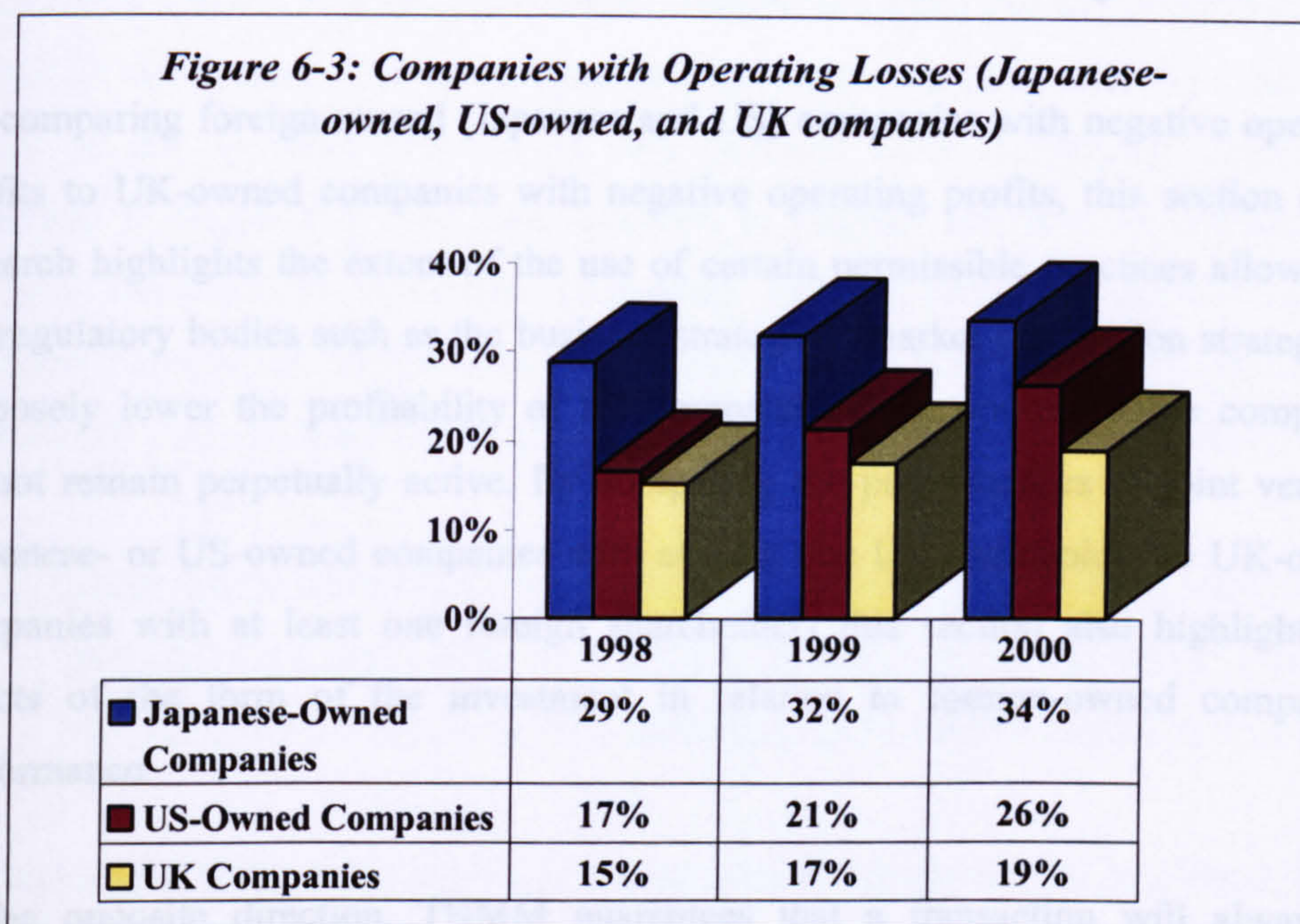
6.3.3 Section 3: Analysis of Operating Losses

One of the main theoretical arguments that explain growth, is the ability of a company to internalize certain advantage(s), carry them overseas and convert them into superior returns. Figure 6-3 illustrates foreign-owned companies in the UK as represented in this research by Japanese- and US-owned companies with average operating losses. The percentage of the total number of Japanese-owned companies with operating losses over the total number of active Japanese-owned companies in the UK is the highest compare to the percentage of the total number of US-owned companies with operating losses over the total number of active US-owned companies and the percentage of the total UK companies with operating losses over the total number of active UK companies. The ratios of loss making companies for the years 1998-2000 raised concerns regarding the low performance of foreign-owned companies, especially Japanese-owned companies.

As comparables are the main focus of this research and loss-making companies cannot be used as a part of comparable set to obtain profit ranges, this section

compares foreign-owned companies (Japanese and US) with negative operating profits to UK-owned companies with negative operating profits. By examining loss-making companies not included in previous studies (Kim and Lyn, 1990; Gideon, 1990; Crain and Stills, 1994; Wheeler, 1988, 1990; and, Munday and Peel, 1997) this study opens an important avenue when testing foreign-owned (Japanese and US) companies compared to their domestic UK counterparts.

Figure 6-3: Companies with Operating Losses (Japanese-owned, US-owned, and UK companies)



* Source: FAME DATABASE, June 2003

Companies cannot continuously lower their profitability or increase their costs under market penetration strategies. Therefore for this research it was assumed that the companies included in the sample did not implement the market penetration strategy since during the market penetration period companies' profits are lower than normal although it is expected that they would earn higher than normal profits after the market penetration period. These higher than and lower than normal profits should be phased out through the use of the multiple year averages 1998-2000.

“Business strategies also could include market penetration schemes. A taxpayer seeking to penetrate a market or to increase its market share might temporarily charge a price for its product that is lower than the price charged for otherwise comparable products in the same market. Furthermore, a taxpayer seeking to enter a new market or expand (or defend) its market share might temporarily incur higher costs (e.g. due to start-up costs or increased

marketing efforts) and hence achieve lower profit levels than other taxpayers operating in the same market” (OECD, 1995, Chap, I, para. 1.32).

As found by Chan and Chow (1997), persistent losses are one of the factors that most triggers tax audits. A possible explanation for companies with average operating losses is that these companies remain in business because of the benefits they provide to their international group of companies (ITP policy) and make use of the flexibility provided by regulatory bodies such as the OECD, US IRS, or UK regulations.

By comparing foreign-owned (Japanese and US) companies with negative operating profits to UK-owned companies with negative operating profits, this section of the research highlights the extent of the use of certain permissible practices allowed by the regulatory bodies such as the business strategies “market penetration strategy” to purposely lower the profitability of the companies since non-profitable companies cannot remain perpetually active. By comparing the performances of joint ventures (Japanese- or US-owned companies with at least one UK shareholder to UK-owned companies with at least one foreign shareholder) this section also highlights the effects of the form of the investment in relation to foreign-owned companies’ performance.

In the opposite direction, TNMM guarantees that a transaction will always be profitable to one of the participants. This does not always occur in arm's-length relationships between unrelated parties. Neither cost plus, resale price, or the CUP methods guarantee net profits to any participant in a given transaction. The OECD Guidelines make this point more generally "There is no justification under the arm's length principle for imposing additional tax on enterprises that are less successful than the average when the reason for the lack of success is attributable to commercial factors" (OECD, 1995, B.3.4).

“Foreign governments objected to the use of US IRS CPM in cases where the multinational group overall had a loss on a product being distributed in the United States. They argued that if there was an overall loss, it was wrong to require a US distribution subsidiary to report a typical distributor's profit” (Cole, 1999 p.9-31).

By focusing on companies with operating losses, this research provides analysis of companies that are not able be included in any comparable set and have been

bypassed thus far in empirical studies with the exception of Chan and Chow (1997).

6.3.3.1 Hypotheses - Section 3

Hypothesis 6: Performance (PLIs) of Foreign-owned (Japanese and US) companies with operating losses vs. UK companies with operating losses

As mentioned earlier in Chapter 2 and Hypothesis 4 of this chapter, MNE theories suggest that a MNE's superior performance can be achieved due to the internalization of certain advantage. Evidence from the literature and data collection, however, points in the opposite direction as data obtained from the FAME database as presented in Figure 6-3. The main question is whether loss-making companies of different countries of ownership (Japanese- and US-owned companies) display different patterns of performance as measured by a wide range of profit level indicators? To answer the above question, a null hypothesis is stated as follows:

H₀6: There are no differences between the performance (profitability measures) of foreign-owned companies with average negative operating profit (Japanese- and US-owned) and UK-owned companies with negative operating profit.

Hypothesis 7: Performance (PLIs) of Foreign-owned Joint ventures (Japanese/UK and US/UK) with operating losses vs. UK/other companies with operating losses

As mentioned earlier in hypothesis 5, The importance of joint venture investments in ITP is due to the form of the investment influencing the tax audits of transfer pricing. Thus, the main question is whether loss-making companies of different countries of ownership (Japanese- and US-owned companies with at least one British company as shareholder) display different patterns of performance as measured by a wide range of profit level indicator? To answer this question, Hypothesis 7 is as follows:

H₀7: There are no differences between the performance (profitability measures) of joint venture foreign-owned companies with average negative operating profit (Japanese/UK- and US/UK owned) and UK/other-owned companies with negative operating profit.

6.3.3.2 Data Sample - Section 3

From this section of the research the data sample consisted of all Japanese-owned companies, US-owned companies and UK domestic companies with three-year average (1998-2000) operating losses obtained from the previous sections (see Table 6-1) in the same twelve manufacturing and six wholesale industries without matching methods due to the limited number of companies with average operating losses.

6.3.4 Section 4: Tax Analysis

Transfer pricing affects many aspects of a MNE's business. The enormous increase in global commerce with the significant portion of worldwide commerce occurring between related businesses, transfer pricing has increased in importance (Tworkowski, 1999). A review of the literature found no studies that address the effects of the latest transfer pricing regulations introduced in the 1998 corporation tax self-assessment. This study adds to the body of knowledge in this area.

As explained in detail in Chapter 4, there has been transfer pricing provisions in the UK tax code for more than 50 years. Transfer pricing changes were overhauled in 1998, as the 1998 Finance Act introduced a comprehensive modernization of the UK's transfer pricing legislation. These changes were part of a wider reform of the Corporation Tax regime, which included the introduction of self-assessment for companies.

For accounting periods ending on or after July 1, 1999, and years of assessment 1999/2000 et seq., sections 770 to 773 of the Income and Corporation Taxes Act (ICTA) 1988 have been replaced by sections 108-111 and Schedule 16 FA 98. The full text of the basic rule now appears as Schedule 28AA ICTA 1988 and can be accessed through the internet at www.inlandrevenue.gov.uk.

No penalties could ordinarily be attached to the tax on pricing increases made by Inland Revenue since there was no statutory requirement to return profits calculated in accordance with the arm's length standard. The transfer pricing regime remained totally reactive for 50 years. Everything has changed for accounting periods ending on or after July 1, 1999, for which Schedule 28AA ICTA 1988 is now in effect (detailed previously in Chapter 3).

This section of the analysis sought to determine (a) if foreign-owned companies reported more or less taxes as reported in their annual profit and loss accounts than UK-owned companies; and (b) if there were any significant changes as a result of the 1998 UK tax revisions.

Because of the differences in financial characteristics of various industries, it is important to compare companies on an industrial basis. For instance, companies classified in the wholesale trade industry generally report large amounts of sales compared to their end-of-year assets. It is also very important when comparing the performance of foreign-owned companies with domestic UK companies that these companies are individually matched. Whereas previous studies, for the most part, ignored matching procedures, this research matched individual companies of gross profit, defined as turnover less cost of sales. The main reason for selecting gross profit to be used as a matching method is to be consistent with previous sections of this study which focused on companies' profitability. Exact matching on the basis of gross profit proved difficult, hence matching was conducted on the basis of gross profit range of plus or minus 10%.

6.3.4.1 Hypotheses - Section 4

Hypothesis 8: Performance (reported taxes) of Foreign-owned (Japanese and US) Companies vs. UK Companies

Since it is generally not possible for researchers to observe the actual transfer price, understanding more about the objectives of the transfer pricing method alleviates the need to consider the specific direction of the effect of the transfer price (Cravens and Shearon, 1996). As taxation is one of the several considerations that influence a company organization's decisions (Abdallah, 1989), this study examines the tax expense figures as they appeared on the companies' annual accounts. Grubert et al. (1993) documented that foreign-controlled subsidiaries in the U.S. "report strikingly less taxable income than do their domestically controlled counterparts" (p. 269). Crain and Stitts (1994) and Kim and Lyn (1990) also provide supporting evidence that foreign-owned companies report lower profits.

Clearly a significant problem exists even given UK or the US tax regulations prohibiting manipulation. Transfer pricing manipulations are not exclusive to foreign-

owned companies in the UK. Most developed nations have laws in effect to prevent the manipulation of transfer prices solely to avoid taxation. Also, from an international perspective, taxation issues may include tariffs levied by customs authorities on the entry or exit of goods into a country. Companies may employ transfer pricing to alter the value of the goods transferred. Transfers to affiliates in countries with high import duties may be accomplished with a lower transfer price to avoid inflating the value of the goods being imported.

The financial distributions that companies make after the declaration of profits or losses are expected to be a function of their recent financial performance. Reported tax is an important variable and is expected to be a fair reflection of performance. Tax has long been recognized as a key variable in the decision making process of MNEs (Belkaoui, 1994; Emmanuel and Mehafdi, 1994) especially in relation to the location of their subsidiaries. In the US, empirical evidence suggesting the use of ITP for shifting income out of high tax or tax-inefficient locations has been widely reported. Some of the studies mentioned earlier in this section reveal that foreign-owned companies' taxes are drastically below those of their domestically owned counterparts. This position is yet to be empirically explored within the UK context.

Although foreign-owned company have always been accused of using ITP to shift income from the UK, little empirical evidence is available in the literature. An empirical comparison of the reported tax expense by foreign-owned (Japanese and US owned companies) operating in the UK with those of their UK-owned counterparts needs to be undertaken. Are there substantial differences between the two groups? Do companies of different countries of ownership report different amounts of tax? To examine this question, Hypothesis 8 is as follows:

H08: There is no difference in the amount of reported tax expense by foreign-owned companies (Japanese- and US-owned) compared to the amount of reported tax expense by domestic companies.

Hypothesis 9: Effects of UK Transfer Pricing Regulations Introduced in 1998 Corporation Tax Self-Assessment on Foreign-owned (Japanese and US) Companies and Domestic UK Companies

Although alignment of transfer pricing with Corporation Tax Self-Assessment (CTSA) was cited as the impetus behind the changes, the 1998 legislation was clearly designed to protect the tax base from further erosion in an environment where other fiscal authorities were aggressively policing compliance with their own domestic transfer pricing rules.

The economic theory of noncompliance attributable to the model of Allingham and Sandmo (1972) and Srinivasan (1973) suggests that taxpayers analyze the economic benefits and costs of noncompliance and that income levels, tax rates, audit rates, penalty rates and risk attitudes are the primary determinants of noncompliance. The purpose of this section is to examine whether the latest UK transfer pricing regulations affects compliance by foreign-owned (Japanese and US) companies and domestic UK companies. In other words, are there any effects of the latest UK transfer pricing rules introduced in 1998 corporation tax self -assessment on the patterns of reported tax by companies of different ownership? To answer this question, a null hypothesis is stated as follows:

H₀9: There are no differences in the amount of reported tax by foreign-owned companies prior and subsequent to the latest UK transfer pricing regulation introduced in 1998 corporation tax self-assessment compared to domestic companies.

6.3.4.2 Data Sample - Section 4

Using the FAME database, the data for this section was obtained to answer the research question regarding the implications of the latest UK transfer pricing regulation using a sample of UK-based companies (Japanese-, US-, and UK-owned) during two selected time periods. An event history analysis, as suggested by Shackelford (1993), was used employing a comparison of the years prior and subsequent to the 1998 UK regulations which was effective for accounting periods ending on or after July 1, 1999. The data consisted of companies' tax liability, gross

profits, turnover, and operating profits for the individual companies for the time periods, fiscal years ended 1996-1997 and fiscal years ended 1999-2000. The time periods were chosen so that the intervening years would cover the period when the changes in the tax and transfer pricing regulations in the UK, including the latest 1998 regulations, occurred and were being widely discussed. The rationale for choosing US-owned and Japanese-owned companies was to be consistent with previous sections of this research.

Since the number of Japanese-owned companies represented is smaller compared to US-owned and UK-owned companies, Japanese-owned companies provide the basis for which the other companies are matched. To avoid the tax credits which may distort the data sets, this research included only companies with positive tax figure. Previous research randomly selected groups of foreign and domestic companies and compared their reported tax, regardless of their activities, size, or profitability. In addition and unlike some of the previous studies, this research uses the same set of sample companies when comparing periods prior and subsequent to the latest UK transfer pricing regulations.

6.3.5 Interviews with ITP Specialists

This study conducted a number of interviews to authenticate the findings of the different parts of this research. It was the intention of this research to use a sample of carefully selected (non random) interviews with academics, consultants and ITP experts. Each interview was recorded and transcribed and lasted (on average) an hour each. The interviewees were identified based on their academic achievement, employment, published works and, above all, their ITP experience.

6.4 Data Measurement and Statistical Tests

The four data sets collected for the first four different sections of this research were ratio scaled. As the distances between the values of the data sample are meaningful, a ratio scale measurement demonstrates how much larger or smaller one value is compared to another. In order to disprove the null hypotheses, this study selected the most appropriate statistical test as determined by the following issues:

1. The research questions;
2. The nature of the data; and,

3. The design or the plan of the research. (Kinnear and Gray, 1997)

The research question relates to the type of relationship being investigated, whether the nature of data establishes the level of measurement of the observations in the data set. Finally, the research design is concerned with the number and type of sample(s) and whether they are related or independent. A particular statistical test is most appropriate for each separate combination of these three key issues. For this research, the choice of the statistical tests was limited to the tests for the differences with a brief description of the selected statistical tests as follows:

1. T-Test

T-tests are most commonly used to examine whether the means of two groups of data are significantly different from one another. With a t-test, the independent variable is nominal or categorical and the dependent variable is measured at an interval or ratio scale of measurement. The populations from which the two groups are drawn can be independent (unrelated) or matched (related). T-tests indicate the sample differences by using means and the distribution of sample scores around the mean. The t-test assumes that the distribution of average difference is approximately normal and can be used for large sample sizes and for all samples from a normal population.

There are two main t-tests. The first type of t-test is used with unmatched data and is known under a number of names including: independent samples t-test, t-test for two independent means, independent t-test, and t-test for unrelated samples. Regardless of the name, with this type of t-test there are two distinct categories for the independent variable and one dependent variable measured at the interval or ratio level. The independent samples t-test examines whether the mean of the dependent variable for each group defined by the independent variable is significantly different.

The second t-test is used with matched data and is also known under a number of names including: paired samples t-test, t-test for related measures, related t-test, and correlated t-test. This test can be used in a number of circumstances where the question calls for the repeated measurement of responses from the same respondent. The paired-samples t-test will be testing whether the means of each of the paired or 'before/after' variables are significantly different or not.

Since the majority of the hypotheses examine the differences between the mean of the variables, this research uses various types of t-tests to examine H₀₁-H₀₈.

2. Sign Test

This test is normally used when the sample size is small and the distribution of values is far from normal or, if the data might have outliers. This test is a nonparametric alternative to the paired t-test. The null hypothesis for the sign test signifies that the median difference between the two members of a pair is 0. There is no need to make any assumptions about the shape of the distributions from which the data is obtained. The only requirement is that the different pairs of observations are selected independently and the values can be ordered from smallest to largest as the test is based on seeing which of a pair of values is larger.

3. Wilcoxon Test

This sign test looks at which of the two numbers for a pair is larger while ignoring the magnitude of the difference. The Wilcoxon matched-pairs signed-rank test uses the information about the size of the difference between the two members of a pair, thereby making it more likely to detect true differences when they exist. However, the Wilcoxon test requires that the differences be a sample from a symmetric distribution, a less stringent assumption than requiring normality, since there are many other distributions besides the normal distribution that are symmetric.

As the non-parametric alternative to the paired t-test, the sign and Wilcoxon tests were selected for H₀₁ and H₀₂ for Section 1 of this research given that the number of profit level indicators is small and the data presented in matched pairs (OECD full range vs. US IRS inter-quartile range).

4. Pearson Correlation

The Pearson correlation is a measure of the linear relationship between variables. It examines the relationship that exists between two or more variables. There are a number of ways in which these variables are related:

- a. The variables are positively related, when one variable moves in one direction the other variable moves in the same direction;

- b. The variables are not related at all, one variable remains the same regardless of the movement of the other variable; and,
- c. The variables are negatively related, when one variable moves in one direction the other variable moves to the opposite direction.

The Pearson correlation test proves appropriate for H₀₃ to examine the linear relationship between the PLIs, which is essential when explaining the movements of different profit measures.

5. One Way ANOVA

This statistical technique, called analysis of variance (ANOVA), examines the variability of the sample values. It looks at how much the observations within each group vary as well as how much the group mean vary. Based on these two estimates of variability, the conclusions about the population means can be drawn. If the sample means vary more than expected based on the variability of the observations in the groups, it can be concluded that the population means are not all equal. It is a one-way analysis of variance because cases are assigned to different groups based on their values for one variable. Analysis of variance requires the following assumptions:

- Independent random samples have been taken from each population;
- The populations are normal; and,
- The population variances are all equal.

The One Way ANOVA test was selected for H₀₉ to compare the reported tax means prior and subsequent to the 1998 UK regulations.

6.5 Summary

This chapter detailed the major four sections of this study. In Section 1 of this research, averages were developed for all data obtained, five different PLIs were used, quantitative and non-quantitative data was used to develop comparables, and industry classifications were considered. Section 2 used three-way matching criteria to compare the performance of foreign-owned companies with domestic companies. Section 3 illustrated the role of companies with negative operating profits in ITP applications. Section 4 used the same set of sample companies when comparing

periods prior and subsequent to the UK regulations introduced in 1998 corporation tax self-assessment, matching criteria for company sets, and industrial classifications codes.

This chapter provides justification for each of the four relevant sections in order to develop comparables and detect the ownership effects on both profitability and taxes and test the level of discretion that can be exercised by MNEs under different regulations. In addition, this chapter provides details of the regress procedures conducted in developing comparables and testing comparable companies' performance as measured by both profits and taxes. This research is designed to eliminate the limitations of previous research as well as satisfy the comparables test.

Chapter 7
Analysis and Results

7.1 Introduction

This chapter presents the data analysis for this research in order to answer the research question whether OECD TNMM and US IRS CPM methods, where applied, can determine transfer pricing while maintaining the arm's length principle and, whether feasible comparables are available to justify the arms length principle. In addition, the data analysis addresses the question of whether companies of different countries of ownership display different patterns of performance as measured by a range of PLIs, operating losses, and reported taxes. Table 7-1 provides a synopsis of the hypothesis, data and sample used for the four sections with a detailed analysis to follow.

7.2 Data Analysis

7.2.1 Section 1: OECD (TNMM) vs. US IRS (CPM)

The objective for this section was to test whether there were any differences between the OECD's TNMM and the US IRS' CPM. In addition, this section examined the accountability of the different PLIs (profit measures) for the total sample 18 manufacturing and wholesale industries combined as presented in the following null hypotheses:

H01: There are no differences between OECD profit ranges (represented by a full range) and IRS profit ranges (represented by inter-quartile ranges).

H02: There are no differences between profit measures in different industries.

The initial investigation of the difference between the OECD TNMM full ranges and the US IRS CPM inter-quartile ranges was conducted using the paired sample t-test. In the t-test for each profit measure, the difference was calculated between the lower and upper point of the full range (OECD full gap) and compared with the difference between the lower quartile and upper quartile range (IRS inter-quartile gap) across all 18 manufacturing and wholesale industries. The paired sample t-test was used to assess whether or not the means of each paired or 'full range/quartile range' was significantly different. The test was done in two stages. The first stage included all comparable companies, while the second stage excluded companies with average operating losses. This was done to determine whether excluding the loss making companies would have any effect on the profit ranges for these industries. (Appendices, Tables 1 and 2).

Table 7-1: Hypotheses, Data and Sample, and Statistical Tests Performed

Section 1: Investigation of Comparables (TNMM vs. CPM)

Hypothesis	Data & Sample	Statistical Tests
H01 There are no differences between OECD profit ranges (represented by a full range) and IRS profit ranges (represented by inter-quartile ranges)	A group of 759 companies representing 18 manufacturing and wholesale industries	1) Paired sample t-test 2) Wilcoxon test 3) Sign test
H02 There are no differences between profit measures in different industries	A group of 759 companies representing 18 manufacturing and wholesale industries	1) Paired sample t-test 2) Wilcoxon test 3) Sign test
H03 There are no differences between profit measures when providing a comparable range	Groups of companies varying by SIC code representing 18 manufacturing and wholesale industries (See Table 6-2)	1) Pearson correlation

Section 2: Foreign-owned Companies (Japanese and US) vs. Domestic UK Companies

H04 There are no differences between the performances (profitability measures) of foreign-owned companies (Japanese- and US-owned) and their domestic counterparts	<ol style="list-style-type: none"> 52 Japanese-owned companies individually matched with 52 domestic UK companies based on growth 26 Japanese-owned companies individually matched with 26 domestic UK companies based on operating profit 42 Japanese-owned companies individually matched with 42 domestic UK companies based on turnover 88 US-owned companies individually matched with 88 domestic UK companies based on growth 53 US-owned companies individually matched with 53 domestic UK companies based on operating profit 68 US-owned companies individually matched with 68 domestic UK companies based on turnover 	Independent sample t-test
H05 There are no differences between the performances (profitability measures) of joint venture foreign-owned companies (Japanese/UK- and US/UK-owned) and the performances of UK/other-owned companies	<ol style="list-style-type: none"> 21 Japanese/UK-owned companies individually matched with 21 domestic UK companies based on growth 9 Japanese/UK-owned companies individually matched with 9 domestic UK companies based on operating profit 11 Japanese/UK-owned companies individually matched with 11 domestic UK companies based on turnover 46 US/UK-owned companies individually matched with 46 domestic UK companies based on growth 26 US/UK-owned companies individually matched with 26 domestic UK companies based on operating profit 33 US/UK-owned companies individually matched with 33 domestic UK companies based on turnover 	Independent sample t-test

Table 7-1: Hypotheses, Data and Sample, and Statistical Tests Performed (cont.)

<i>Section 3: Foreign-owned Companies (Japanese and US) with Operating Losses vs. Domestic UK Companies with Operating Losses</i>			
	Hypothesis	Data & Sample	Statistical Tests
H06	There are no differences between the performance (profitability measures) of foreign-owned companies with average negative operating profit (Japanese- and US-owned) and UK-owned companies with negative operating profit	<ol style="list-style-type: none"> 27 Japanese-owned companies with 3-yr (1998-2000) average operating losses vs. 115 domestic UK companies with 3-yr (1998-2000) average operating losses 36 US-owned companies with 3-yr (1998-2000) average operating losses vs. 115 domestic UK companies with 3-yr (1998-2000) average operating losses 	Independent sample t-test
H07	There are no differences between the performance (profitability measures) of joint venture foreign-owned companies with average negative operating profit (Japanese/UK- and US/UK owned) and UK/other-owned companies with negative operating profit	<ol style="list-style-type: none"> 18 Japanese/UK-owned companies with 3-yr (1998-2000) average operating losses vs. 47 domestic UK companies with 3-yr (1998-2000) average operating losses 42 US/UK-owned companies with 3-yr (1998-2000) average operating losses vs. 47 domestic UK companies with 3-yr (1998-2000) average operating losses 	Independent sample t-test

Section 4: Tax Analysis

	Hypothesis	Data & Sample	Statistical Tests
H08	There is no difference in the amount of reported tax expense by foreign-owned companies (Japanese- and US-owned) compared to the amount of reported tax expense by domestic companies.	<ol style="list-style-type: none"> 47 Japanese-owned manufacturing companies individually matched with 47 domestic UK manufacturing companies based on gross profit 202 US-owned manufacturing companies individually matched with 202 domestic UK manufacturing companies based on gross profit 41 Japanese-owned wholesale companies individually matched with 41 domestic UK wholesale companies based on gross profit 80 US-owned wholesale companies individually matched with 80 domestic UK wholesale companies based on gross profit 	Independent sample t-test
H09	There are no differences in the amount of reported tax by foreign-owned companies prior and subsequent to the latest UK transfer pricing regulation introduced in 1998 corporation tax self-assessment compared to domestic companies.	<ol style="list-style-type: none"> 47 Japanese-owned manufacturing companies 202 US-owned manufacturing companies 249 domestic UK manufacturing companies 41 Japanese-owned wholesale companies 80 US-owned wholesale companies 121 domestic UK companies 	One Way ANOVA

The paired t-test revealed that there were significant differences at the 5% level between the OECD full range and the US IRS quartile ranges for the profit margin, return on assets, net margin and Berry ratio. Conducting the same test excluding the loss making companies showed that there were significant differences between the OECD full range and US IRS inter-quartile range at the 5% level for the profit margin, profit margin on sales, Berry ratio, and return on assets.

Wilcoxon and Sign tests were also used to investigate whether there was a difference between the OECD TNMM full ranges and the US IRS CPM inter-quartile ranges. In the Wilcoxon and Sign tests, for each profit measure the difference was calculated between the lower and upper point of the full range (OECD full gap) then compared with the difference between the lower quartile and upper quartile range (IRS inter-quartile gap) across all 18 manufacturing and wholesale industries. The Wilcoxon and Sign tests were used to confirm the results obtained from the paired t-test. Similar to the paired t-test, the Wilcoxon and Sign tests were done in two stages. The first stage included all comparable companies (Appendices, Table 3A, 3B, 3C, and 3D), while the second stage excluded companies with average operating losses. (Appendices, Table 4A, 4B, 4C, and 4D)

The Wilcoxon and Sign tests revealed that there were significant differences between the OECD full range and the US IRS inter-quartile ranges for the profit margin, profit margin on sales, net margin, Berry ratio, and return on assets. Conducting the same test excluding the loss making companies showed that there were significant differences between the OECD full range and US IRS inter-quartile range for profit margin, profit margin on sales, net margin, Berry ratio, and return on assets.

To further investigate whether there was a difference between the OECD TNMM full range (OECD full gap) and the US IRS CPM inter-quartile range (IRS inter-quartile gap), a ratio analysis was conducted for the individual industries as shown in Table 7-2. The ratio analysis revealed that the ratios of inter-quartile ranges over the full range varied notably from one industry to another. Although both SIC 5164 (Wholesale of Office Machinery and Equipment) and SIC 5155 (Wholesale of Chemical Products) are wholesale industries, SIC 5164 reports the highest ratio (the least distance from the full range and more logical distribution as it is close to the 50th percentile) while

SIC 5155 reports the lowest ratio (the widest distance as it is 8th percentile). These ratio distributions illustrate how industries vary in terms of their comparable profits.

Table 7-2: Ratio Analysis of Full vs. Inter-Quartile Ranges (Section 1 - Hypothesis 1)

Industry	OECD Lower Profit Margin	OECD Upper Profit Margin	IRS Lower Quartile Profit Margin	IRS Upper Quartile Profit Margin	Distance Full	Distance Inter-Quartile	Ratio Quartile/Full
2416	-11.2	31.03	3.2	8.75	42.23	5.55	13%
3002	-6.8	21.77	3.16	9.72	28.57	6.56	23%
2875	-12.1	27.92	2.5	10.7	40.02	8.2	20%
2862	-2.54	18.82	2.49	8.45	21.36	5.96	28%
2524	-7.21	26.46	2.34	11.27	33.67	8.93	27%
2466	-25.03	21.2	0.81	10.87	46.23	10.06	22%
3162	-4.89	43.56	3.76	15.16	48.45	11.4	24%
3210	-3.01	42.74	1.69	12.09	45.75	10.4	23%
5142	-3.03	17.2	1.56	8.41	20.23	6.85	34%
3410	-5.6	7.99	1.17	3.83	13.59	2.66	20%
3320	-1.09	43.79	4.25	13.13	44.88	8.88	20%
3230	-1.47	14.41	0.25	6.04	15.88	5.79	36%
3220	-3.24	36.3	3.08	13.42	39.54	10.34	26%
5143	-1.18	41.01	2.04	6.11	42.19	4.07	10%
5146	0.13	26.67	2.28	9.84	26.54	7.56	28%
5164	0.36	25.98	1.76	14.17	25.62	12.41	48%
5155	-2.53	28.46	1.51	3.84	30.99	2.33	8%
5165	0.89	51.01	5.47	13.15	50.12	7.68	15%

Based on the findings in Section 1, this research rejects both the first null hypothesis that there are no differences between the OECD full range and IRS quartile range for all the profit ranges used and the second null hypothesis that there are no differences between profit measures for the 18 total sample manufacturing and wholesale industries. TNMM endorsed in OECD Guidelines and CPM endorsed by the US IRS are conceptually the same method of determining transfer prices. Differences between the two methods lie in the nuances of their application, particularly the US IRS' emphasis on the inter-quartile range and adjustment to the midpoint. This research shows that the application of different regulations affords MNEs differing degrees of discretion in terms of compliance. Whereas the US IRS limits a company's ability by restricting the profit ranges to inter-quartile profit ranges as opposed to the full range used by the OECD, the OECD allows a wider range but emphasizes comparison on function and risk. The US IRS emphasizes less control for function and risk through the use of inter-quartile ranges thus moving towards industry standards.

The US IRS view is that when inter-quartile ranges are used, no precise adjustment for function and risk is necessary. This finding supports the US IRS argument that the range must be adjusted through the application of a valid statistical method, if possible, to increase the reliability of the analysis. US IRS regulations state that reliability is satisfied if statistical methods are applied to establish a range of results in which the limits of the range will be determined such that there is a 75% probability of a result falling below the upper end of the range. The inter-quartile range will thus satisfy the reliability portion of the test.

These findings also suggest that larger sets of comparable companies can be obtained when companies with operating losses are included. In addition, the results presented the effects of loss making companies on the PLIs (Appendices, Table 1 and Table 2).

As the use of the inter-quartile range limits PLI ranges to the middle 50th percentile, the main argument that can be put forward is that due to the OECD's awareness of the level of assurance that TNMM can provide, the OECD recognizes TNMM as method of last resort while the US includes CPM as part of the best method rule.

The importance of this finding is that companies that use CPM to test the arm's-length nature of their transfer pricing therefore face the possibility that European tax authorities may reject an analysis developed using profit-based methods since many European tax authorities view CPM as inconsistent with OECD Guidelines. An example of a comparables set, SIC 2416 (Manufacturing of Plastic in Primary Forms) is shown in Table 5 (Appendices).

H03: There are no differences between profit measures when providing a comparable range.

To validate H03 related to the measurement of different PLIs, this study tested each of the 18 industries separately. After excluding companies with 3-yr. (1998-2000) average operating losses, this research individually developed descriptives and Pearson correlations for each of the 18 industries with the analysis focusing on the differences and relationship between the PLIs. The descriptive statistics for each of the 18 industries showed the minimum and the maximum values for each of the profit measures and the mean value of each of the PLIs.

The Pearson correlation presented the relationship between the different PLIs was based on individual industries in order to determine whether the PLIs were different from each other and providing alternatives for companies when selecting the preferred PLI. The correlation examined whether the relationship between different PLIs was significantly different from positive correlation. Specifically, the Pearson correlation tested whether the correlation coefficient differed significantly from +1. As the coefficient could not be above +1 (perfect positive correlation) a one tailed test was used. The results of each individual industry are summarized in Table 7-3.

Table 7-3: Analysis of individual industries (Section 1 - Hypothesis 3)

<i>No.</i>	<i>SIC 1992</i>	<i>Sample Size</i>	<i>Statistical Test</i>	<i>No. of PLIs Significance at 0.01 or 0.05 level</i>	<i>*Table</i>
1	2416	51	<i>Pearson Correlation</i>	9	7B
2	2466	42		9	8B
3	2524	44		6	9B
4	2862	24		7	10B
5	2875	72		8	11B
6	3002	39		9	12B
7	3162	75		7	13B
8	3210	51		7	14B
9	3220	31		7	15B
10	3230	15		4	16B
11	3320	58		9	17B
12	3410	24		8	18B
13	5142	38		7	19B
14	5143	70		7	20B
15	5146	45		7	21B
16	5155	32		4	22B
17	5164	27		7	23B
18	5165	21		5	24B

*All Tables in Appendices.

Through the statistical test of the individual industries it can be concluded that different PLIs provide different profit ranges and are statistically significant from each other in providing a comparable profit range. Therefore, this research can confidently reject the null hypothesis that there are no differences between profit measures in providing a comparable range. The number of comparables differed between industries (some industries might have a limited number of companies). Significant gaps existed within the comparable results despite attempts to control for differences in functions and risks. The significance of this finding is that companies have the ability not only to adjust their profit level within a range, they may also decide which PLI or profit measure to use.

In the absence of detailed instructions in the application of TNMM or CPM, a series of choices should address the following,

1. Which independent companies should be considered comparable to the tested party;
2. Which profit level indicator should be used;
3. Over what time period can financial data be averaged;
4. How can the results be adjusted to accommodate differences vis a vis the tested party;
5. How can the arm's length range of results be determined; and,
6. What happens when the tested party's profit falls outside the arm's length range.

These significant results might be due in part to the fact that ranges of profitability are affected by a multitude of factors: competitive position, management efficiency, business cycles in the industry and on a global basis, currency fluctuation, age of plant and equipment, intangible property, research and development, cost of capital, and marketing efficiency which can not be easily accounted for. This finding illustrates that the discretion of profit indicators is enhanced as the measures themselves give differing degrees of profitability within each industry. Industries offer a vast number of comparable companies in which comparable sets can be obtained and a great number of PLIs can be selected, thereby allowing companies not only to adjust their profit level within a range, but also leeway to decide which PLI or profit measure to use. Companies may opt to use any PLI and any point within their respective comparable industry range to their optimum benefit.

7.2.2 Section 2: Foreign-owned vs. Domestic-owned Companies

This section sheds light on the performance, as measured by PLIs, of foreign-owned and domestic-owned companies. The independent sample t-test was used to assess whether the means of each of the PLIs between the groups were significantly different or not. This section tests the following null hypothesis:

H₀4: There are no differences between the performances (profitability measures) of foreign-owned companies (Japanese- and US-owned) and their domestic UK counterparts.

To validate the hypothesis comparing the performance of foreign-owned companies represented by US- and Japanese-owned companies, a three-way match was used to minimize the limitation of using individual matching criteria. The matching methods used were as follows:

1. Individually matched by growth in turnover (+, - 2.5%) over the 3-yr period 1998-2000, factoring in similar strategies, product cycles, etc;
2. Individually matched by operating profit over the 3-yr average period 1998-2000 (+, - 10%), factoring in similar profitability levels, cost of goods sold, ability to make profit, etc; and,
3. Individually matched by turnover over the 3-yr average 1998-2000 (+, - 10%), factoring in similar size of operations, market, share, etc.

For each of the matching methods, a group of Japanese-owned companies was individually matched with a group of UK-owned companies and a group of US-owned companies was individually matched with a group of UK-owned companies. The investigation of the differences between the groups conducted using the independent sample t-test. The independent sample t-test was used to assess whether the means of each of the PLIs was different for the foreign-owned companies compared to the domestic UK companies. Table 7-4 shows a summary of the matched data, matching method, the number of matched companies, and the table number.

Table 7-4: Data and Matching (Section 2 - Hypothesis 4)

<i>Data</i>	<i>Matching methods</i>	<i>Number of Pairs</i>	<i>Table</i>
Japanese-owned vs. UK-owned	Growth in Turnover	52	25 A & B
Japanese-owned vs. UK-owned	Operating profit	26	26 A & B
Japanese-owned vs. UK-owned	Turnover	42	27 A & B
US-owned vs. UK-owned	Growth in Turnover	88	28 A & B
US-owned vs. UK-owned	Operating profit	53	29 A & B
US-owned vs. UK-owned	Turnover	68	30 A & B

*All Tables in Appendices.

Japanese-owned companies vs. UK-owned companies

In order to compare the performance of the Japanese-owned companies and their UK counterparts the growth of the turnover was used. The first step was the calculation of the growth, done by looking at the growth of the sales between the year ended 1998 and the year ended 2000 for all Japanese-owned and UK-owned companies classified

under the same individual industry SIC codes used in Section 1 (12 manufacturing industries and 6 wholesale industries). The second step was to individually match Japanese-owned companies with UK-owned companies within each SIC four-digit code and with similar growth (+, - 2.5%). The result of this method was 52 paired matches of Japanese- and UK-owned companies. The independent sample t-test was used to examine the PLIs of both Japanese- and UK-owned companies. The t-test of the mean of each PLI showed that the means of all PLIs were lower for Japanese-owned companies compared to that of the UK-owned companies. In addition, the return on assets ratio was statistically significantly lower for the Japanese-owned companies compared to the UK sets (Table 25 A & B in Appendices).

The second method used to match individual Japanese-owned and UK-owned companies was operating profit matching criteria. By looking at the companies with similar operating profit figures (+, - 10%) for all the Japanese-owned and UK-owned companies classified under the same industrial codes used in Section 1 (12 manufacturing industries and 6 wholesale industries), this research identified 26 pairs of individually matched Japanese- and UK-owned companies within each SIC four-digit code and with similar operating profit. The independent sample t-test was used to examine the PLIs of both Japanese-owned and UK-owned companies. The t-test of the mean of each PLI showed that the means of all PLIs were lower for the Japanese-owned companies compared to that of the UK-owned companies with no statistically significant results found (Table 26 A & B in Appendices).

The last method used to match individual Japanese-owned and UK-owned companies was by turnover. By looking at the companies with similar turnover figure (+, - 10%) for all the Japanese-owned and UK-owned companies classified under the same industrial codes used in Section 1 (12 manufacturing industries and 6 wholesale industries), this research identified 42 pairs of individually matched Japanese-owned companies with UK-owned companies within each SIC four-digit code and with similar turnover. The independent sample t-test was used to examine the PLIs of both Japanese-owned and UK-owned companies. The t-test of the mean of each PLI showed that the means of the PLIs were lower for the Japanese-owned companies compared to that of the UK-owned companies. Berry ratio was statistically

significantly lower for the Japanese-owned companies (Table 27 A & B in Appendices).

US-owned companies vs. UK-owned companies

In order to compare the performance of the US-owned companies and their UK counterparts, the growth of the turnover was used. The first step was the calculation of the growth, done by looking at the growth of the sales between the year ended 1998 and the year ended 2000 for all the US-owned and UK-owned companies classified under the same industrial codes used in Section 1 (12 manufacturing industries and 6 wholesale industries). The second step was to individually match US-owned companies with UK-owned companies within each SIC four-digit code and with similar growth (+, - 2.5%). The result of this method was 88 matched pairs of US- and UK-owned companies. The independent sample t-test was used to examine the PLIs of both US-owned and UK-owned companies. The t-test of the means of four PLIs were lower for the US-owned companies compared to that of the UK-owned companies. Profit margin on sales ratio was statistically lower for the US-owned companies compared to the UK-owned sets (Table 28 A & B in Appendices).

The second method used to match individual US-owned and UK-owned companies was through operating profit matching criteria. By looking at the companies with similar operating profit figures (+, - 10%) for all the US-owned and UK-owned companies classified under the same industrial codes used in Section 1 (12 manufacturing industries and 6 wholesale industries), this method identified 53 pairs of individually matched US- and UK-owned companies within each SIC four-digit code and with similar operating profit. The independent sample t-test was used to examine the PLIs of both US-owned and UK-owned companies. The t-test of the mean of each PLI showed that the mean of four PLIs was higher for the US-owned companies compared to that of the UK-owned companies with no statistically significant results found (Table 29 A & B in Appendices).

The last method used to match individual US-owned and UK-owned companies was by turnover. By looking at the companies with similar turnover figures (+, - 10%) for all the US-owned and UK-owned companies classified under the same industrial codes used in Section 1 (12 manufacturing industries and 6 wholesale industries), this

research identified 68 pairs of individually matched US- and UK-owned companies within each SIC four-digit code and with similar turnover. The independent sample t-test was used to examine the PLIs of both US-owned and UK-owned companies. The t-test of the mean of each PLI showed that the means of four of the PLIs were lower for the US-owned companies compared to that of the UK-owned companies with net margin being statistically significant (Table 30 A & B in Appendices).

Based on the results of the statistical tests of the different matching methods, it can be concluded that differences between the performance as measured by PLI of foreign-owned companies (Japanese- and US-owned) exist. This research used the two PLIs for the Japanese-owned companies and the two PLIs for the US-owned companies to reject the null hypothesis and can be confident that evidence of lower profitability by foreign-owned companies was presented. Even after accounting for matching individual companies based on turnover, operating profit, and growth of turnover, Japanese- and US-owned companies reported lower profits than UK-owned companies.

H₀₅: There are no differences between the performances (profitability measures) of joint venture foreign-owned companies (Japanese/UK- and US/UK-owned) and the performances of UK/other-owned companies.

To validate the hypothesis related to the comparison of the performance of jointly owned foreign companies (with at least one British company in the shareholders) with UK partners represented by US/UK- and Japanese/UK-owned companies, the same three matching methods were obtained to ensure the limitation of using individual matching criteria. The matching methods were as follows:

1. Individually matched by growth in turnover (+, - 2.5%) over the 3-yr period 1998-2000, factoring in similar strategies, product cycles, etc;
2. Individually matched by operating profit over the 3-yr average period 1998-2000 (+, - 10%), factoring in similar profitability levels, cost of goods sold, ability to make profit, etc; and,
3. Individually matched by turnover over the 3-yr average 1998-2000 (+, - 10%), factoring in similar size of operations, market, share, etc.

For each of the matching methods a group of Japanese/UK jointly owned companies were individually matched with a group of UK/other-owned companies. In addition, a group of US/UK jointly owned companies were individually matched with a group of UK-owned companies. Table 7-5 shows a summary of the matched data, matching method, the number of matched companies and the table number.

Table 7-5: Data and Matching (Section 2 - Hypothesis 5)

<i>Data</i>	<i>Matching methods</i>	<i>Number of Pairs</i>	<i>Table</i>
Japanese/UK-Owned vs. UK/other-Owned	Growth in Turnover	21	31 A & B
Japanese/UK-Owned vs. UK/other-Owned	Operating profit	9	32 A & B
Japanese/UK-Owned vs. UK/other-Owned	Turnover	11	33 A & B
US/UK-Owned vs. UK/Other-Owned	Growth in Turnover	46	34 A & B
US/UK-Owned vs. UK/Other-Owned	Operating profit	26	35 A & B
US/UK-Owned vs. UK/Other-Owned	Turnover	33	36 A & B

*All Tables in Appendices.

Japanese/UK-Owned Company vs. UK/Other-Owned Companies

To compare the performance of the Japanese/UK-owned companies with their UK/Other counterparts the growth of the turnover was used. The first step was the calculation of growth, done by looking at growth of the sales between the year ended 1998 and the year ended 2000 for all Japanese/UK-owned and UK/other companies classified under the same industrial codes used in Section 1 (12 manufacturing industries and 6 wholesale industries). The second step was to individually match Japanese/UK-owned companies with UK/other companies within each SIC four-digit code and with similar growth (+, - 2.5%). The result of this method was 21 matched pairs of Japanese/UK- and UK/other companies. The independent sample t-test was used to examine the PLIs of both Japanese/UK- and UK/other companies. The t-test of the means of each PLI showed that the means of all PLIs were lower for the Japanese/UK-owned companies compared to that of the UK/other companies with no statistically significant results (Table 31 A & B in Appendices).

The second method used to match individual Japanese/UK- and UK/other companies was operating profit matching criteria. By looking at the companies with similar operating profit figures (+, - 10%) for all the Japanese-owned and UK companies classified under the same industrial codes used in Section 1 (12 manufacturing industries and 6 wholesale industries), this research matched 9 pairs of Japanese/UK-

owned companies with UK/other companies within each SIC four-digit code and with similar operating profit. The independent sample t-test was used to examine the PLIs of both Japanese/UK and UK/other companies. The t-test of the mean of each PLI showed that the means of all PLIs were lower for the Japanese/UK-owned companies compared to that of the UK/other companies with no statistically significant results (Table 32 A & B in Appendices).

The last method used to match individual Japanese/UK- and UK/other companies was matching by turnover. By looking at the companies with similar turnover figures (+, - 10%) for all the Japanese-owned and UK/other companies classified under the same industrial codes used in Section 1 (12 manufacturing industries and 6 wholesale industries), this research identified 11 matched Japanese/UK-owned companies with UK/other companies within each SIC four-digit code and with similar turnover. The independent sample t-test was used to examine the PLIs of both Japanese/UK- and UK/other companies. The t-test of the mean of each PLI showed that the means of the PLIs were lower for the Japanese/UK-owned companies compared to that of the UK/other companies with no statistically significant results found (Table 33 A & B in Appendices).

US/UK-Owned Companies vs. UK/Other-Owned Companies

In order to compare the performance of the US/UK-owned companies with their UK/other counterparts the growth of the turnover was used. The first step was calculation of growth, done by looking at the growth of sales between the year ended 1998 and the year ended 2000 for all the US/UK- and UK/other companies classified under the same industrial codes used in Section 1 (12 manufacturing industries and 6 wholesale industries). The second step was to individually match US/UK companies with UK/other companies within each SIC four-digit code and with similar growth (+, - 2.5%). The result of this method was 46 matched pairs of US/UK- and UK/other companies. The independent sample t-test was used to examine the PLIs of both US/UK- and UK/other companies. The t-test of the mean of all PLIs was higher for the US/UK-owned companies compared to that of the UK/other companies. In addition, net margin (operating margin) ratio was, statistically, significantly higher for the US/UK-owned companies compared to the UK/other-owned sets (Table 34 A & B in Appendices).

The second method used to match individual US/UK- and UK/other companies was operating profit matching criteria. By looking at the companies with similar operating profit figures (+, - 10%) for all US/UK- and UK/other companies classified under the same industrial codes used in Section 1 (12 manufacturing industries and 6 wholesale industries), this research matched 26 pairs of US/UK-owned companies with UK/other companies within each SIC four-digit code and with similar operating profit. The independent sample t-test was used to examine the PLIs of both US/UK- and UK/other companies. The t-test of the mean of each PLI showed that the means of all PLIs were higher for the US/UK-owned companies compared to that of the UK/other companies. Profit margin on sales and net margin (operating margin) ratios were, statistically, significantly higher for the US/UK-owned companies compared to the UK/other sets (Table 35 A & B in Appendices).

The last method used to match individual US/UK- and UK/other companies was matching by turnover. By looking at the companies with similar turnover figure (+, - 10%) for all the US-owned and UK/other companies classified under the same industrial codes used in Section 1 (12 manufacturing industries and 6 wholesale industries), this research identified 33 pairs of individually matched US/UK-owned companies with UK/other companies within each SIC four-digit code and with similar turnover. The independent sample t-test was used to examine the PLIs of both US/UK- and UK/other companies. The t-test of the mean of each PLI showed that the mean of three PLIs was lower for the US/UK-owned companies compared to that of the UK/other companies with no statistically significant results (Table 36 A & B in Appendices).

From the statistical test of the different joint ventures groups using different matching methods, it is visible that the form of the investment represented by joint ventures or a domestic partner has an effect on the performance as measured by PLIs of the MNEs. These effects seem to change according to differences in the ownership of MNEs. Japanese-owned companies having a domestic partner reduced the gaps in profits between Japanese- and UK/other companies given that the results indicated no significant differences. In the opposite direction, the joint venture form of investments had positive effects on PLIs of US/UK-owned companies compared to their UK/other counterparts. Two PLIs were statistically significantly higher for the US/UK-owned

companies compared to the UK/other sets. Due to the differing characteristics of the ownership, this research can not reject the null hypothesis that there are no differences between the performances (profitability measures) of joint venture foreign-owned companies (US- and Japanese-owned) from the performances of foreign-owned companies (US- and Japanese-owned).

7.2.3 Section 3: Analysis of Operating Losses

This section is similar to Section 2 in highlighting the performance of foreign-owned and domestic-owned companies and focusing on companies with average operating losses. The investigation of the differences between the groups was conducted using the independent sample t-test. The basis for using the independent sample t-test was to assess whether the means of each of the PLIs was different for the foreign-owned companies compared to the UK-owned companies. This section tests the following null hypothesis:

H₀₆: There are no differences between the performance (profitability measures) of foreign-owned companies with average negative operating profit (Japanese- and US-owned) and UK-owned companies with negative operating profit.

Japanese-owned companies vs. UK-owned companies

In order to compare the performance of Japanese-owned companies with operating losses with their UK-owned counterparts, averages of the PLIs were used for both groups for the years 1998-2000 for all Japanese- and UK-owned companies classified under the 18 industrial codes (12 manufacturing industries and 6 wholesale industries). The sample consisted of 27 Japanese-owned companies and 115 UK-owned companies. The independent sample t-test was used to examine the PLIs of both Japanese-owned and UK-owned companies. The t-test of the mean of the PLIs showed that the mean of all PLIs was lower for the Japanese companies compared to that of the UK companies. Profit margin, profit margin on sales, net margin (operating margin), and Berry ratio PLIs were statistically significantly lower for the Japanese-owned companies compared to the UK sets (Table 37 A & B in Appendices).

US-owned companies vs. UK-owned companies

To compare the performance of the US-owned companies with operating losses to their UK-owned counterparts, averages of the PLIs were used for both groups for the years 1998-2000 for all the US-owned and UK-owned companies classified under 18 industrial codes (12 manufacturing industries and 6 wholesale industries). The sample consisted of 36 US-owned companies and 115 UK-owned companies. The independent sample t-test was used to examine the PLIs of both US-owned and UK-owned companies. The t-test of the means of the PLIs showed that the mean of four PLIs were lower for the US companies compared to that of the UK-owned companies. The profit margin ratio was statistically significantly lower for the US-owned companies compared with the UK-owned companies (Table 38 A & B in Appendices).

Although this section did not use precise matching methods due to the limited number of companies with 3-yr average (1998-2000) operating losses, it appears from the statistical tests that the profitability of MNEs differed based on country of ownership. For the Japanese-owned companies, the result revealed that four of the PLIs were statistically significantly lower than the UK-owned companies indicating that for the companies with Japanese citizenship the null hypothesis could only be rejected if the tests were conducted on only the Japanese companies. On the other hand, the statistical results found one profit level indicator significantly different for the US-owned companies compared to the UK-owned companies. Therefore, this study neither rejects nor accepts the null hypothesis that there are no differences between the performance (PLIs) of foreign-owned companies with negative operating profit and UK-owned companies. Similar to previous portions of this research, this finding further confirms that Japanese-owned companies have consistently lower profitability unlike the US-owned companies, presumably due to country of ownership

H₀7: There are no differences between the performance (profitability measures) of joint venture foreign-owned companies with average negative operating profit (Japanese/UK- and US/UK owned) and UK/other-owned companies with negative operating profit.

Japan/UK-owned companies vs. UK/other companies

In order to compare the performance of the Japanese/UK-owned companies with operating losses to their UK/other counterparts, averages of the PLIs were used for both groups for the years 1998-2000 for all the Japanese/UK- and UK/other companies classified under 18 industrial codes (12 manufacturing industries and 6 wholesale industries). The sample consisted of 18 Japanese-owned companies and 47 UK companies. The independent sample t-test was used to examine the PLIs of both Japanese/UK- and UK/other companies. The t-test of the mean of the PLIs showed that the means of three PLIs were lower for Japanese/UK-owned companies compared to that of the UK/other companies with no statistically significant results (Table 39 A & B in Appendices).

US/UK-owned companies vs. UK/other companies

To compare the performance of the US/UK-owned companies with operating losses and their UK-owned counterparts, averages of the PLIs were used for both groups for the years 1998-2000 for all the US/UK- and UK/other companies classified under the 18 industrial codes (12 manufacturing industries and 6 wholesale industries). The sample consisted of 42 US-owned companies and 47 UK companies. The independent sample t-test was used to examine the PLIs of both US/UK-owned and UK/other companies. The t-test of the means of the PLIs showed that the means of all PLIs were lower for the US/UK-owned companies compared to that of the UK/other companies. In addition, the profit margin ratio was statistically significant (Table 40 A & B in Appendices).

It can be concluded from the statistical tests that the form of the investment represented by Japanese/UK- and US/UK-owned companies with 3-yr (1998-2000) average operating losses affected the performance as measured by PLIs of the MNEs. This was a repeated occurrence for these and previous samples as the role of the domestic UK partner in the joint venture minimized gaps in the PLIs. As there was one significant ratio between the two groups (Japan/UK- vs. UK/other and US/UK- vs. UK/other), this research can not reject the null hypothesis that there are no differences between the performance (PLIs) of joint venture foreign-owned companies with negative operating profit and UK-owned companies. The explanation being that by having a local partner in a joint venture management, differences

between the performance of foreign and domestic-owned companies are eliminated.

7.2.4 Section 4: Analysis of Tax

This section sheds light on the impact of the latest UK transfer pricing regulations introduced in 1998 corporation tax self-assessment reform and its influence on performance as measured by tax payment of both foreign-owned and domestic-owned companies in the UK. The time periods examined are fiscal years 1996-1997 and fiscal years 1999-2000. These fiscal years cover the period prior and subsequent to the 1998 transfer pricing regulations in the UK. The rationale for choosing US-owned and Japanese-owned companies was to be consistent with previous sections of this research and to follow the evidence in previous literature that has led to the suggestion that Japanese-owned companies tend to improperly use transfer pricing tax laws to reallocate income from their overseas operations to Japan.

Unlike previous research which randomly selected groups of foreign and domestic companies and compared their tax payments regardless of their activities, size, profitability, or used the same set of companies when comparing periods prior and subsequent to the new regulations, this study eliminated the differences in financial characteristics of various industries and compared companies on an industrial basis. The sample for this section was obtained using the FAME database covering the fiscal years 1996, 1997, 1999, and 2000. Table 7-6 shows a summary of the matched data, matching method, and the number of matched companies.

Table 7-6: Data and Matching (Section 4)

<i>Data</i>	<i>Industries</i>	<i>Number of Pairs</i>	<i>Table</i>
Japanese-owned vs. UK-owned	Manufacturing	47	41 A & B
US-owned vs. UK-owned	Manufacturing	202	42 A & B
Japanese-owned vs. UK-owned	Wholesale	41	43 A & B
US-owned vs. UK-owned	Wholesale	80	44 A & B

*All Tables in Appendices.

This section tested the following null hypothesis:

H₀₈: There is no difference in the amount of reported tax expense by foreign-owned companies (Japanese- and US-owned) compared to the amount of reported tax expense by domestic companies.

Japanese-owned companies vs. UK-owned companies (Manufacturing Industries)

In order to compare the tax payment of the foreign-owned companies and their UK counterparts, this research matched individual foreign-owned companies by both SIC two-digit codes (rather than the SIC four-digit code used in the previous section to allow for a greater number of individually matched companies) and gross profit (+, - 10%) located in all manufacturing industries. The result of this matching method was 47 pairs of Japanese- and UK-owned companies. The independent sample t-test was used to examine the tax payment (net tax liability paid to Inland Revenue) of both Japanese-owned and UK-owned companies. The t-test for the four financial years tested suggested that the tax paid by Japanese companies to the UK government was lower than the mean of the tax payment paid by the matched UK companies. The results for the years 1999, 1997, and 1996 were, statistically, significantly lower for Japanese companies (Table 41 A & B in Appendices).

US-owned companies vs. UK-owned companies (Manufacturing Industries)

To compare the tax payment of the US-owned companies and their UK-owned counterparts, a match of individual foreign-owned companies by both SIC two-digit codes (rather than the SIC four-digit code used in the previous section to allow for a greater number of individually matched companies) and gross profit (+, - 10%) located in all manufacturing industries was used. The result of this matching method was 202 pairs of US- and UK-owned companies. The independent sample t-test was applied to examine the tax payment of both US-owned and UK-owned companies. The t-test for the four financial years tested suggested that the mean of the tax paid by US-owned companies to the UK government was lower than the tax payment paid by the matched UK-owned companies for three financial years. The result for the year 1999 was statistically significantly lower for US-owned companies (Table 42 A & B in Appendices).

Japanese-owned companies vs. UK-owned companies (Wholesale Industries)

To evaluate the tax payment of the foreign-owned companies and their UK counterparts, this research matched individual foreign-owned companies by both SIC two-digit codes (rather than the SIC four-digit code used in the previous section to allow for a greater number of individually matched companies) and gross profit (+, - 10%) located in all wholesale industries. The result of this matching method was 41

pairs of Japanese- and UK-owned companies. The independent sample t-test was used to examine the tax payment of both Japanese- and UK-owned companies. The t-test of the financial years tested suggested that the tax paid by Japanese-owned companies to the UK government was lower than the mean of the tax payment paid by the matched UK-owned companies. The results for the years 2000, 1999, and 1997 were statistically significantly lower for Japanese companies (Table 43 A & B in Appendices).

US-owned companies vs. UK-owned companies (Wholesale Industries)

To assess the tax payment of the US-owned companies and their UK-owned counterparts, a match of individual foreign-owned companies by both SIC two-digit codes (rather than the SIC four-digit code used in the previous section to allow for a greater number of individually matched companies) and gross profit (+, - 10%) located in all manufacturing industries were used. The result of this matching method was 80 pairs of US- and UK-owned companies. The independent sample t-test was applied to examine the tax payments of both US- and UK-owned companies. The t-test of the financial years tested suggested that the mean of the taxes paid by US-owned companies to the UK government was lower than the tax payment paid by the matched UK-owned companies for all the financial years with no statistically significant results (Table 44 A & B in Appendices).

As a result of the findings noted above, this research neither accepts nor rejects the null hypothesis that there is no difference in the amount of tax paid to the UK government from foreign-owned companies within the manufacturing and wholesale industries over time compared to the amount of tax paid by domestic companies. Since the tests demonstrated one statistically significant low value of the tax payment for the US-owned companies and six statistically significant low mean values of tax payments for the Japanese-owned companies, the null hypothesis can be rejected if it is only based on the Japanese-owned companies. The low tax payment by Japanese-owned companies was evident consistently amongst both the manufacturing and wholesale industries. This finding confirms the results of previous research in the area as well as prior sections that surmised that Japanese-owned companies underperforms by both profitability and tax payments compared to domestic UK companies. The distribution of the Japanese-owned companies' taxes provides

evidence on how likely it is that manipulation of income takes place. Persistently large losses in relation to assets or sales suggests limited tax planning as the foreign company could lower its worldwide tax bill by shifting some of its losses to other jurisdictions.

H₀9: There are no differences in the amount of reported tax expense by foreign-owned companies prior and subsequent to the latest UK transfer pricing regulation introduced in 1998 corporation tax self-assessment compared to domestic companies.

To test the impact of the latest UK 1998 regulation changes on the tax and transfer pricing regulations in the UK, it was necessary to examine the periods prior and subsequent to the tax changes. Fiscal years 1996-1997 and fiscal years 1999-2000 were used to validate this null hypothesis. Using data from manufacturing and wholesale industries, each of the Japanese-, US-, and UK-owned data were tested separately using the One Way ANOVA test for the years prior and subsequent to the UK tax reform. The One Way ANOVA test combined the data prior and subsequent to 1998 in order to detect any effects of the new law. The results of the One Way ANOVA for the groups were as follows:

Japanese-owned Companies (Manufacturing Industries)

The results of the One Way ANOVA for the 47 Japanese-owned companies in the manufacturing industry revealed an increase in tax payments after the introduction of the new UK self-assessment with no significant results (Table 45 in Appendices).

US-owned Companies (Manufacturing Industries)

The results of the One Way ANOVA for the 202 US-owned companies in the manufacturing industry revealed a decrease in tax payments after the introduction of the new UK self-assessment with no significant results (Table 46 in Appendices).

UK-owned Companies (Manufacturing Industries)

The results of the One Way ANOVA for the 249 UK-owned companies in the manufacturing industry revealed an increase in tax payments after the introduction of the new UK self-assessment with no significant results (Table 47 in Appendices).

Japanese-owned Companies (Wholesale Industries)

The results of the One Way ANOVA for the 41 Japanese-owned companies in the wholesale industry revealed a decrease in tax payments after the introduction of the new UK self-assessment with no significant results (Table 48 in Appendices).

US-owned Companies (Wholesale Industries)

The results of the One Way ANOVA for the 80 US-owned companies in the wholesale industry revealed a decrease in tax payments after the introduction of the new UK self-assessment with no significant results (Table 49 in Appendices).

UK-owned Companies (Wholesale Industries)

The results of the One Way ANOVA for the 121 UK-owned companies in the wholesale industry revealed a decrease in tax payments after the introduction of the new UK self-assessment with no significant results (Table 50 in Appendices).

The statistical results obtained using the One Way ANOVA on all manufacturing and wholesale industries indicated no significant differences between the tax payments prior and subsequent to the new tax reform, thus the null hypothesis that there are no differences in the amount of taxes paid by foreign-owned companies prior and subsequent to the 1998 UK self-assessment tax compared to domestic companies can not be rejected.

7.3 Interviews with ITP Specialists

7.3.1 Consulting Firms

In order to further validate the research findings, interviews were conducted with two transfer pricing consultants. In addition to confirming the research findings, the consultants provided a wealth of information on transfer pricing in practice. They noted that although there remain theoretical differences between TNMM and CPM, in practice the differences are minimal. OECD Guidelines give companies freedom in determining profitability within the range; profit level indicators are open to differing interpretations with subjectivity involved in determining comparables. The 1998 UK self-assessment tax law brings greater compliance burdens, awareness, and requirements to companies and gives more authority to the tax authorities. In terms of procedures, the inter-quartile range is widely used by consultants and tax authorities

within the UK. Profit-based methods are widely used to support companies' ITP policy. Consultants are aware of ownership effects. Aggregation of the transactions is an accepted mechanism by the tax authorities. Finally, although the 1998 UK self-assessment has given Inland Revenue more authority, its resources are limited in comparison to those of ITP consultants. The following is a summary of the comments of the interviewees related to the findings of this study:

Interviewee 1

Interviewee 1 holds a doctorate in transfer pricing and is a senior transfer pricing manager at an international accounting firm. The interview was conducted in London in July 2002 with the main points as follows.

To avoid the problem of bigger profit ranges in practice, consultants use the US IRS statistical tool which eliminates 50% of the results (inter-quartile range) in the UK. Although Inland Revenue does not require companies to report their comparable ranges with any limitations (statistical method), it is commonly accepted to eliminate the outliers by using the statistical method (inter-quartile ranges). In specific circumstances consultants use the full range depending on the purpose of work. For example, quartile ranges are used for planning exercises to support a filing position by the taxpayer. Companies defend their comparable sets more ably if it is within the quartile ranges because top and bottom 25% are eliminated. Tax authorities in some cases might not only reject the range but also the method used.

With differing approaches available in practice as well as differing interpretations of OECD Guidelines, the main issue is supporting companies' position in terms of method chosen with tax authorities and ensuring compliance with arm's length. This observation supports the significance of this research as comparables remain important even when transaction based methods applied.

The process in developing comparables includes: industry, keywords search, independent websites, and business description. The number of comparables is usually between five and twenty companies. The same process in developing comparables is used for all industries. Foreign operating profit measures are preferred over the gross profit measure with certain industries have differing priorities in terms

of deciding which profit measures to use. For example, distribution industries may use operating margin while trading industries may use the Berry ratio.

Companies are more likely to make decisions in terms of profit level indicators when preparing their own documentation to ensure acceptance by Inland Revenue. Transactional methods are preferred, but they are difficult to obtain and apply since it requires adjustment for risks, currency, and terms of sale. Even if comparable sets are obtained, tax authorities carefully evaluate them and require companies to make the necessary adjustments.

Tax authorities are less likely to question profitable companies and are more likely to question loss-making companies. In practice, consultants might use loss-making companies as a part of a good comparable set. Consultants use Jordan's FAME database to obtain comparables for UK companies. In developing comparables, consultants place more adjustments when a large number of companies are available.

In developing comparables consultants put less restrictions when a smaller number of companies is available. The key issue is that companies have similar function and risk rather than size or strategy. Foreign-owned companies are expected to earn as much as domestic companies since arm's length price is based on functional risk. In practice, foreign-owned companies may earn the same as a UK distributor, the key issue being to satisfy the arm's length. The difference between foreign-owned and domestic-owned profits might be due to the fact that some of these companies incur additional costs such as startup costs, foreign exchange, R & D, etc. Whereas according to this research's findings, differences in profitability between the foreign-owned companies and their domestic counterparts are, in all probability, due to skilled tax planning and income reallocation. The influences of startup costs and R & D were eliminated in this research when matching foreign- and domestic-owned companies by using established companies (active for a minimum of four years) and by reviewing the intangibles (without significant license to third parties) in the sample sets. Due to time restrictions and cost issues, transactions are aggregated by the line of business or type of transaction with one set of comparables obtained for the group. Although consultants are aware of ownership effects, focus from tax authorities on certain nationalities has not been noticed.

Prior to the latest UK transfer pricing regulations, consultant firms only had a handful of ITP specialists. Now many consulting firms have a whole department full of ITP specialists. The main reason is compliance with new guidelines to support a company's position. Greater compliance burden/documentation has resulted in more companies meeting with requirements. Taxpayers may take an active role in determining their comparable sets, possibly leading to a change in the set of comparable companies that will prove satisfactory to both the consultant and the taxpayer. As a result of the large number of comparable companies available and the leeway when choosing PLIs, the previous observation supports this research's findings that companies are able, to a certain degree, to select the comparable sets, PLIs, and the profit range most appropriate to their ITP policy.

Interviewee 2

Interviewee 2 is also a senior transfer pricing manager at an international accounting firm. The interview was conducted in London in July 2002 with the main points as follows.

The second consultant confirmed the observations of the first interviewee regarding the vast profit ranges in practice and the use of the inter-quartile range. The explanation of the wide profit ranges being that the techniques used to date are not sufficiently sophisticated to hone in on the underlying return for a specific function and risk. As a result, the attempts are to control for as much as possible. Consultants today are seeing ranges fairly wide across different industries, although for some industries the ranges are a bit narrower. This observation is further confirmed through this research as seen in Table 7-3, where the number of comparable sets varied from 21 to 75 companies throughout the eighteen industries. According to this consultant's experience, the number of reported comparables in a set is usually between five and ten, thus confirming this research's implication that companies can select their preferred sets. Overall, practices are becoming more sophisticated and consultants use IR as a guide even though IR today is a couple of years behind the consultants in terms of techniques used and database analysis.

Quartile ranges remain a good tool to control for the factors that cannot be controlled when developing comparables. The choice of profit measure (PLIs) is determined by

looking at the most reliable justifiable measure. In some cases more than one profit measure is used. Inland Revenue appears to be particularly interested in the choice of the profit measure. For example, whether the manufacturing industry uses return on assets, the selling/trading industry uses operating margin, etc. In some situations the choice of profit indication leads to a discussion with IR on which profit level indicators to choose, possibly due to the absence of detailed regulations.

When aggregating transactions, the size of the transactions and the profit level indicator choice might be considered. Additional refinements such as telephone surveys, extra research, internet, etc are utilized to reduce the comparable sets when a large number of comparables are available. Tax authorities do not have the resources consultants have... "When Revenue comes up with an alternative set of comparables they are not doing a good job as their arguments will be limited against consultants' comparables sets." Inland Revenue is less in a position to argue against a set of comparables prepared by consultants due to limited resources and heavy workloads. Although the interviewee states that IR might challenge the comparable sets and selected PLIs, experienced MNEs and tax consultants remain in a position to use their discretion in terms of compliance with the arm's length principle.

Transfer pricing guidelines provide some flexibility when ascertaining degree as no exact comparables can be obtained. 'Pepsi not comparable to Coke' and there is always an element of subjectivity.

One of the explanations of the differences between foreign-owned and domestic-owned companies might be the value of intangibles, such as R&D or research centers that might be located in the parent country. For example, Japanese companies might be unwilling to make profits outside of Japan possibly because of the Japanese tax authorities. In practice, there have been examples where Japanese companies were questioned by Inland Revenue because they did not seem to be making enough profit in the UK. Certain Japanese clients explained that part of Japanese culture is that the transfer price is set in the home country. One of the interviewee's Japanese clients explained, "You need to understand the Japanese business culture in Japan, we want to make our profit in Japan." A business culture practice such as this is usually backed up by tax authorities in Japan who also believe that Japanese companies

should make their profit in Japan. This might follow the same argument that IR would like UK companies to have the profit in the UK, whereas this is not the case for US companies because they might be more aware of the implications of ITP. While the findings of the tax analysis section (7.2-H08) of this research showed one low figure of reported tax expense for the US-owned companies, it showed six low figures of tax expenses for Japanese-owned companies confirming the interviewee's previous comments.

The latest 28AAICTA 1998 UK transfer pricing regulations brings more awareness and encourages companies to do things properly which includes choosing the appropriate comparables and profit level indicators. This might have a direct effect on foreign-owned companies which might be under investigation of the tax authorities (more compliance for foreign-owned companies within the acceptable range), especially that the latest 1998 UK regulations brings a compliance burden on the taxpayers.

This research supports the opinions of the interviewee that the UK latest transfer pricing rules introduced in 1998 corporation tax self-assessment would have a great impact on both foreign- and domestic-owned companies as it contains a specific requirement for profits to be calculated in accordance with the arm's length principle. Previously there was no requirement to adhere to the arm's length principle in calculating profits for inclusion in a tax return. Instead, IR has the authority, through the use of some cumbersome processes, including the issue of formal directions by its Board, to replace prices on transactions which has resulted in the understatement of profits in the UK through pricing at arm's length. As there was no statutory requirement to return profits calculated in accordance with the arm's length standard no penalties could ordinarily be attached to the tax on uplifts made by IR. (Ernst & Young UK, 2000)

The final comment made by the interviewee was that findings of this research study were consistent with consultants' experience in practice.

7.3.2 International tax agency

To authenticate the research findings, three other interviews were conducted with ITP specialists from the International Bureau for Fiscal Documentation (IBFD) in the Netherlands in order to authenticate the research findings. The specialists provided their views regarding the research problem in theoretical and practical bases. The following is a summary of the comments of the interviewees which is related to the findings of this study:

Interviewee 3

Interviewee 3 is an international taxation professor, ITP expert, and published author. The following are the main comments from the interviewee conducted December 2002 in Amsterdam.

Not until the early 1990's was there a shift towards one central benchmark which is comparable to the operating profit of comparable enterprises. "We cannot assure that this is the number one method like in the US where data on operating profit can be easily found, and we hope that we do not go in the direction of the US." From the point of view of this research, the previous comment made by the interviewee supports the research method used, based on UK data, when comparing TNMM and CPM since detailed financial data are available in the UK.

From a theoretical point view, the focus should remain on the use of traditional methods because both TNMM and CPM is basically returning to the third empirical method approach of transfer pricing where no reliable accounts or no accounts at all can be found. CPM does not include the arm's length principle because it is based on Anglo-Saxon approach that develops to avoid income shifting internationally, such as US laws in 1917 and UK 1918.

According to this research the importance of comparables is not only due in part to its use for profit-based methods such as TNMM and CPM, but also its relevance in the documentation which must include sufficient detail for the economic argument as to placement within or outside any comparable range.

Interviewee 4

Interviewee 4 is a tax lawyer and ITP consultant, previously employed by the Australian tax authorities. The following are the main comments from the interview conducted December 2002 in Amsterdam.

It seems that getting tighter profit ranges improves comparability of the data sets but CPM is not always applied in practice. In essence, this research used similar procedure as thoes done by consulting firms and government agencies.

The justification of the lower profitability by US- and Japanese-owned companies is because they are based on higher sales volume. This comment was addressed by the research method through the use of turnover as criteria to match foreign- and domestic-owned companies.

In closing, in reality, it might be the large number of companies to a tested party, but these can only be used as supporting documentation. In addition, aggregation of transactions should be acceptable. Relating this comment to this research, aggregating transactions might lead to enhanced discretion by the taxpayers as it allows the use of wider criteria (less control) in obtaining comparable sets.

Interviewee 5

Interviewee 5 is a tax lawyer. The following are the main comments from the interviewee conducted December 2002 in Amsterdam.

The emphasis was given to the justification of the profit measure used in practice and the feeling that it is important for the measure to represent an arm's length situation. For example, where the assets are not the driving force, the profit on the return on assets can't be used.

The differences in the performance of foreign-owned companies can be explained by the dividends paid to the parent companies or funds transfer between countries. Consideration might be given to the strategy of Japanese-owned companies that can't be covered by ITP regulations. It is possible that transfer pricing regulations allow income shifting.

The introduction of the UK 1998 self-assessment has an influence in foreign-owned companies because companies will look for the safe side and to avoid penalties. This can be seen when the US introduced their detailed transfer pricing rules which led the OECD to follow it by introducing the new version of their rules. Countries fear that detailed restricted rules in one country lead enterprises to seek the safe side in that country at the expense of other countries. This research supports the opinions of the interviewee that the new self-assessment would have a great impact because of its detailed documentations requirement and possible penalties.

The interviewee's final comments were that OECD Guidelines are an attempt to limit the fear of European countries from US regulations.

7.4 Summary

This study provides important results from a theoretical and practical standpoint. On a the theoretical level, the results of the analysis do not support FDI theories regarding the high quality performance (profit and taxes) that foreign subsidiaries expect to achieve. On a practical level, Section One provided an in depth analysis of the differences in practice between OECD profit ranges, full range, and US IRS profit ratios, inter-quartile ranges in addition to evaluating different PLIs across individual industries. This section highlighted the results of examining different methods of creating comparables which relate to the function and risk profiles. In addition to uncovering the effects of ownership on comparables, Sections Two and Three represent a contribution to the limited empirical studies in the UK. By comparing the performances of foreign-owned companies to domestic companies, this study increased the strength of the results by stressing the importance of the use of matching between groups and joint-ventures partners. The final section illuminated on the influence of the latest transfer pricing regulations and provided evidence of the low amount of reported tax by foreign-owned companies in the UK.

The interviews carried out by this research confirmed the findings of the analysis, noted the preference by the continental European experts for OECD profit methods and, provided a core understanding of ITP challenges. These interviews underscore the importance of profit-based methods and comparables and the flexibility of transfer pricing guidelines in allowing MNEs discretion in terms of compliance, in addition to

sensing improper practices by foreign-owned companies. This study opens a multitude of new areas of future research in theory and practice as explained in the next chapter.

Chapter 8

Findings, Limitations, and Future research

8.1 Introduction

The objective of this research is to contribute and improve understanding of profit based methods and the process of creating comparables. This goal can be achieved through the inspection of the most recent OECD TNMM and US IRS CPM, the performance (profit and tax) of foreign companies, and the examination of the degree of discretion provided under these regulations. In this chapter a summary of the findings, expected implications, the contribution of this research to both FDI theories and ITP literature, and an assessment to the research method and methodology is provided. The remainder of this chapter identifies strengths and limitations of this research, considers the research method used, and suggests directions for future research.

8.2 Findings and Implications

Table 8-1 lists the nine tested null hypotheses for the four sections and the conclusions drawn from the results. The following provides detailed findings of each of the individual sections of this research.

The first section found differences between OECD full ranges and US IRS inter-quartile ranges for all the profit ranges with significant differences observed between profit measures in different industries. There were differences between profit measures in providing a comparable range, thus indicating that the OECD TNMM and the US IRS CPM are conceptually the same method of determining transfer prices (both based on profit ratios of a group of comparable companies) but with differences seen in their application. In particular, the US IRS emphasizes the inter-quartile range and adjustment to the midpoint. 1994 US IRS regulations (Section 482) kept CPM and subjected the choice of methods to the best method rule. Given that the IRS decided to retain CPM and use it when it was the best method, OECD Guidelines issued in 1995 contained TNMM and recognized it as a method of last resort. In practice and as stated by Interviewee 1 (UK), countries such as the UK whose transfer pricing regulations are based on OECD guidelines, accept US IRS inter-quartile ranges to limit the ranges for profit level indicators.

These findings imply that companies might be exposed to different regulations, TNMM vs. CPM, and face conflicts in compliance since the application of different

regulations gives different profit ranges acceptable to different fiscal authorities. Different industries may offer a different number of comparable companies, thereby allowing companies to select preferable sets. This finding is significant because it allows companies the ability not only to adjust their profit level within a range, they may also decide which PLI or profit measure to use. The freedom of profit indicators is enhanced as the measures themselves give differing degrees of profitability within each industry. Companies may opt to use any PLI and any point within their respective comparable industry range for optimum benefit thus increasing companies discretion.

Table 8-1: Hypotheses and Findings

<i>Section 1: Investigation of Comparables (TNMM vs. CPM)</i>		
	<i>Hypothesis</i>	<i>Findings</i>
H01	There are no differences between OECD profit ranges (represented by a full range) and IRS profit ranges (represented by inter-quartile ranges)	Rejected
H02	There are no differences between profit measures in different industries	Rejected
H03	There are no differences between profit measures when providing a comparable range	Rejected
<i>Section 2: Foreign-owned Companies (Japanese and US) vs. Domestic UK Companies</i>		
H04	There are no differences between the performances (profitability measures) of foreign-owned companies (Japanese- and US-owned) and their domestic counterparts	Rejected
H05	There are no differences between the performances (profitability measures) of joint venture foreign-owned companies (Japanese/UK- and US/UK-owned) and the performances of UK-owned companies	Not Rejected
<i>Section 3: Foreign-owned Companies (Japanese and US) with Operating Losses vs. Domestic UK Companies with Operating Losses</i>		
H06	There are no differences between the performance (profitability measures) of foreign-owned companies with average negative operating profit (Japanese- and US-owned) and UK-owned companies with negative operating profit	Not Rejected
H07	There are no differences between the performance (profitability measures) of joint venture foreign-owned companies with average negative operating profit (Japanese/UK- and US/UK owned) and UK-owned companies with negative operating profit	Not Rejected
<i>Section 4: Tax Analysis</i>		
H08	There is no difference in the amount of reported tax expense by foreign-owned companies (Japanese- and US-owned) compared to the amount of reported tax expense by domestic companies.	Not Rejected
H09	There are no differences in the amount of reported tax by foreign-owned companies prior and subsequent to the latest UK transfer pricing regulation introduced in 1998 corporation tax self-assessment compared to domestic companies.	Not Rejected

The findings of Section 1 are consistent with findings by Horst (Cole, 1999) which investigated return on assets of US independent wholesalers for the years 1986-1990. Horst found that the 25th percentile average was 2.6%, while the 75th percentile was 15.4%. That is to say, half of all independent distributors reported average return on assets between 2.6% and 15.4% while the remaining half were either above or below the range.

While there is much variability in profit level indicators, a small random sample may by chance have a median value and full or inter-quartile range that is quite different from the median value and the full or inter-quartile range, respectively, of the theoretical population from which the small sample was drawn. This research therefore concludes that companies may easily achieve low or high ranges of PLIs directly or indirectly by imposing artificial selection of criteria.

This study represents a step forward towards a more credible process in which the identification of potential comparable parties strives to be as objective as possible. Due to the ease in which criteria for selecting PLIs can be manipulated to achieve a contrived result, TNMM or CPM must provide more stringent guidelines on the selection of PLIs. This study suggests that the criteria for selecting PLIs when identifying potential comparables should be clearly stated by the regulations with insistence that reasonable effort be made in identifying all companies meeting those criteria. Criteria that are economically meaningful, verifiable, and fully disclosed should be applied.

The results of Section 2, Chapter 8 are in line with the findings of previous income shifting studies (Wheeler, 1988; Kim and Lyn, 1990; Gideon, 1990; Crain and Stitts, 1994; Oyelere and Emmanuel, 1996; Munday and Peel, 1997) regarding the lower profitability of foreign-owned companies. Buckley and Hughes (1996) suggested that the low profitability of the Japanese companies was mainly due to target costing system used by Japanese subsidiaries which allow the parent company to “squeeze” margins as well as costs. The Japanese overseas company is not regarded as a profit centre in its own right and therefore, there is no incentive to increase company profits. From the Japanese point view, profit in a subsidiary company is dysfunctional (Buckley and Hughes, 1996).

This study confirms lower performance by US-owned and Japanese-owned companies compared to UK companies, raising a number of issues. There is a dichotomy between the comparatively high productivity characteristics of Japanese-owned and US-owned companies and their relatively poor profit performance since the samples were matched companies with similar operating profits, growth, or turnover. There is a definite ownership effect on the profitability, suggesting profit management on the part of the Japanese- and US-owned companies in order to maximize global profits. It is worthwhile for future studies to investigate whether UK-owned companies operating across national borders follow similar practices of shifting income to the UK.

The findings in Section 2 also revealed that differences in profitability were found between US joint ventures and UK joint ventures companies. No differences in profitability were found between Japanese joint ventures and UK companies. The presence of monitoring by a local partner prevents abuse and therefore confirms results of previous studies that suggest that the lack of monitoring by local partners draws the attention of tax authorities for tax audits (Chan and Chow, 1997).

In Section 3, it appeared from the statistical test of the different groups of MNEs that the effects of ownership seem to change according to differences in the nationality of MNEs. The Japanese-owned companies had, on average, lower profits than the UK-owned companies. This supports the findings of Section 2 regarding the questionable low profits of the Japanese-owned companies and explains in part the high percentage of loss-making Japanese companies in the UK. (According to the FAME database, over 34% of Japanese-owned companies are loss-making for the year 2000, a significantly higher proportion than the 19% found for UK companies.)

On the other hand, the results from the tests of different joint venture groups with operating losses indicated no differences between the performance of joint venture foreign-owned companies with negative operating profit and UK-owned companies. This is consistent with previous studies as well as the previous section of this research regarding joint ventures and the role of monitoring of the local partner, thus eliminating the gaps in profits between foreign- and domestic-owned companies.

Finally, Section 4 results confirmed the findings of Sections 2 and 3 with the conclusion that there was evidence of low tax expense reported by Japanese-owned companies, but not for the US-owned companies, compared to the domestic companies for all the manufacturing and wholesaling industries. This suggests that companies with certain ownership such as the Japanese-owned companies in the UK seem to aggressively manage their tax expense, through ITP policy which might allow low profitability, reporting losses and low tax since tax rates are considered highly significant determinants of reported profits. Grubert et al (1993) findings were similar, noting that foreign companies pay significantly less tax than US companies. Although Grubert et al did not use similarly large companies for both groups, they found after adjusting for the age profiles of foreign and domestic companies and other factors that could cause legitimate differences in profitability, they were able to account for part of the differential but roughly 50% of the difference remained unexplained. Their results imply that foreign companies attempt to reduce US taxable income through income shifting.

Section 4 findings are supported by the empirical results presented in Chapter 4 as well as by the empirical results of other research studies (Piper, 1996; Munday and Peel, 1997) that concluded that Japanese companies in the UK pay only a fraction of the tax of their domestic counterparts. Whether the manipulation of transfer prices in the UK reflects a deliberate desire to minimize tax liability, to avoid exchange rate risks, or simply reflects the culture of Japanese businesses, remains uncertain.

The implication of these findings for tax authorities worldwide is obvious. Gaps and loopholes in rules and regulations between and within national tax jurisdictions need to be gradually blocked to minimize the opportunities to circumvent ITP regulations. The continuous development of such legislative instruments should be carried out on an inter-country basis and in consultation with all parties that are likely to be affected by the outcome, such as international organizations, MNEs, and professional bodies such as the OECD and US IRS which commonly carry out such consultative processes. A Trans-national body similar to the EU arbitration model might be introduced to arbitrate and develop case laws, although the likelihood of such might be slim given individual countries' fiscal interests.

In the UK, Inland Revenue modernized transfer pricing rules in 1998 by implementing overhauled self-assessment transfer pricing laws. The final portion of this research tested the impact of the latest UK regulations on both foreign-owned and domestic UK companies with the results revealing some immediate positive effects such as increased tax payments without significant differences for the sample group of foreign-owned and domestic-owned companies. The latest UK transfer pricing regulation appears to have had a great impact on both foreign- and domestic-owned companies as it contains a specific requirement for profits to be calculated in accordance with the arm's length principle. Before the UK 1998 transfer pricing regulations, companies adhered to the arm's length principle in calculating profits for inclusion in a tax return. IR assessed a company's profits and wielded the authority, through the use of some cumbersome processes including the issue of formal directions by its Board, to replace prices on transactions which had resulted in the understatement of profits in the UK through pricing other than at arm's length with the price that would have been agreed had the parties been independent and acting at arm's length. In addition, penalties, as well as the threat of increased audit, appear to be an effective deterrent to non-compliance of the regulations. Companies may face threats of penalties, aggressive tax audits, and/or double taxation. Over time, tax payment differences between foreign and domestic may converge to become less volatile due to management experience in complying with the regulations. Companies may outsource the preparation of the transfer pricing documentation and use advance price agreements to comply with the regulations.

Reported tax expenses by foreign-owned companies have improved via penalties, contemporaneous documentation, and self-assessment. The latter still allows MNEs a great deal of discretion when selecting comparables.

8.3 Assessing FDI Theories and ITP Literature

The theories of MNEs reviewed in Chapter Two suggest that the main pre-condition for the spread of FDI is the ability of a company to internalize certain advantage(s), transport them across national boundaries and translate them into returns that are over and above what indigenous companies in the host country can make. This higher return is necessary to compensate the foreign MNE for developing, internalizing and transporting the advantage(s). The theory therefore supports superior levels of

performance by foreign-owned subsidiaries. Most of the findings and the empirical evidence of this research do not depart from those of the empirical studies mentioned in Chapter 3 regarding performance of foreign-owned companies. Wheeler (1988, 1990) was able to show that indigenous firms in the US outperform their foreign-owned counterparts six times over in terms of return on assets. Munday and Peel (1997) and Oyelere and Emmanuel (1998) also reported similar evidence in the UK. In addition, Kim and Lyn (1990), for example, found that "foreign-owned firms operating in the United States do not appear to earn higher profits than American-owned firms" (p. 51). Gideon (1990) and Crain and Stitts (1994) also reported similar results.

Through the examination of the hypothesis embedded in these FDI theories, this study also questions the rationale for advantage-based involvement of companies operating in foreign countries. H₀₄ in Section 2 provides evidence of low profits by foreign-owned companies compared to their domestic UK counterparts. The low performance of foreign-owned companies operating in the UK cannot be explained by the number of Japanese companies located in the UK nor can the disproportionate ratio of foreign-owned companies (especially Japanese-owned) be easily understood. All companies in the sample operate within UK base and hence faced the same economic environment.

It is difficult to understand the lower reported performance by foreign-owned companies over the period sampled (1998-2000), especially since they are required to meet reporting standards in the UK. One possible answer is that the performances of foreign-owned companies are being under-disclosed due to flexible ITP regulations without detailed requirements, differences in ITP rules in different countries, or low enforcement of the regulations. As with all studies using publicly available data, only indirect inferences can be made but the evidence provided here indicates that ITP cannot be eliminated to explain diverse performance of foreign-owned and UK companies.

8.4 Assessing the Research Method and Methodology

In an effort to provide some insight to the logic behind the methodological choices made, the following attempts to address the strengths and the limitations associated

both with the overall research design and the particular method employed in this study. Given the complex nature of this study, transfer pricing regulations and the test of comparables, concerns regarding the research might certainly arise. Some may criticize the use of an electronic database for data collection, with the assertion that companies' finance directors, consulting firms, and tax agents may provide a deeper understanding of the issues under investigation in all of its proportions. However, given that the main purpose of the study was to test whether the new regulations on comparables can curb MNE discretion, whether ownership effects can be detected, and whether regulation changes can be shown to affect tax paid, the selected data source was chosen as the most relevant. Due to FAME's content (detailed company information, quantitative and qualitative data, 10 years of data for each company, and a listing of both private and public companies), its basis on UK GAAP, and its data collection from Companies House, it appeared to best fit the specific needs of this research.

This is not to say that the chosen research method that has been employed in this study is regarded as a faultless data-collection instrument. On the contrary, an attempt was made throughout the thesis to document all the potential and actual limitations and when judgment was necessary, controls or screens were placed on samples to try to detect patterns. In the final analysis, however, it seems safe to conclude that all the previously discussed strengths and weaknesses, concerning both the actual method and the overall research design utilized in this research which included some fieldwork authentication, represents a trade-off between the precision that comes from a high degree of control and the loss of 'real-life' richness (Greene and D'Oliveira, 1982). Eventually, such choices depend largely on the purpose of the research, the conclusions which are expected to be drawn from it, and the conditions under which the research is actually carried out.

8.4.1 Internal Validity

All in all, the level of internal validity of this research remains high. This is fundamentally a study of a more positive nature, which is structured upon

- i) the *a priori* construction and statement of hypotheses that derive from a given theoretical model (FDI and MNE theories and ITP regulations);

- ii) the explicit identification, operationalization and measurement were carefully selected; and,
- iii) the collection of data through the use of a highly structured, standardized data-collection method (FAME database and fieldwork of structured interviews).

It is this structured nature, along with the statistical control over the identified variables in the stage of data analysis that essentially renders this study with a relatively high degree of confidence that the conclusions regarding the hypothesized relationships are warranted. However, the inability of the study to control for the possible effect of other factors which requires access to individual companies may have affected the selection of the criteria when developing comparables. The above constitutes a discrepancy between the statistical significance and the substantive importance of the results reported.

8.4.2 External Validity

Traditionally a positive research study is endowed with a high level of overall external validity (generalizability) (Abernethy et al., 1999). Secondary data research endeavours most usually entail the careful random selection of samples that enable the obtained findings to be generalized to wider populations with a high degree of confidence. For Section 1, this study draws data from randomly selected samples of comparable companies within 18 different manufacturing and wholesale industries representative of the entire population sample. The population validity - that is, its ability to generalize from the sample of twelve manufacturing and six wholesale industries to all manufacturing and wholesale industries is high and to all other industries might be limited. In addition, the samples for Sections 2, 3, and 4 cover most Japanese-owned companies and a large sample of US-owned and UK companies within selected industries with the findings being highly generalizable for the Japanese- and US-owned companies within the manufacturing and wholesale industries in UK and limited to other foreign-owned companies in the UK.

As far as the study's ecological validity is concerned (that is, its ability to provide results that can be readily generalized from the actual social context in which the research has taken place to other contexts and settings (Gill & Johnson, 2002)), the

high degree of standardization and structure of the instrument used to collect data is likely to have created a relative lack of naturalism that may have thereby adversely affected the study's overall ecological validity.

This research used some fieldwork interviews in addition to the main data to gather data and authenticate findings from interviewees who were both academic and experts in the field acting within their actual social context to provide a definite advantage in terms of ecological validity. These more qualitative data that were collected from the interviews enriched and provided triangulation for the findings that emerged from the main data source. All things considered, the overall external validity of this research is held to be relatively high.

8.4.3 Construct Validity

With regard to the construct validity of the study, the fact that all variables were measured with instruments drawn from the ITP regulations, which have been previously developed and extensively tested in practice, gives some confidence about the extent to which the constructs of theoretical interest have been successfully operationalized and measured here and therefore, provide some assurance of the overall study's criterion and construct validity.

8.4.4 Reliability

Lastly, the reliability of the study is also considered to be fairly high. The use of a highly structured method for collecting data in a form that is quantitatively analyzable, as well as the emphasis on the statistical control over the variables identified in the research, provide a relatively high degree of confidence about the consistency of the results obtained. Overall, mainly owing to the high level of structure and rigour maintained in the data collection and analysis, the present study is regarded as easily replicable for similar research endeavours in the future, and hence as highly reliable.

8.5 Research Strengths

The literature review in Chapter 3 identified many of the previous empirical studies. Regarding transfer pricing methods, the majority of the previous studies focused on either the selection of the acceptable methods by MNEs or the factors that influenced

the selected methods. By concentrating on how each of the acceptable methods of transfer pricing is applied and knowing the inner workings on how these methods are applied in practice improves the understanding of ITP and fill in the gaps between theory and practice. Many of the previous studies lack the focus to provide meaningful explanations of ITP practice given that transfer pricing is such a multi-disciplinary area with numerous competing theories and many conflicting findings.

To increase the reliability of the comparable sets and the validity of the findings, this research's carefully selected sources of data is the same source used by consultants and accepted by Inland Revenue (Interviewee 2-UK).

This research introduced empirical differences between TNMM and CPM, the ownership of more than one group of foreign companies, the performance of loss-making companies in relation to ITP, and finally, the empirical effects of the latest UK transfer pricing rules. Another focal point of this study was the data analysis. The data analysis contained four integrated sections in addition to interviews which at least in part verified the results.

Previous empirical studies have used unmatched samples (e.g. Norusis, 1999), not distinguished between the different forms of investment the foreign-owned companies represent (Oyelere and Emmanuel, 1996), or have drawn conclusions based on one year's worth of data (Munday and Peel, 1997). Unlike previous research, this study used three matching methods to assess the performance of foreign-owned companies with the performance of domestic-owned companies. By controlling for many factors (strategies, product cycle, growth, profitability and, size of operation) that might affect the performance, this research eliminated the disadvantages of using one matching method. The matching process was also used to assess the reported tax expense of foreign-owned companies with domestic-owned companies.

This research disaggregated foreign-owned companies into a group of Japanese-owned companies and a group of US-owned companies in order to avoid missing any cultural tendencies that might exist within a certain group of foreign companies. The importance of the matching methods between individual companies cannot be stressed enough as it is essential to any research that considers testing the performance of

different groups of companies as a representation of a company's capability. Continued research in this direction will promote a greater understanding of the behavior of foreign companies, encouraging a transaction level analysis which may require different research methods.

Lastly, this research's major strength is the balance between the research methods and the research questions, which provided solid findings of benefit to MNEs, policy makers, tax authorities, and consulting firms. To demonstrate the importance of comparables, Section 1 examined the profit-based methods TNMM and CPM and found differences between OECD and IRS profit ranges and variations between different PLIs. Section 2 provided comparisons between foreign-owned (Japanese and US) companies and discovered low profitability of Japanese- and US-owned companies compared to UK companies. Section 3 provided comparisons between foreign-owned companies (Japanese and US) with operating losses compared to UK companies with operating losses and found that a vital number of the Japanese-owned companies are loss making and that Japanese-owned companies with operating losses significantly under perform their UK counterparts. Finally, Section 4 tested the effects of the latest UK transfer pricing regulation introduced in 1998 corporation tax self-assessment tax and offered evidence of the tax expenses reported by foreign-owned companies (Japanese and US) which confirms the low amount of reported tax on behalf of the Japanese-owned companies.

8.6 Research Limitations

As is the case with all research of this nature, certain limitations may apply. One potential limitation is the necessity of making assumptions regarding the control for functions and risk when developing comparables using both TNMM and CPM. Due to the limitation of the qualitative data available on each company, this study did not use rigorous controls for function and risk differences. Although the same controls were applied for both TNMM and CPM when selecting the comparable sets, this limitation was partially overcome through the strategy of using individual industry analysis with four digit SIC codes, five different PLIs and, recent three year average data.

The foreign-owned companies used in the research sample are companies with

foreign ownership (control) whose activities and practices may be largely limited by the decisions taken by their parents as well as accounting and other rules and regulations of the parent home country. This may, to some extent limit the level of comparability of the data collected. However these companies, insofar as they operate within the UK and report to Companies House, are expected to meet UK generally accepted accounting principles.

Exact matching of individual foreign companies with domestic companies proved difficult. Research judgments were used in order to balance the matching methods with the number of matched samples. More specifically, companies were matched based on a matching method of plus or minus 2.5% to 10% as explained in Chapter 6 which is consistent with previous literature (Munday and Peel, 1997).

The investigation of the performance of foreign-owned and domestic-owned companies was based solely on financial accounting figures, average profit level indicators for Sections 2 and 3 and tax paid for Section 4, as reported in the financial statements of sampled companies. Accounting figures alone may not capture all the economic value-based performance of a company within a certain period. Other models that measure differences in a company's value at the beginning and end of a period, for example, may perhaps provide a more accurate measure of performance. Profit level indicators, as obtained from the financial statement of the companies, however remain a globally recognized medium of communication in the business world, and are included in the ITP regulations.

Although this research conducted five fruitful interviews, none of the interviewees represented any of the sample companies or the tax authorities due to the sensitivity of the subject, restricted access, and time constraints. As access is a major difficulty to this kind of fieldwork, future studies might consider interviews or case studies with tax agents and company finance directors to obtain in-depth evaluations of comparables and ITP profit methods.

A final limitation is associated with researcher bias in interviews. This research recognized this possibility and attempted to address it in a number of ways. The interviews were conducted in the knowledge that the researcher was an independent

academic and the preliminary findings were used as guidelines with an explanation of the research question, research method and data samples provided to each interviewee.

8.7 Future Research

Transfer pricing represents a controversial area that cannot be dealt with in a single or few studies or by using one particular methodological approach. Further research and other approaches, possibly eliminating some of the limitations of this study, remains necessary. This research might influence the directions for future research for ITP in several directions in addition to paving the road for new research questions and methods.

This research is one of the few studies that focus on certain groups' tendencies. Future studies should continue breaking samples down by country of ownership to observe if these different nationality traits exist with respect to ITP practices and performance. Future research might consider comparing matched samples of foreign-owned companies with other foreign-owned companies rather than their domestic counterparts which due to time and resource limitations was not tested by this research.

Japanese-owned MNEs present a key area for future research due to their unique (in terms of profit and taxes) performance in the UK. In general, more in-depth investigation is required for the ITP policies of loss-making companies operating in the UK, which is currently an under researched area.

Through the testing of ITP methods (TNMM and CPM) in Section 1, it was deduced that the wide profit ranges witnessed were mainly due to the lack of detail in the regulations. These general regulations allowed different adjustments on the part of consulting firms and companies (as mentioned by Interviewee 2-UK). Further studies might consider investigating the practices of different consulting groups in applying and developing comparable data sets. In addition, it might be worthwhile investigating whether consultants have a comparative advantage or do other factors outweigh the need for comparables.

This study also moves one step forward toward more tax-oriented research in the UK. Further studies are needed to investigate companies' strategies and FDI decisions. Because of the diversity of the transfer pricing topic, various aspects cannot be captured through one single work, thus it is recommended that future research is conducted to consider the use of different research methods such as case study, which might be useful to this type of study. Comparative case studies of matched set foreign-owned companies with domestic-owned companies would be essential to further assess their performance and comparability. Finally, it is essential for future studies to test the performance of matched foreign parent companies (headquarter) at their home country with the performance of UK parent companies to further explain whether differences in the performance are due to economical and environmental factors or perhaps cultural, national tendencies.

8.8 Summary

This research offers additional insight regarding the level of discretion that can be provided under different regulations and the extent to which ownership effect on profit and taxes can be detected. It is apparent that MNEs attempt to achieve more than one transfer pricing objective through their transfer pricing decisions. As the primary objective of most MNEs remains profit maximization as motioned in the earlier chapters, the use of particular acceptable methods by an MNE is appropriate.

This study suggests several factors must be carefully considered when applying profit-based methods. Many of the same factors must be considered in applying any transfer pricing method. Application of TNMM and CPM requires resolution of a series of specific issues that may have a significant impact on the final result. TNMM and CPM are theoretically the same method of determining transfer prices. The differences between the two methods lie in the nuances of their application. While rejecting CPM, OECD guidelines include a similar method, TNMM, with the injunction that TNMM be used only as the last resort. The wide profit ranges and the freedom of selecting PLIs in developing comparables for both of these methods cannot be ignored. In general, both profit-based TNMM and CPM afford MNEs differing degrees of discretion in terms of compliance.

The review of the application of CPM and TNMM highlights the fact that, in practice,

CPM and TNMM are either close cousins or identical methods. However, the official position in most of the countries covered more often reflects the view, based on the theory, that there is a difference. In particular, it is worth noting that the most common reason given for the suspicion with which CPM is often regarded is that a proper analysis is required of the functions and risks of the companies used as sources of comparable data and of the data they disclose. However, where CPM is applied in the manner in which, its proponents argue is intended, such an analysis is indeed performed.

Where TNMM is accepted in preference to CPM this seems to be because the theory of TNMM focuses more on the underlying transactions. CPM is equated more to an industry average style of approach. The conclusion is that in practical application, neither of these two is really true. In practice, the truth might lie somewhere between the two.

In the absence of reliable internal data on arm's length profitability, the application of TNMM usually relies on published financial statements of independent companies. Because this data is limited as to detail, rendering the desegregation of product lines and the making of adjustment all but impossible, the effect is that the practical application of TNMM looks very much like a CPM approach.

TNMM and CPM are useful tools in a company tax policy, but neither is a substitute for transaction-based methods. CPM is not recognized by the regulatory bodies of some OECD member countries and remains questionable to researchers as it might be considered a departure from the arm's length principle (Eden, 1998). Findings suggest that the different applications of regulations are questionable in that widely different ranges might occur.

The success of the UK's policy of subsidizing and encouraging foreign FDI as a means of promoting regional and national development revolves around the ability of these companies to create real spillover advantages for the UK manufacturing and wholesaling industries. This policy will be called into question if such investors are shown to be performing inadequately relative to the matched domestic competition. Low profitability on part of US-owned companies and low profitability, persistent

losses, lack of monitoring by local partners, and low taxes on the part of Japanese-owned companies provides evidence on how different nationalities have different tendencies and the likelihood that manipulation of income does indeed occur. Clearly, further research into the performance of foreign-owned companies and Japanese-owned companies in particular is needed in the light of the claims made for these MNEs in terms of profit and tax.

Through the theoretical awareness and knowledge gained from this study, it is certain that the transfer pricing topic will remain one of the most challenging areas for future research.

Appendices

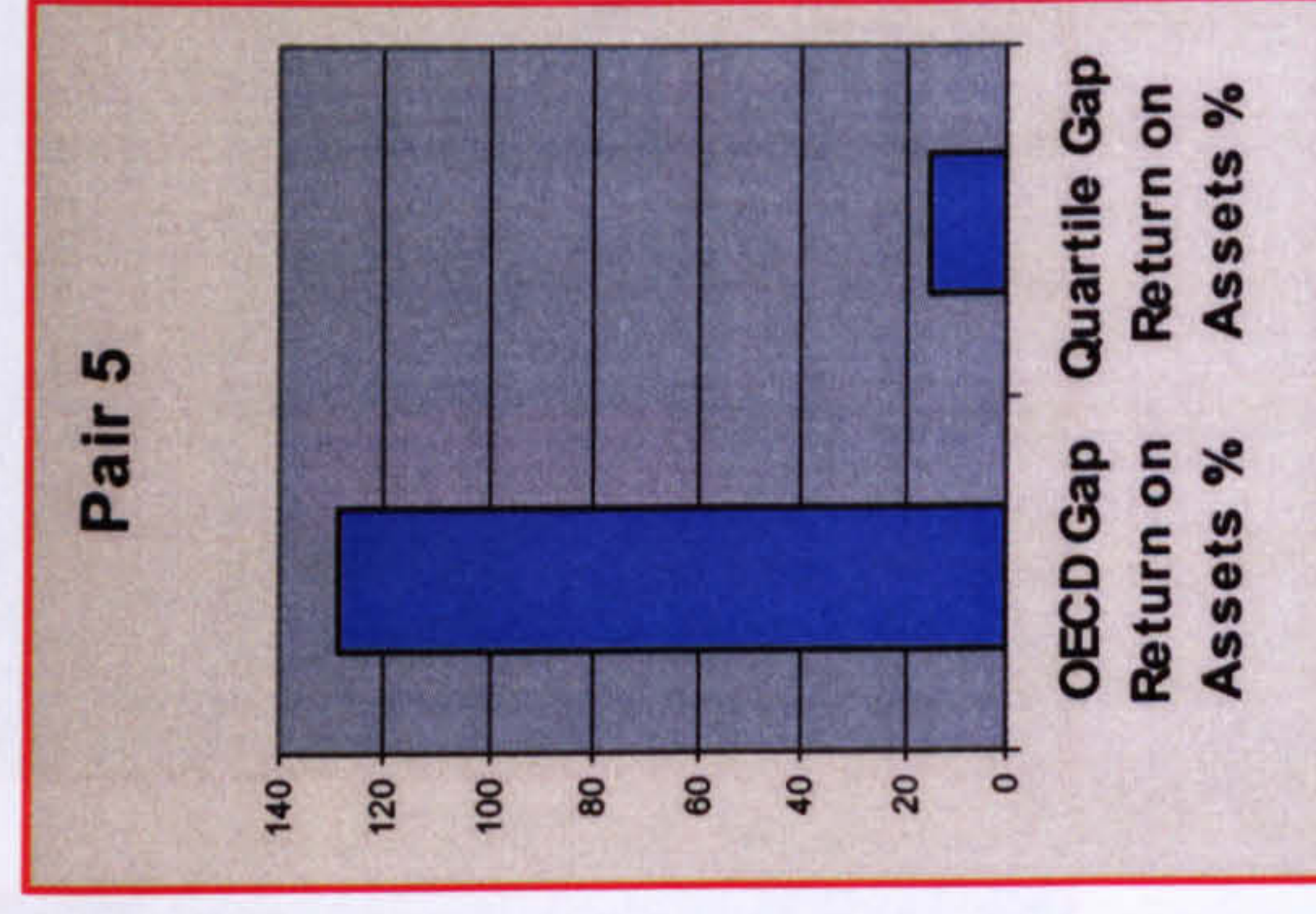
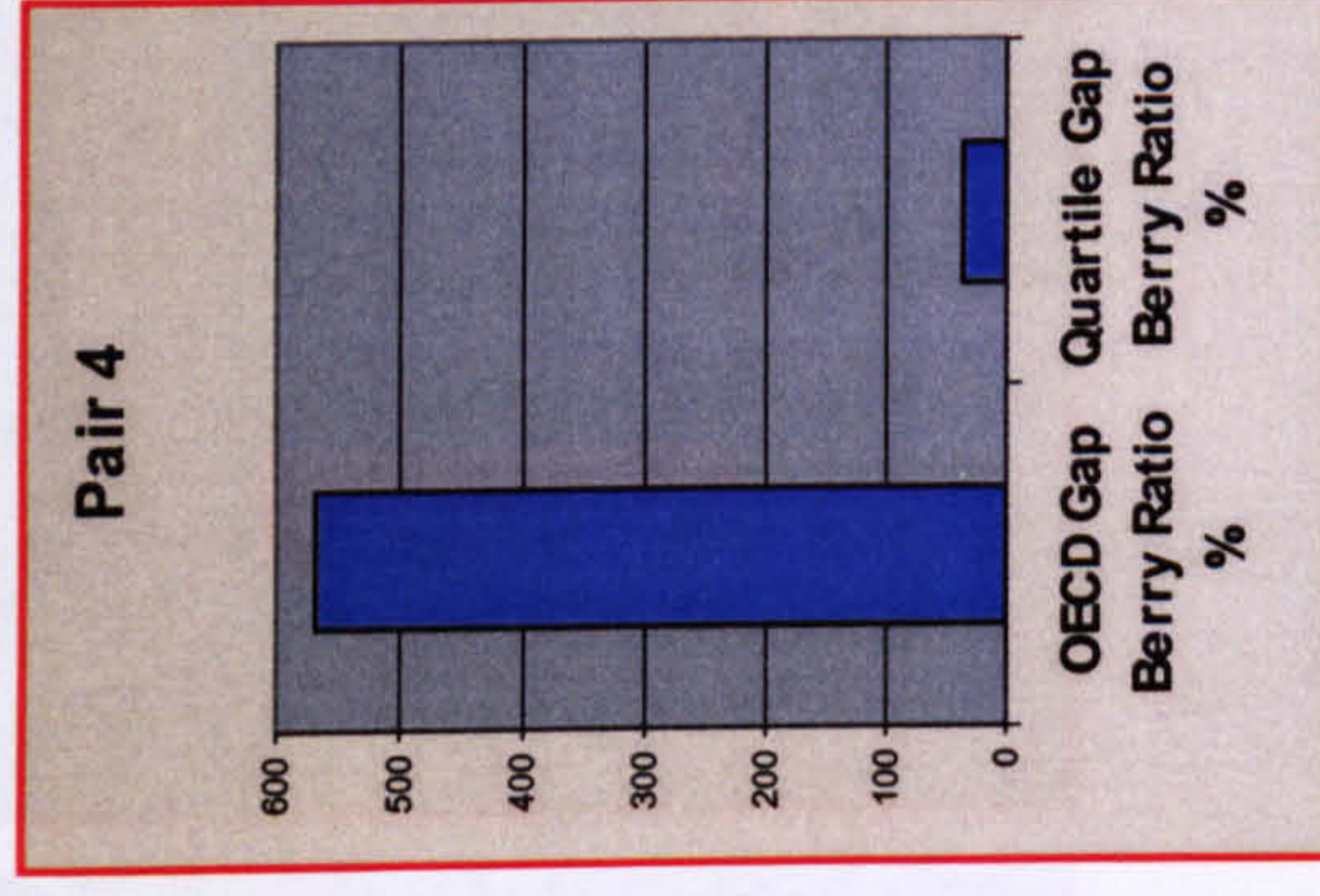
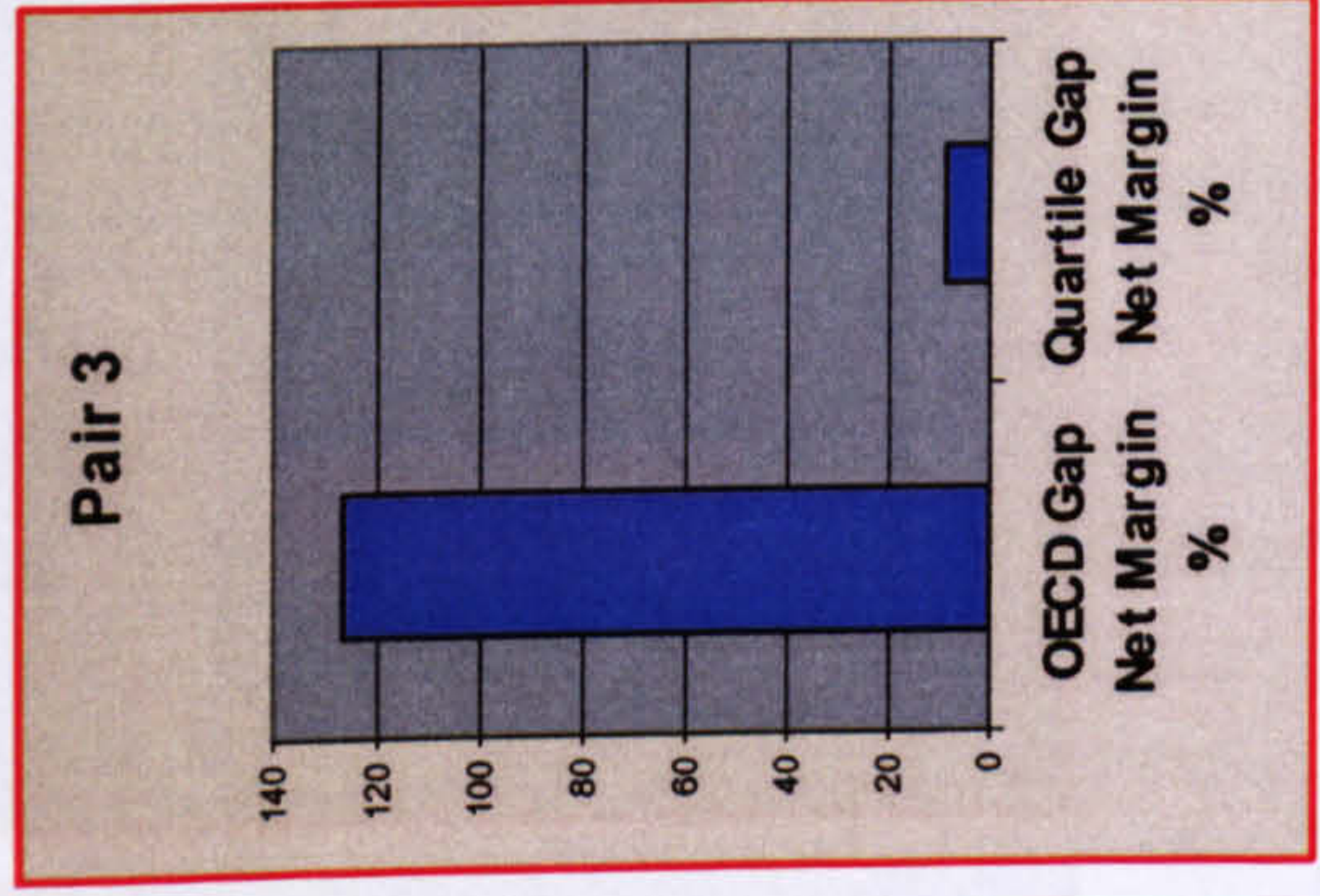
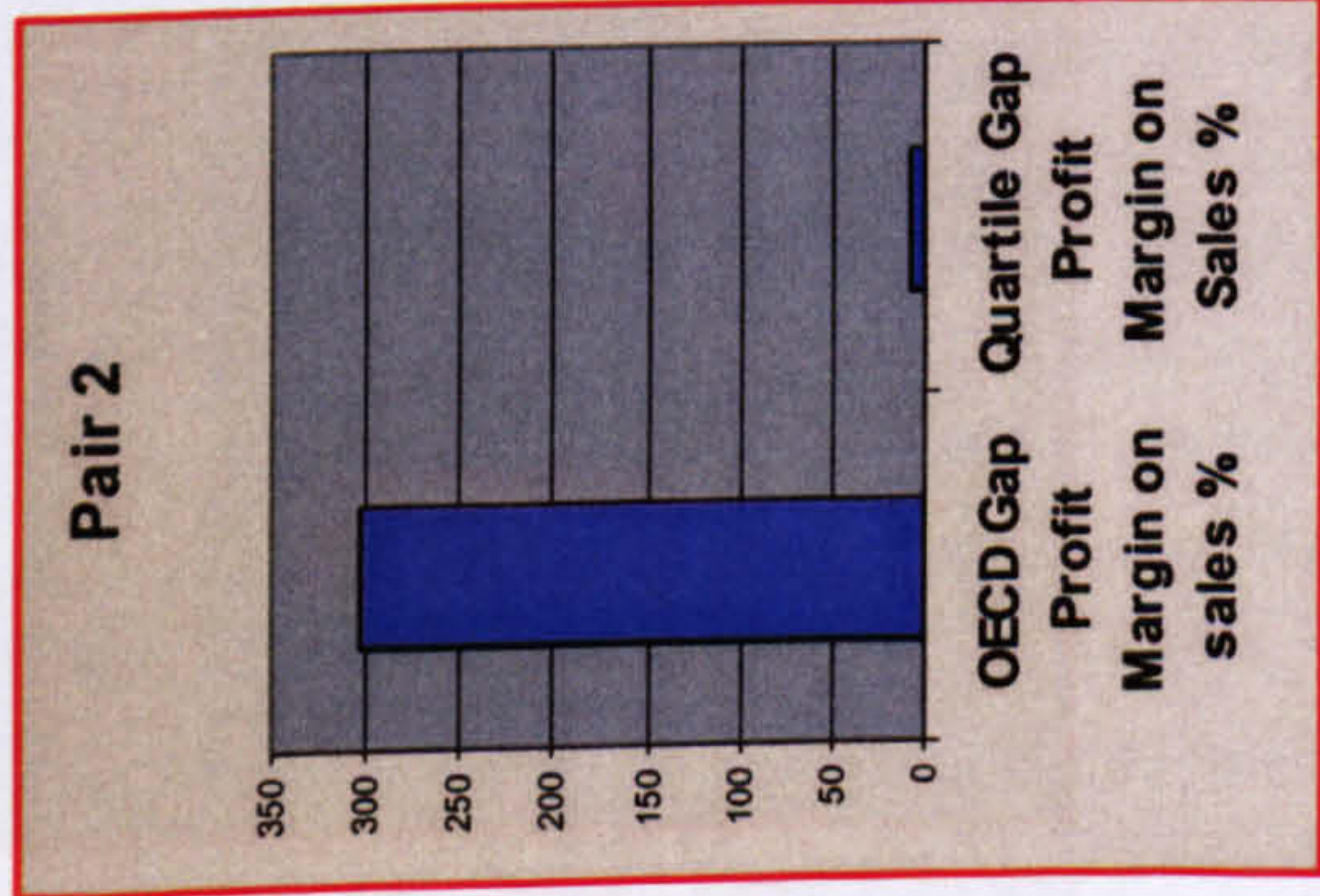
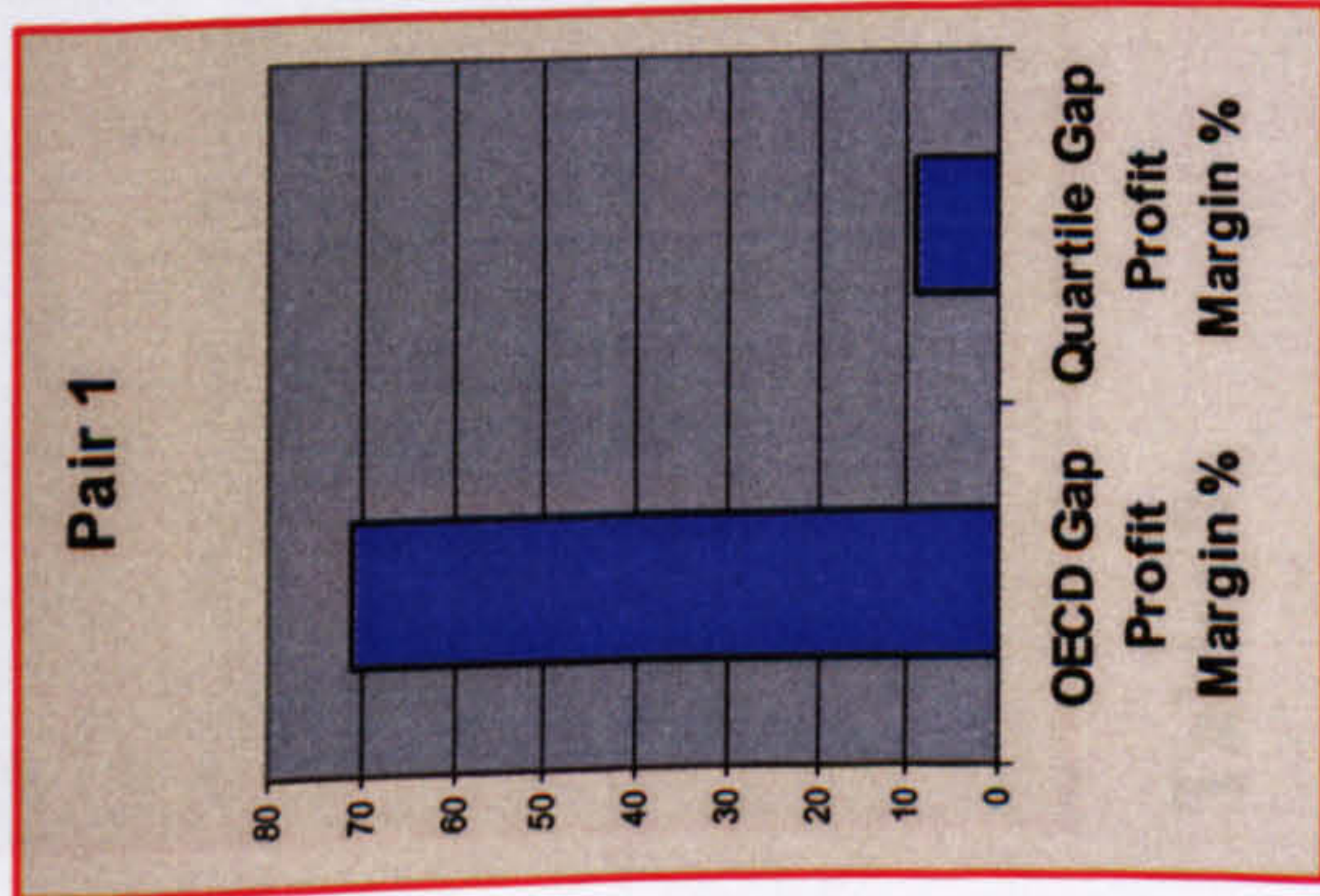


Table: 1

Paired Samples Test (Profit Ranges All Cos.)

	Paired Differences					Sig. (2-tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			df
				Lower	Upper		
Pair 1	62.1767	26.1964	6.1746	49.1495	75.2038	17	.000
Pair 2	294.632	885.4392	208.70	-145.69	734.950	17	.176
Pair 3	118.116	178.9320	42.1747	29.1353	207.097	17	.012
Pair 4	531.108	901.2278	212.42	82.9377	979.278	17	.023
Pair 5	113.973	69.0783	16.2819	79.6210	148.325	17	.000

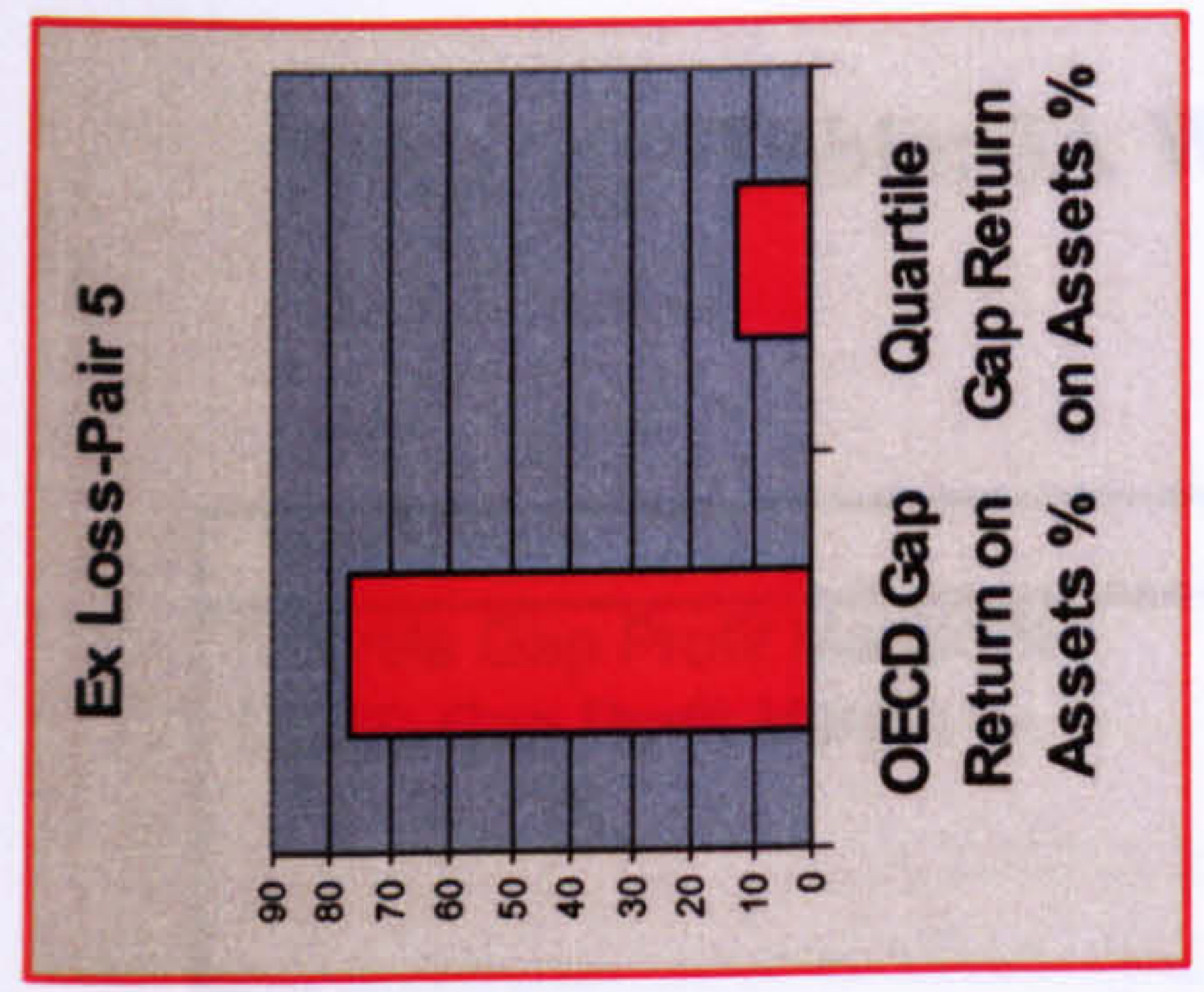
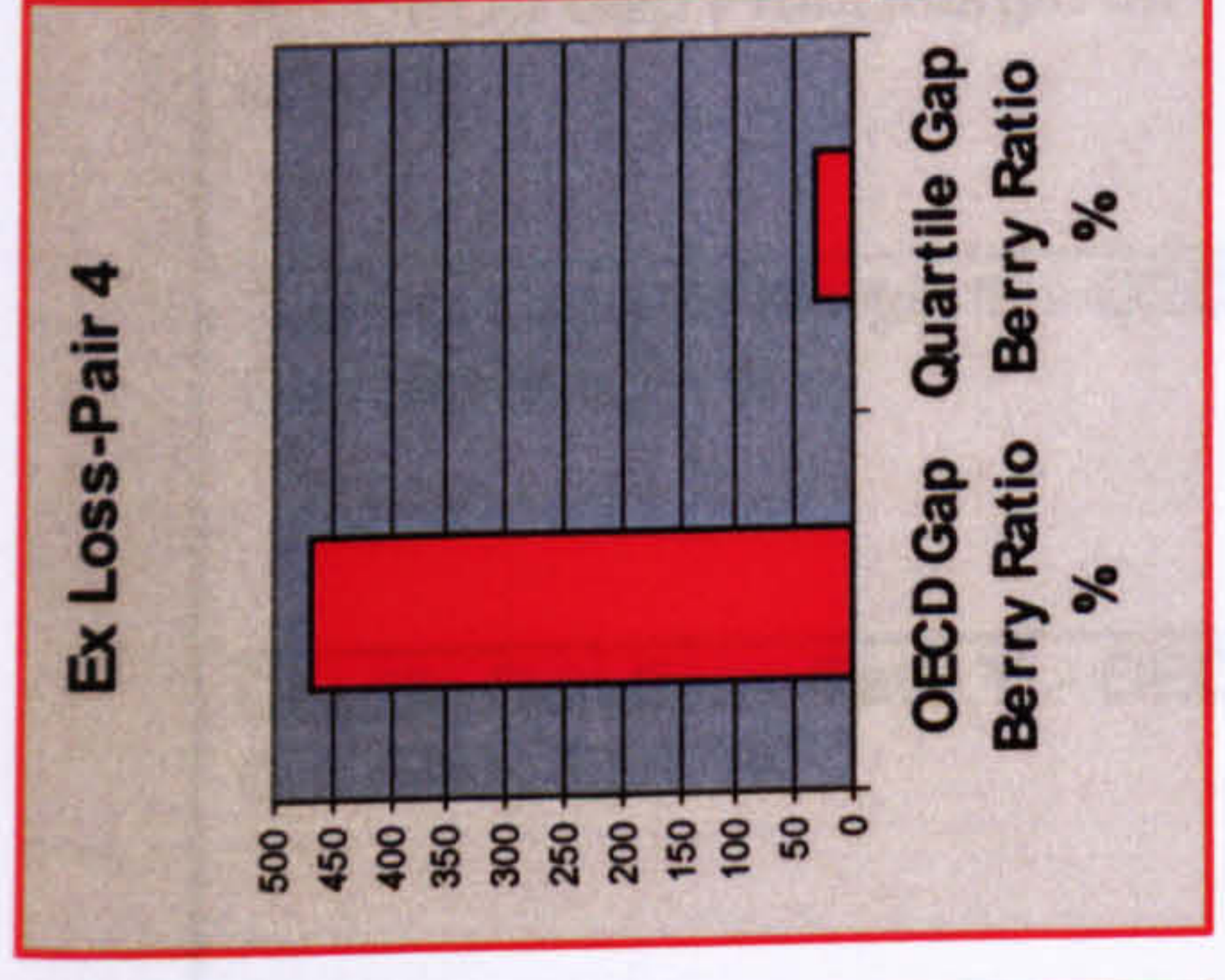
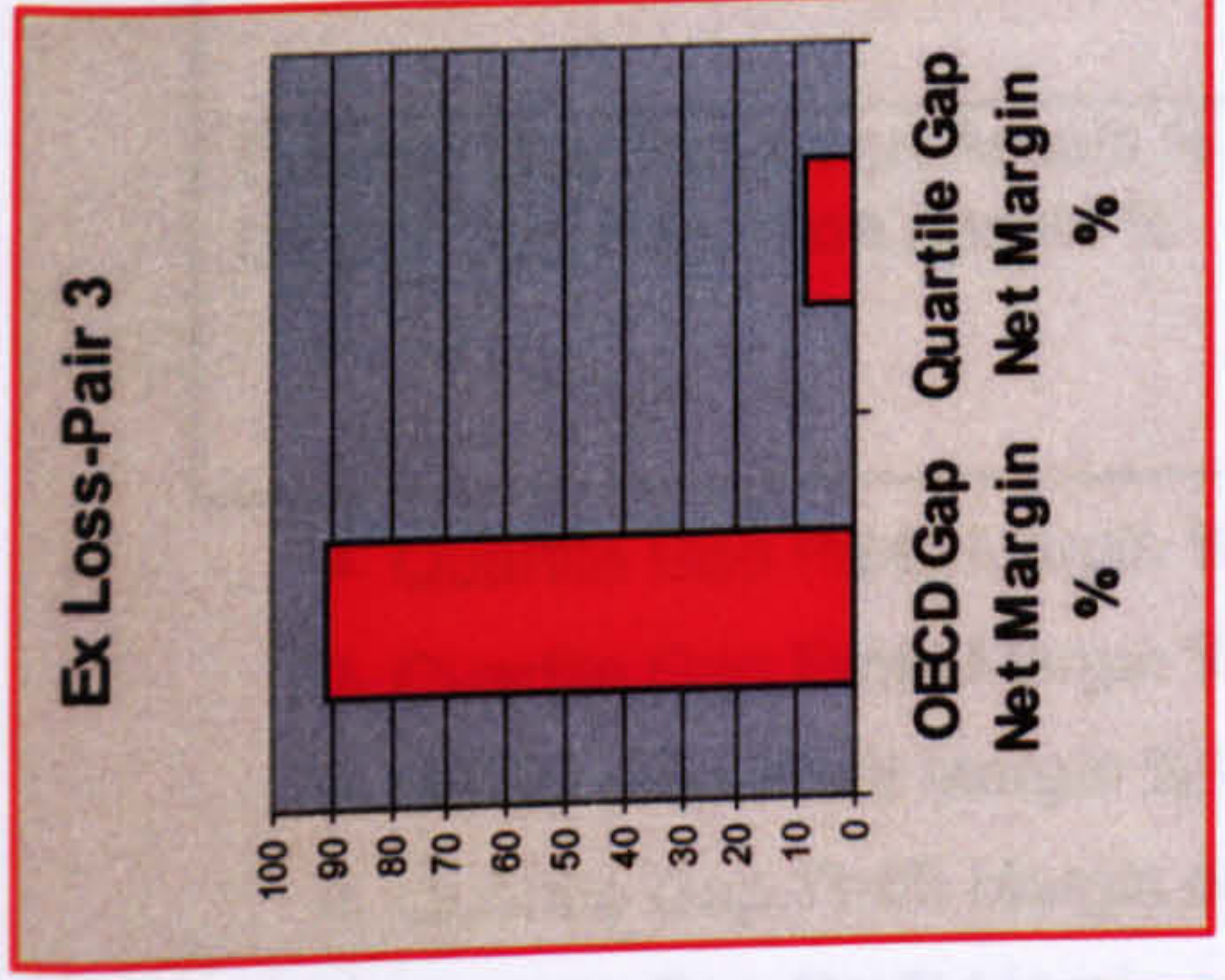
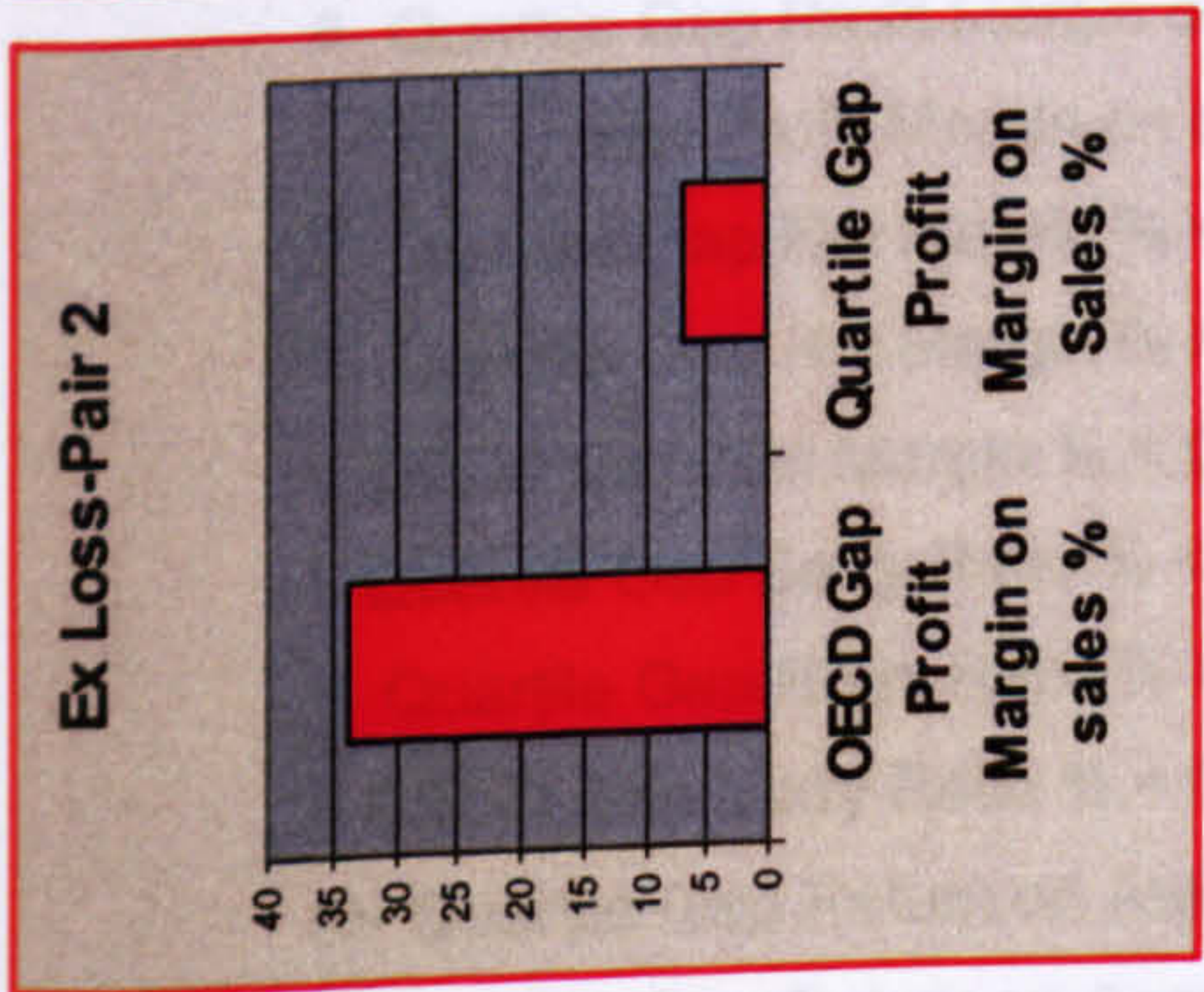
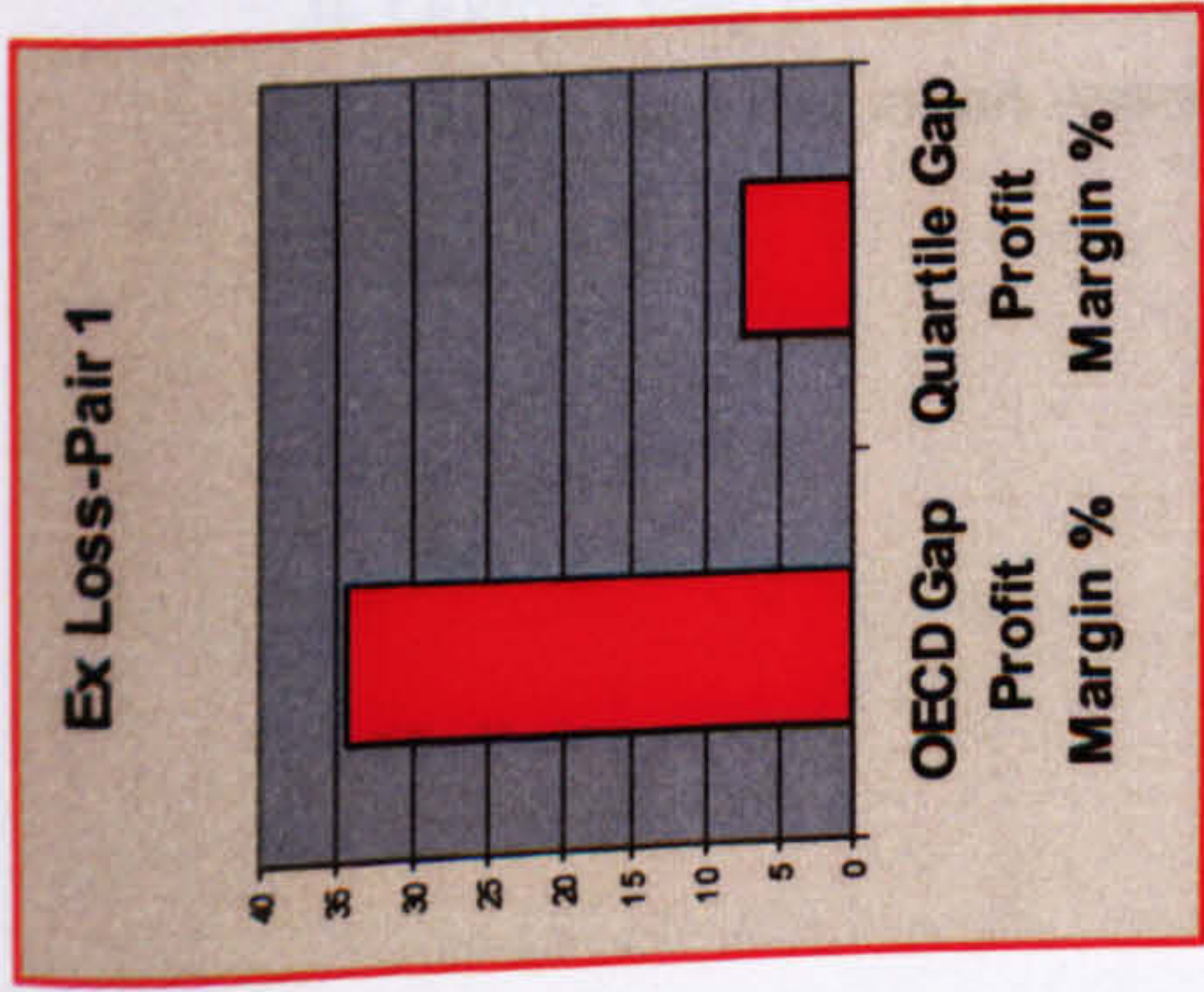


Table: 2

Paired Samples Test (Profit Ranges Exclude Loss Cos.)

Pair	Paired Differences	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	OECD Gap Profit Margin % - Quartile Gap Profit Margin	26.68	10.7629	2.5368	21.327	32.0317	10.52	17	.000
Pair 2	OECD Gap Profit Margin on sales % - Quartile Gap Profit Margin on Sales %	26.91	17.3915	4.0992	18.263	35.5597	6.565	17	.000
Pair 3	OECD Gap Net Margin % - Quartile Gap Net Margin %	83.10	181.4635	42.7714	-7.1397	173.340	1.943	17	.069
Pair 4	OECD Gap Berry Ratio % - Quartile Gap Berry Ratio %	434.6	886.8269	209.03	-6.4320	875.585	2.079	17	.053
Pair 5	OECD Gap Return on Assets % - Quartile Gap Return on Assets %	65.00	70.5232	16.6225	29.929	100.070	3.910	17	.001

Table: 3A Wilcoxon Signed Ranks Test (ALL)

Ranks

		N	Mean Rank	Sum of Ranks
Quartile Gap Profit Margin % - OECD Gap Profit Margin %	Negative Ranks	18 ^a	9.50	171.00
	Positive Ranks	0 ^b	.00	.00
	Ties	0 ^c		
	Total	18		
Quartile Gap Profit Margin on Sales % - OECD Gap Profit Margin on sales %	Negative Ranks	18 ^d	9.50	171.00
	Positive Ranks	0 ^e	.00	.00
	Ties	0 ^f		
	Total	18		
Quartile Gap Net Margin % - OECD Gap Net Margin %	Negative Ranks	18 ^g	9.50	171.00
	Positive Ranks	0 ^h	.00	.00
	Ties	0 ⁱ		
	Total	18		
Quartile Gap Berry Ratio % - OECD Gap Berry Ratio %	Negative Ranks	18 ^j	9.50	171.00
	Positive Ranks	0 ^k	.00	.00
	Ties	0 ^l		
	Total	18		
Quartile Gap Return on Assets % - OECD Gap Return on Assets %	Negative Ranks	18 ^m	9.50	171.00
	Positive Ranks	0 ⁿ	.00	.00
	Ties	0 ^o		
	Total	18		

- a. Quartile Gap Profit Margin % < OECD Gap Profit Margin %
- b. Quartile Gap Profit Margin % > OECD Gap Profit Margin %
- c. OECD Gap Profit Margin % = Quartile Gap Profit Margin %
- d. Quartile Gap Profit Margin on Sales % < OECD Gap Profit Margin on sales %
- e. Quartile Gap Profit Margin on Sales % > OECD Gap Profit Margin on sales %
- f. OECD Gap Profit Margin on sales % = Quartile Gap Profit Margin on Sales %
- g. Quartile Gap Net Margin % < OECD Gap Net Margin %
- h. Quartile Gap Net Margin % > OECD Gap Net Margin %
- i. OECD Gap Net Margin % = Quartile Gap Net Margin %
- j. Quartile Gap Berry Ratio % < OECD Gap Berry Ratio %
- k. Quartile Gap Berry Ratio % > OECD Gap Berry Ratio %
- l. OECD Gap Berry Ratio % = Quartile Gap Berry Ratio %
- m. Quartile Gap Return on Assets % < OECD Gap Return on Assets %
- n. Quartile Gap Return on Assets % > OECD Gap Return on Assets %
- o. OECD Gap Return on Assets % = Quartile Gap Return on Assets %

Table 3B

Test Statistics^b

	Quartile Gap Profit Margin % - OECD Gap Profit Margin %	Quartile Gap Profit Margin on Sales % - OECD Gap Profit Margin on sales %	Quartile Gap Net Margin % - OECD Gap Net Margin %	Quartile Gap Berry Ratio % - OECD Gap Berry Ratio %	Quartile Gap Return on Assets % - OECD Gap Return on Assets %
Z	-3.724 ^a	-3.724 ^a	-3.724 ^a	-3.724 ^a	-3.724 ^a
Asymp. Sig. (2-tailed)	.000	.000	.000	.000	.000

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

Table 3C

Sign test - Frequencies

		N
Quartile Gap Profit Margin % - OECD Gap Profit Margin %	Negative Differences ^{a, b}	18
	Positive Differences ^{f, g, h}	0
	Ties ^{k, l, m, n, o}	0
	Total	18
Quartile Gap Profit Margin on Sales % - OECD Gap Profit Margin on sales %	Negative Differences ^{a, b}	18
	Positive Differences ^{f, g, h}	0
	Ties ^{k, l, m, n, o}	0
	Total	18
Quartile Gap Net Margin % - OECD Gap Net Margin %	Negative Differences ^{a, b}	18
	Positive Differences ^{f, g, h}	0
	Ties ^{k, l, m, n, o}	0
	Total	18
Quartile Gap Berry Ratio % - OECD Gap Berry Ratio %	Negative Differences ^{a, b}	18
	Positive Differences ^{f, g, h}	0
	Ties ^{k, l, m, n, o}	0
	Total	18
Quartile Gap Return on Assets % - OECD Gap Return on Assets %	Negative Differences ^{a, b}	18
	Positive Differences ^{f, g, h}	0
	Ties ^{k, l, m, n, o}	0
	Total	18

- a. Quartile Gap Profit Margin % < OECD Gap Profit Margin %
- b. Quartile Gap Profit Margin on Sales % < OECD Gap Profit Margin on sales %
- c. Quartile Gap Net Margin % < OECD Gap Net Margin %
- d. Quartile Gap Berry Ratio % < OECD Gap Berry Ratio %
- e. Quartile Gap Return on Assets % < OECD Gap Return on Assets %
- f. Quartile Gap Profit Margin % > OECD Gap Profit Margin %
- g. Quartile Gap Profit Margin on Sales % > OECD Gap Profit Margin on sales %
- h. Quartile Gap Net Margin % > OECD Gap Net Margin %
- i. Quartile Gap Berry Ratio % > OECD Gap Berry Ratio %
- j. Quartile Gap Return on Assets % > OECD Gap Return on Assets %
- k. OECD Gap Profit Margin % = Quartile Gap Profit Margin %
- l. OECD Gap Profit Margin on sales % = Quartile Gap Profit Margin on Sales %
- m. OECD Gap Net Margin % = Quartile Gap Net Margin %
- n. OECD Gap Berry Ratio % = Quartile Gap Berry Ratio %
- o. OECD Gap Return on Assets % = Quartile Gap Return on Assets %

Table 3D

Test Statistics^b

	Quartile Gap Profit Margin % - OECD Gap Profit Margin %	Quartile Gap Profit Margin on Sales % - OECD Gap Profit Margin on sales %	Quartile Gap Net Margin % - OECD Gap Net Margin %	Quartile Gap Berry Ratio % - OECD Gap Berry Ratio %	Quartile Gap Return on Assets % - OECD Gap Return on Assets %
Exact Sig. (2-tailed)	.000 ^a	.000 ^a	.000 ^a	.000 ^a	.000 ^a

a. Binomial distribution used.

b. Sign Test

Table 4A: Wilcoxon Signed Ranks Test (Ex Losses)

Ranks

		N	Mean Rank	Sum of Ranks
Quartile Gap Profit Margin % - OECD Gap Profit Margin %	Negative Ranks	18 ^a	9.50	171.00
	Positive Ranks	0 ^b	.00	.00
	Ties	0 ^c		
	Total	18		
Quartile Gap Profit Margin on Sales % - OECD Gap Profit Margin on sales %	Negative Ranks	18 ^d	9.50	171.00
	Positive Ranks	0 ^e	.00	.00
	Ties	0 ^f		
	Total	18		
Quartile Gap Net Margin % - OECD Gap Net Margin %	Negative Ranks	18 ^g	9.50	171.00
	Positive Ranks	0 ^h	.00	.00
	Ties	0 ⁱ		
	Total	18		
Quartile Gap Berry Ratio % - OECD Gap Berry Ratio %	Negative Ranks	18 ^j	9.50	171.00
	Positive Ranks	0 ^k	.00	.00
	Ties	0 ^l		
	Total	18		
Quartile Gap Return on Assets % - OECD Gap Return on Assets %	Negative Ranks	18 ^m	9.50	171.00
	Positive Ranks	0 ⁿ	.00	.00
	Ties	0 ^o		
	Total	18		

- a. Quartile Gap Profit Margin % < OECD Gap Profit Margin %
- b. Quartile Gap Profit Margin % > OECD Gap Profit Margin %
- c. OECD Gap Profit Margin % = Quartile Gap Profit Margin %
- d. Quartile Gap Profit Margin on Sales % < OECD Gap Profit Margin on sales %
- e. Quartile Gap Profit Margin on Sales % > OECD Gap Profit Margin on sales %
- f. OECD Gap Profit Margin on sales % = Quartile Gap Profit Margin on Sales %
- g. Quartile Gap Net Margin % < OECD Gap Net Margin %
- h. Quartile Gap Net Margin % > OECD Gap Net Margin %
- i. OECD Gap Net Margin % = Quartile Gap Net Margin %
- j. Quartile Gap Berry Ratio % < OECD Gap Berry Ratio %
- k. Quartile Gap Berry Ratio % > OECD Gap Berry Ratio %
- l. OECD Gap Berry Ratio % = Quartile Gap Berry Ratio %
- m. Quartile Gap Return on Assets % < OECD Gap Return on Assets %
- n. Quartile Gap Return on Assets % > OECD Gap Return on Assets %
- o. OECD Gap Return on Assets % = Quartile Gap Return on Assets %

Table: 4B**Test Statistics^b**

	Quartile Gap Profit Margin % - OECD Gap Profit Margin %	Quartile Gap Profit Margin on Sales % - OECD Gap Profit Margin on sales %	Quartile Gap Net Margin % - OECD Gap Net Margin %	Quartile Gap Berry Ratio % - OECD Gap Berry Ratio %	Quartile Gap Return on Assets % - OECD Gap Return on Assets %
Z	-3.724 ^a	-3.724 ^a	-3.724 ^a	-3.724 ^a	-3.724 ^a
Asymp. Sig. (2-tailed)	.000	.000	.000	.000	.000

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

Table 4C

Sign Test - Frequencies

		N
Quartile Gap Profit Margin % - OECD Gap Profit Margin %	Negative Differences ^a	18
	Positive Differences ^{f,g}	0
	Ties ^{k,l,m,n,o}	0
	Total	18
Quartile Gap Profit Margin on Sales % - OECD Gap Profit Margin on sales %	Negative Differences ^a	18
	Positive Differences ^{f,g}	0
	Ties ^{k,l,m,n,o}	0
	Total	18
Quartile Gap Net Margin % - OECD Gap Net Margin %	Negative Differences ^a	18
	Positive Differences ^{f,g}	0
	Ties ^{k,l,m,n,o}	0
	Total	18
Quartile Gap Berry Ratio % - OECD Gap Berry Ratio %	Negative Differences ^a	18
	Positive Differences ^{f,g}	0
	Ties ^{k,l,m,n,o}	0
	Total	18
Quartile Gap Return on Assets % - OECD Gap Return on Assets %	Negative Differences ^a	18
	Positive Differences ^{f,g}	0
	Ties ^{k,l,m,n,o}	0
	Total	18

- a. Quartile Gap Profit Margin % < OECD Gap Profit Margin %
- b. Quartile Gap Profit Margin on Sales % < OECD Gap Profit Margin on sales %
- c. Quartile Gap Net Margin % < OECD Gap Net Margin %
- d. Quartile Gap Berry Ratio % < OECD Gap Berry Ratio %
- e. Quartile Gap Return on Assets % < OECD Gap Return on Assets %
- f. Quartile Gap Profit Margin % > OECD Gap Profit Margin %
- g. Quartile Gap Profit Margin on Sales % > OECD Gap Profit Margin on sales %
- h. Quartile Gap Net Margin % > OECD Gap Net Margin %
- i. Quartile Gap Berry Ratio % > OECD Gap Berry Ratio %
- j. Quartile Gap Return on Assets % > OECD Gap Return on Assets %
- k. OECD Gap Profit Margin % = Quartile Gap Profit Margin %
- l. OECD Gap Profit Margin on sales % = Quartile Gap Profit Margin on Sales %
- m. OECD Gap Net Margin % = Quartile Gap Net Margin %
- n. OECD Gap Berry Ratio % = Quartile Gap Berry Ratio %
- o. OECD Gap Return on Assets % = Quartile Gap Return on Assets %

Table 4D

Test Statistics^b

	Quartile Gap Profit Margin % - OECD Gap Profit Margin %	Quartile Gap Profit Margin on Sales % - OECD Gap Profit Margin on sales %	Quartile Gap Net Margin % - OECD Gap Net Margin %	Quartile Gap Berry Ratio % - OECD Gap Berry Ratio %	Quartile Gap Return on Assets % - OECD Gap Return on Assets %
Exact Sig. (2-tailed)	.000 ^a	.000 ^a	.000 ^a	.000 ^a	.000 ^a

a. Binomial distribution used.

b. Sign Test

Table 5 : Comparables set for SIC 2416 - Manufacture of plastic in primary forms

Group	Turnover Avg. (00-98) GBP	Operating Profit Avg. (00-98) GBP	Cost of sales Avg. (00-98) GBP	Profit Margin Avg. (00-98) (%)	Profit Margin on Sales (%)	Net margin Operating margin (%)	Berry ratio Avg. (00-98) (%)	Return on Assets Avg. (00-98) (%)
VITA THERMOPLASTIC COMPOUND	68,488,000	2,666,000	58,115,667	3.75	3.89	4.05	17.85	6.81
VITAFOAM LIMITED	84,819,333	7,370,667	61,587,667	8.59	8.69	9.52	37.72	19.9
CRAY VALLEY LIMITED	79,338,667	8,384,000	61,113,000	11.11	10.57	11.82	29.82	14.79
RECTICEL LIMITED	58,095,333	583,333	47,678,333	1.42	1	1.01	21.85	2.23
VICTREX MANUFACTURING LIMITE	41,473,000	13,267,000	23,524,667	31.03	31.99	47.04	76.3	25.62
ROHM AND HAAS (SCOTLAND) LIMI	52,786,667	2,628,000	49,673,000	3.49	4.98	5.24	6.27	4.5
EMTELLE UK LIMITED	29,301,667	2,089,667	22,518,667	6.82	7.13	7.68	30.12	10.2
KAY-METZELER LIMITED	41,463,667	4,977,000	27,325,000	12.19	12	13.64	51.74	31.7
VITA THERMOPLASTIC SHEET LIMI	32,166,667	2,446,000	24,812,333	6.86	7.6	8.23	29.64	12.31
STRUCTURAL POLYMER SYSTEMS L	31,302,667	3,190,333	22,707,333	10.94	10.19	11.35	37.85	20.51
BERNARD WARDLE AND COMPANY	38,763,333	3,408,667		8.7	8.79	9.64		20.7
DISTRUPOL LIMITED	51,672,333	3,335,667	42,725,000	6.47	6.46	6.9	20.94	17.05
MAINETTI (UK) LIMITED	32,591,667	1,035,333	24,094,000	1.71	3.18	3.28	35.27	1.81
CALIGEN FOAM LIMITED	32,749,333	2,244,000	24,574,667	6.71	6.85	7.36	33.27	15.23
HYPERLAST LIMITED	24,430,667	3,274,000	16,900,333	12.51	13.4	15.48	44.56	27.37
RESINOUS CHEMICALS LIMITED	21,600,000	1,680,333	16,689,667	8.54	7.78	8.44	29.42	11.98
PLASCOAT U.K. LIMITED	21,694,000	1,693,667	16,531,333	5.38	7.81	8.47	31.23	1.84
TERRAM LIMITED	18,827,000	973,000	13,873,333	5.94	5.17	5.45	35.71	5.4
SENIOR FLEXONICS LIMITED	16,895,667	261,667	13,511,667	1.29	1.55	1.57	25.05	2.72
FENESEAL LIMITED	19,196,667	362,000	14,327,333	0.93	1.89	1.92	33.99	1.61
AMBERSIL LIMITED	13,578,333	1,032,000		14.24	7.6	8.23		17.59
STOREYS INDUSTRIAL PRODUCTS L	15,669,667	534,667		3.25	3.41	3.53		2.49
VITA INDUSTRIAL POLYMERS LIMIT	13,757,667	470,667		2.46	3.42	3.54	25.02	4.94
KINGSPAN INDUSTRIAL INSULATIO	12,015,667	847,000	8,124,667	5.05	7.05	7.58	47.9	5.74
VITA LIQUID POLYMERS LIMITED	12,229,667	1,095,333	9,456,333	8.81	8.96	9.84	29.33	24.27
HILLS HI-SPEED PLATES LIMITED	9,827,871	543,475	7,402,095	4.51	5.53	5.85	32.78	7.49
PVC COMPOUNDS LIMITED	12,491,667	462,000	11,008,667	2.79	3.7	3.84	13.47	3.91
W & J TOD LIMITED	9,713,000	614,333	7,784,000	3.55	6.32	6.75	24.78	5.41
HALLITE SEALS INTERNATIONAL L	10,201,667	800,667	7,087,667	18.83	7.85	8.52	43.94	15.6
AEI COMPOUNDS LIMITED	9,822,333	887,333	7,813,000	8.51	9.03	9.93	25.72	22.13
S.DUGDALE SON & CO.LIMITED	9,649,811	599,979		7.65	6.22	6.63		11.21
SOVEREIGN RUBBER LIMITED	7,530,796	1,618,044	4,428,672	18.99	21.49	27.37	70.05	22.56
TEX INDUSTRIAL PLASTICS LIMITE	6,260,497	576,024	5,074,121	7.02	9.2	10.13	23.38	9.15
POLYCON PACKAGING LIMITED	7,739,787	587,672	5,861,615	6.72	7.59	8.22	32.04	25.76

Table 5 : Comparables set for SIC 2416 - Manufacture of plastic in primary forms (cont.)

Group	Turnover Avg. (00-98) GBP	Operating Profit Avg. (00-98) GBP	Cost of sales Avg. (00-98) GBP	Profit Margin Avg. (00-98) (%)	Profit Margin on Sales (%)	Net margin Operating margin (%)	Berry ratio Avg. (00-98) (%)	Return on Assets Avg. (00-98) (%)
CTP WHITE KNIGHT LIMITED	7,479,565	102,483	188,771	0.69	1.37	1.39	3,821.66	1.4
VITAMOL LIMITED	8,271,180	358,301	6,917,537	4.44	4.33	4.53	19.57	7.67
HIS LIMITED	8,145,117	317,457	4,001,926	3.14	3.9	4.06	77.55	6.19
INEOS ACRYLICS NEWTON AYCLIFF	6,444,434	1,136,058	4,167,707	19.8	17.63	21.4	54.63	12.45
CELSUR PLASTICS LIMITED	5,947,419	153,290	4,026,972	3.76	2.58	2.65	47.69	7.28
CONDAL PLASTICS LIMITED	6,146,756	276,995	4,325,014	4.79	4.51	4.72	42.12	6.85
ATLANTIC PLASTICS LIMITED	8,718,803	1,454,058	5,233,818	-11.2	16.68	20.02	66.58	-14.87
EAGLEY PLASTICS LIMITED	4,181,229	85,723	3,570,204	2.03	2.05	2.09	17.11	2.35
SILICONE-ALTIMEX LIMITED	3,795,465	365,140	2,813,449	7.72	9.62	10.64	34.9	7.46
SHIN-ETSU HANDOTAI EUROPE LIM	104,953,333	605,333	95,584,000	-7.92	0.58	0.58	9.8	-3.08
ZEON CHEMICALS EUROPE LIMITED	24,846,667	366,333	20,662,667	1.86	1.47	1.5	20.25	1.92
ASAHI THERMOFIL (UK) LTD.	22,156,667	1,168,667	17,673,000	4.48	5.27	5.57	25.37	6.13
REICHHOLD UK LIMITED	20,665,000	1,567,333	16,173,000	6.61	7.58	8.21	27.77	9.08
EXXONMOBIL CHEMICAL LIMITED	478,759,000	73,385,333	383,428,333	15.57	15.33	18.1	24.86	24.21
CONSTAR INTERNATIONAL U.K. LIM	50,826,000	269,667	43,801,000	0.75	0.53	0.53	17.39	1.28
DOW CORNING STI LIMITED	22,654,000	3,077,667	17,002,333	11.99	13.59	15.72	33.24	31.95
ULTRAMARK ADHESIVE PRODUCTS	13,435,333	1,624,333	10,130,667	11.59	12.09	13.75	32.62	17.1
OECD:								
Lower Range:				-11.2	0.53	0.53	6.27	-14.87
Upper Range:				31.03	31.99	47.04	3,821.66	31.95
IRS:								
Median:				6.47	7.05	7.58	31.23	7.67
Lower Quartile:				3.2	3.8	3.95	24.82	4.21
Upper Quartile:				8.75	9.12	10.03	39.99	17.35
Profit Margin (%)								
Profit Margin on Sales (%)								
Net margin (%)								
Berry ratio (%)								
Return on Assets (%)								

Table 6: 52 Japanese-owned companies individually matched with 52 domestic UK companies based on growth

Origin	SIC	Group	Turnover Avg. (00-98) GBP	Operating Profit Avg. (00-98) GBP	Cost of sales Avg. (00-98) GBP	Profit Margin Avg. (00-98) (%)	Profit Margin on Sales (%) Avg. (00-98)	Net margin Operating margin (%) Avg. (00-98)	Berry ratio Avg. (00-98) (%)	Return on Assets Avg. (00-98) (%)
UK	2416	RAYBURN PLASTICS LIMITED	1,916,315	-87,260	1,473,800	-9.56	-4.55	-4.36	30.03	-11.26
UK	2466	ALBION CHEMICALS LIMITED	157,776,000	16,410,000		10.42	10.40	11.61		12.66
UK	2466	CRODA CHEMICALS INTERNATIONAL LIMITED	140,384,333	8,335,333		3.40	5.94	6.31		3.21
UK	2466	SANODA LIMITED	25,387,333	-1,084,000	21,285,000	-9.04	-4.27	-4.09	19.27	-9.34
UK	2875	HILL & SMITH LIMITED	12,797,000	1,153,333	8,574,333	8.73	9.01	9.90	49.25	9.47
UK	2875	BROWN MCFARLANE LIMITED	13,856,333	-141,667	11,484,667	-1.69	-1.02	-1.01	20.65	-3.16
UK	3002	NORTHGATE INFORMATION SOLUTIONS UK LIMITED	102,204,667	-6,776,000		-3.98	-6.63	-6.22		-10.08
UK	3002	VIGLEN LIMITED	86,170,000	2,547,000		4.94	2.96	3.05		12.20
UK	3002	COMPUTER REPAIR CENTRE LIMITED	12,691,667	-81,667	10,356,667	-1.86	-0.64	-0.64	22.54	0.41
UK	3002	KENT MODULAR ELECTRONICS LIMITED	5,739,153	1,60539	4,803,736	3.35	2.80	2.88	19.47	7.12
UK	3002	METRODATA LIMITED	3,504,602	189964	809,169	3.90	5.42	5.73	333.11	11.16
UK	3162	DYSON LIMITED	190,186,000	24503000	114,357,000	13.48	12.88	14.79	66.31	24.01
UK	3162	SANKEY LAMINATIONS LIMITED	31,219,000	2221333	24,751,667	7.99	7.12	7.66	26.13	8.98
UK	3162	MARCONI COMMAND AND CONTROL INTERNATIONAL	13,923,667	3260333		4.79	23.42	20.38		5.64
UK	3162	INVOTEC CIRCUITS TAMWORTH LIMITED	20,469,000	904,000	15,956,000	11.57	4.42	4.62	28.29	8.51
UK	3162	TRL TECHNOLOGY LIMITED	10,018,110	1,100,191	6,258,162	10.70	10.98	12.34	60.08	17.57
UK	3162	WELWYN LIGHTING DESIGNS LIMITED	9,059,667	1,376,000	4,915,333	16.97	15.19	17.91	84.31	25.96
UK	3162	CHLORIDE SAFETY SYSTEMS LIMITED	7,875,667	290,667	5,688,000	2.29	3.69	3.83	38.46	3.40
UK	3210	LINTON AND HIRST LIMITED	19,625,333	-24,333	17,200,000	-2.36	-0.12	-0.12	14.1	-2.69
UK	3210	GREENBROOK ELECTRICAL PLC	14,904,667	173,667	11,669,333	-0.23	1.17	1.18	27.73	-0.21
UK	3210	ZLIN ELECTRONICS LIMITED	8,645,667	2,493,000	3,452,000	29.82	28.84	40.52	118.68	42.84
UK	3210	DYNAMIC EUROPE LIMITED	7,481,690	1,206,891	5,353,834	17.06	16.13	19.23	39.74	46.39
UK	3210	MMG NEOSID LIMITED	6,109,333	13,333	4,758,333	-2.10	0.22	0.22	28.39	-1.66
UK	3210	AB ELECTRONIC LIMITED	6,075,000	-99,000	5,216,667	-4.34	-1.63	-1.6	16.45	-4.63
UK	3210	HARWIN COMPONENTS LIMITED	3,948,137	105,953	2,878,704	1.44	2.68	2.76	37.15	5.23
UK	3210	BULGIN POWER SOURCE PLC	2,496,417	-75,447	1,612,256	-4.28	-3.02	-2.93	54.84	-8.16

Table 6: 52 Japanese-owned companies individually matched with 52 domestic UK companies based on growth (cont.)

Origin	SIC	Group	Turnover Avg. (00-98) GBP	Operating Profit Avg. (00-98) GBP	Cost of sales Avg. (00-98) GBP	Profit Margin Avg. (00-98) (%)	Profit Margin on Sales (%)Avg. (00-98)	Net margin Operating margin (%)Avg. (00-98)	Berry ratio Avg. (00-98) (%)	Return on Assets Avg. (00-98) (%)
UK	3220	TEKDATA LIMITED	11,646,333	782,667	9,282,333	6.37	6.72	7.2	25.47	14.34
UK	3220	RADIATRON COMPONENTS LIMITED	9,851,667	1,589,000	5,381,500	16.45	16.13	19.23	72.26	39.63
UK	3230	ALBA RADIO LIMITED	51,398,000	-1,295,667	46,099,000	1.6	-2.52	-2.46	11.49	3.36
UK	3230	GOODMANS LOUDSPEAKERS LIMITED	22,514,000	108,000	19,258,000	-0.28	0.48	0.48	16.91	-1.46
UK	3320	OXFORD INSTRUMENTS SUPERCONDUCTIVITY	42,732,667	-4,277,000	37,381,667	-12.66	-10.01	-9.1	14.31	-10.15
UK	3320	EUROTHERM PROCESS AUTOMATION LIMITED	12,534,000	572,000	9,121,667	4.65	4.56	4.78	37.41	12.73
UK	3410	EAGLE SPECIALIST VEHICLES LIMITED	5,033,563	131,775	4,437,593	2.60	2.62	2.69	13.43	14.44
UK	3410	DPS COMPOSITES LIMITED	3,789,811	112,816	2,838,105	2.97	2.98	3.07	33.53	6.16
UK	5142	RAJAN TRADING (INTERNATIONAL) LIMITED	11,993,000	-1,076,333	10,773,667	-5.43	-8.97	-8.24	11.32	-7.58
UK	5142	3D SPORTS LIMITED	1,354,537	-35,306	909,983	-1.36	-2.61	-2.54	48.85	-3.36
UK	5142	E. C. MOORE (LEICESTER) LIMITED	993,922	11,074		1.3	1.11	1.13		1.7
UK	5143	GOODMANS INDUSTRIES LIMITED	31,156,667	1,000,000	28,602,667	3.05	3.21	3.32	8.93	14.26
UK	5143	HARDMAN ISHERWOOD LIMITED	34,984,333	1,146,000	32,190,000	1.99	3.28	3.39	8.68	3.18
UK	5143	FRIGIDAIRE CONSOLIDATED LIMITED	15,719,000	-298,333	14,503,000	-2.12	-1.9	-1.86	8.38	-6.73
UK	5143	CASTLE MICROWAVE LIMITED	6,062,154	130,528	5,028,564	2.65	2.15	2.2	20.55	7.48
UK	5143	CLEARLIGHT ELECTRICAL COMPANY LIMITED	7,313,176	124,200		0.95	1.7	1.73		2.58
UK	5143	A & M ELECTRONICS LIMITED	2,674,471	-1,741	2,227,388	2.37	-0.07	-0.07	20.07	10.52
UK	5143	LENBROOK U.K. LIMITED	2,187,894	93,907	1,580,316	3.97	4.29	4.48	38.45	7.25
UK	5143	ROADSTAR UK LIMITED	2,524,823	103,096	2,210,392	3.8	4.08	4.26	14.23	15.3
UK	5143	LIONEL ROBINSON & CO LIMITED	2,933,090	7,125	2,318,318	2.18	0.24	0.24	26.52	3.8
UK	5143	WESLEC LIMITED	2,554,199	-59,237	1,829,706	-1.99	-2.32	-2.27	39.6	-4.3
UK	5146	SANTS PHARMACEUTICAL DISTRIBUTORS LIMITED	30,548,667	252,667	28,473,333	0.29	0.83	0.83	7.29	1.34
UK	5155	SURFACHEM LIMITED	22,093,333	1,025,667	18,037,667	5.15	4.64	4.87	22.49	10.49
UK	5155	BIACHEM LIMITED	6,535,502	248,132	5,617,186	3.4	3.8	3.95	16.35	11.3
UK	5164	BLICK U.K. LIMITED	35,943,667	7,016,667	18,450,000	23.76	19.52	24.26	94.82	18.41
UK	5164	ALGER BROWNLESS & COURT (LONDON) LTD	3,866,691	- 186,131	2,439,599	- 4.29	- 4.81	- 4.59	58.50	0.56

Table 6: 52 Japanese-owned companies individually matched with 52 domestic UK companies based on growth (cont.)

SIC	Group	Turnover Avg. (00-98) GBP	Operating Profit Avg. (00-98) GBP	Cost of sales Avg. (00-98) GBP	Profit Margin Avg. (00-98) (%)	Profit Margin on Sales (%) Avg. (00-98)	Net margin Operating margin (%) Avg. (00-98)	Berry ratio Avg. (00-98) (%)	Return on Assets Avg. (00-98) (%)
2416	ZEON CHEMICALS EUROPE LIMITED	24,846,667	366,333	20,662,667	1.86	1.47	1.5	20.25	1.92
2466	D.I.C. (UK) LIMITED	9,198,585	55,364	7,817,024	0.66	0.60	0.61	17.67	1.36
2466	TAMURA KAKEN (UK) LTD	5,974,648	121,498	4,889,495	-4.48	2.03	2.08	22.19	-5.22
2466	F2 CHEMICALS LIMITED	2,477,667	-1,325,667		-61.22	-53.50	-34.86		-18.17
2875	NSG UK SERVICES LIMITED	12,911,667	-665,000		-9.59	-5.15	-4.9		-10.98
2875	SHARP PRECISION MANUFACTURING (U.K.) LIMITED	8,460,589	68,794	8,042,495	0.76	0.81	0.82	5.2	1.09
3002	EPSON TELFORD LIMITED	279,396,333	8,085,667	261,299,333	1.25	2.89	2.98	6.93	3.26
3002	CASIO ELECTRONICS CO. LIMITED	54,961,667	-151,000	40,894,333	-0.40	-0.27	-0.27	34.4	-1.12
3002	YASKAWA ELECTRIC UK LIMITED	20,463,333	474,000		-0.39	2.32	2.37		-0.17
3002	TDK SYSTEMS EUROPE LIMITED	10,444,662	305,316	6,767,581	2.82	2.92	3.01	54.33	5.74
3002	FUJITSU PERSONAL SYSTEMS (U.K.) LIMITED	686,448	87,283		12.20	12.72	14.57		19.09
3162	YUASA AUTOMOTIVE BATTERIES (EUROPE) LIMITED	29,767,000	-4,371,333		-17.86	-14.69	-12.8		-13.91
3162	MATSUSHITA ELECTRONIC MAGNETRON CORPOR	18,181,333	109,000	16,501,000	1.43	0.60	0.6	10.18	3.05
3162	SMK (U.K.) LIMITED	15,073,333	405,667	13,766,667	2.69	2.69	2.77	9.49	4.93
3162	TABUCHI ELECTRIC U.K. LTD.	17,126,667	-102,667	15,806,667	-0.32	-0.60	-0.6	8.35	-1.01
3162	JAE EUROPE, LIMITED	8,361,746	-131,449	7,203,924	-0.79	-1.57	-1.55	16.07	-0.94
3162	ITRON (U.K.) LIMITED	5,739,483	977,769	4,004,809	17.77	17.04	20.53	43.31	34.79
3162	TAIKO ELECTRONICS (UK) LIMITED	1,597,041	-19,111	955,842	0.31	-1.20	-1.18	67.08	0.73
3210	SANKEN POWER SYSTEMS (UK) LIMITED	18,398,333	-1,788,333	18,081,667	-13.83	-9.72	-8.86	1.75	-13.43
3210	TOKO(U.K.) LIMITED	12,842,333	1,365,667	10,618,333	12.65	10.63	11.9	20.94	17.91
3210	FUJI ELECTRIC (SCOTLAND) LIMITED	13137000	397000	11286333	0.99	3.02	3.12	16.4	1.71
3210	J.S.T. (U.K.) LIMITED	11235667	2319000	6675333	25.51	20.64	26.01	68.31	16.97
3210	SAMTEC (EUROPE) LIMITED	6599333	2270333	3328667	38.17	34.40	52.44	98.26	51.72
3210	MATSUSHITA INDUSTRIAL EQUIPMENT CO.(U.K.)	9830000	-445000	9103000	-5.56	-4.53	-4.33	7.99	-12.38
3210	ELECTRONIC HARNESES (U.K.) LIMITED	7428413	-145125	6850623	-0.97	-1.95	-1.92	8.43	-1.38
3210	GOULD ELECTRONICS LIMITED	354000	98000	71333	32.34	27.68	38.28	396.26	-13.44
3220	HOSIDEN BESSON LIMITED	32,007,000	268,667	29,136,667	0.19	0.84	0.85	9.85	0.33
3220	CLARION (G.B.) LTD	34,675,667	1,108,000	29,309,333	2.52	3.2	3.3	18.31	7.11

Table 6: 52 Japanese-owned companies individually matched with 52 domestic UK companies based on growth (cont.)

Origin	SIC	Group	Turnover Avg. (00-98) GBP	Operating Profit Avg. (00-98) GBP	Cost of sales Avg. (00-98) GBP	Profit Margin Avg. (00-98) (%)	Profit Margin on Sales (%)Avg. (00-98)	Net margin Operating margin (%)Avg. (00-98)	Berry ratio Avg. (00-98) (%)	Return on Assets Avg. (00-98) (%)
Japan	3230	JVC MANUFACTURING U.K. LIMITED	93,744,000	-567,667	87,392,000	-1.57	-0.61	-0.6	7.27	-5.61
Japan	3230	B.B.M. ELECTRONICS GROUP LIMITED	3,307,504	78,182	1,857,744	-0.22	2.36	2.42	78.04	2.77
Japan	3320	HORIBA INSTRUMENTS LIMITED	13,262,000	541,667	10,152,667	1.76	4.08	4.26	30.63	2.51
Japan	3320	NORDIKO LIMITED	11,992,667	-4,175,667	13,157,333	-49.76	-34.82	-25.83	-7.28	-54.86
Japan	3410	TOYOTA MOTOR MANUFACTURING (UK) LIMITED	1,298,110,667	-27,051,667	1,298,430,667	-4.40	-2.08	-2.04	-0.02	-7.16
Japan	3410	HASHIMOTO LIMITED	26,207,667	799,000	22,090,000	1.46	3.05	3.14	18.64	1.85
Japan	5142	YONEX U.K. LIMITED	4,473,518	114,109	2,830,251	3.79	2.55	2.62	58.06	3.16
Japan	5142	KENT & CURWEN LIMITED	2,421,774	90,108	1,268,222	-3.03	3.72	3.86	90.96	-2.99
Japan	5142	ONWARD KASHIYAMA U.K. LIMITED	1,689,769	-515,532	1,193,852	9.53	-30.51	-23.38	41.54	3.55
Japan	5143	TEAC UK LIMITED	55,448,667	-22,000	51,332,333	0.61	-0.04	-0.04	8.02	1.17
Japan	5143	ALPINE ELECTRONICS OF U.K. LIMITED	35,131,000	1,133,000	29,520,000	3.06	3.23	3.33	19.01	6.64
Japan	5143	HAYDEN LABORATORIES LIMITED	22,565,667	943,333	16,300,000	3.66	4.18	4.36	38.44	11.46
Japan	5143	SHINDENGEN UK LIMITED	15,171,000	-106,000	14,085,667	0.47	-0.7	-0.69	7.7	0.98
Japan	5143	YAMAHA ELECTRONICS (UK) LIMITED	9,082,999	256,343	7,652,614	2.66	2.82	2.9	18.7	8.41
Japan	5143	HIROSE ELECTRIC UK LTD	8,627,695	1,115,595	6,329,267	15.34	12.93	14.85	36.31	20.47
Japan	5143	JANOME UK LIMITED	7,096,509	58,176	5,333,307	0.45	0.82	0.83	33.06	0.8
Japan	5143	MERLIN AERIALS LIMITED	3,796,861	178,969	3,085,029	4.28	4.71	4.95	23.07	9.38
Japan	5143	HITACHI DENSHI (U.K.) LIMITED	2,740,545	-262,561	1,977,128	-4.49	-9.58	-8.74	38.61	-3.52
Japan	5143	MISUMI EUROPE LIMITED	1,723,143	17,790	1,206,674	1.43	1.03	1.04	42.8	3.52
Japan	5146	FUJISAWA LIMITED	16,549,000	1,973,667	11,670,667	11.7	11.93	13.54	41.8	24.66
Japan	5155	PROFARMA LIMITED	43,929,333	82,667		-0.36	0.19	0.19		-2.09
Japan	5155	IDEMITSU CHEMICALS EUROPE PLC	9,344,187	189,530	8,392,225	3.07	2.03	2.07	11.34	8.63
Japan	5164	EPSON (U.K.) LIMITED	316,095,667	7,397,000	262,568,667	2.37	2.34	2.40	20.39	8.30
Japan	5164	MITA COPYSTAR (UK) LIMITED	6,711,287	108,185	4,880,738	0.57	1.61	1.64	37.51	1.80

Table 7A: Descriptives SIC 2416

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	51	-11.20	31.03	6.8012	6.7171
Profit Margin on Sales % (3 yrs avg)	51	.53	31.99	7.5961	5.7598
Net Margin % (Operating Margin 3 yrs avg)	51	.53	47.04	8.6963	7.8515
Berry Ratio % (3yrs avg)	47	6.27	3821.66	114.2579	552.7629
Return on Assets % (3 yrs avg)	51	-14.87	31.95	10.9392	9.6526
Valid N (listwise)	47				

Table 7B:

Correlations - 2416

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.743			
	N	51			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.738	.991		
	N	51	51		
Berry Ratio % (3yrs avg)	Pearson Correlation	-.117	-.140	-.118	
	N	47	47	47	
Return on Assets % (3 yrs avg)	Pearson Correlation	.774	.563	.522	-.135
	N	51	51	51	47

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 8A: Descriptives SIC 2466

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	42	-25.03	21.20	5.7798	7.7782
Profit Margin on Sales % (3 yrs avg)	42	.60	18.03	6.2898	4.5055
Net Margin % (Operating Margin 3 yrs avg)	42	.61	21.99	7.0352	5.2760
Berry Ratio % (3yrs avg)	29	13.55	134.93	47.5766	29.8493
Return on Assets % (3 yrs avg)	42	-19.26	99.20	12.3800	21.0301
Valid N (listwise)	29				

Table 8B:

Correlations - 2466

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.638			
	N	42			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.632	.995		
	N	42	42		
Berry Ratio % (3yrs avg)	Pearson Correlation	.072	.418	.429	
	N	29	29	29	
Return on Assets % (3 yrs avg)	Pearson Correlation	.498	.085	.083	-.177
	N	42	42	42	29

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 9A: Descriptives SIC 2524

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	44	-7.21	26.46	7.1407	7.1852
Profit Margin on Sales % (3 yrs avg)	44	.34	27.17	8.0952	6.1962
Net Margin % (Operating Margin 3 yrs avg)	44	.34	37.31	9.3452	8.1779
Berry Ratio % (3yrs avg)	39	8.70	140.30	46.3828	31.6358
Return on Assets % (3 yrs avg)	44	-4.43	35.37	9.8473	8.4543
Valid N (listwise)	39				

Table 9B:

Correlations - 2524

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.941			
	N	44			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.930	.995		
	N	44	44		
Berry Ratio % (3yrs avg)	Pearson Correlation	.621	.639	.625	
	N	39	39	39	
Return on Assets % (3 yrs avg)	Pearson Correlation	.863	.772	.738	.600
	N	44	44	44	39

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 10A: Descriptives SIC 2862

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	23	-2.54	18.82	6.0822	5.6062
Profit Margin on Sales % (3 yrs avg)	24	.09	89.04	9.0938	17.6904
Net Margin % (Operating Margin 3 yrs avg)	24	.09	812.28	39.8238	164.6289
Berry Ratio % (3yrs avg)	16	11.82	136.43	49.5238	28.9490
Return on Assets % (3 yrs avg)	24	-2.29	31.88	8.3179	8.0567
Valid N (listwise)	16				

Table 10B:

Correlations - 2862

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.814			
	N	23			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.812	.971		
	N	23	24		
Berry Ratio % (3yrs avg)	Pearson Correlation	.014	.128	.112	
	N	16	16	16	
Return on Assets % (3 yrs avg)	Pearson Correlation	.727	.084	-.079	.380
	N	23	24	24	16

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 11A: Descriptives SIC 2875

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	72	-12.10	27.92	7.3243	7.1826
Profit Margin on Sales % (3 yrs avg)	72	.50	42.02	7.8561	7.1156
Net Margin % (Operating Margin 3 yrs avg)	72	.51	72.49	9.3214	10.6446
Berry Ratio % (3yrs avg)	63	-.61	164.57	36.7795	28.3746
Return on Assets % (3 yrs avg)	72	-20.73	45.30	11.4275	10.6389
Valid N (listwise)	63				

Table 11B:

Correlations-2875

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.898			
	N	72			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.842	.982		
	N	72	72		
Berry Ratio % (3yrs avg)	Pearson Correlation	.718	.775	.785	
	N	63	63	63	
Return on Assets % (3 yrs avg)	Pearson Correlation	.626	.398	.249	.128
	N	72	72	72	63

Correlation significant from +1 at 0.01 (One-tailed)

Correlation significant from +1 at 0.05 (One-tailed)

Table 12A: Descriptives SIC 3002

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	39	-6.80	21.77	6.5338	5.1250
Profit Margin on Sales % (3 yrs avg)	39	.14	31.85	8.9333	7.2191
Net Margin % (Operating Margin 3 yrs avg)	39	.14	46.74	10.5726	9.9448
Berry Ratio % (3yrs avg)	29	6.93	333.11	63.3045	76.1055
Return on Assets % (3 yrs avg)	39	-37.24	78.78	15.2000	17.8883
Valid N (listwise)	29				

Table 12B:

Correlations - 3002

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.582			
	N	39			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.509	.994		
	N	39	39		
Berry Ratio % (3yrs avg)	Pearson Correlation	.114	.464	.479	
	N	29	29	29	
Return on Assets % (3 yrs avg)	Pearson Correlation	.771	.367	.317	.053
	N	39	39	39	29

Correlation significant from +1 at 0.01 (One-tailed)

Correlation significant from +1 at 0.05 (One-tailed)

Table 13A: Descriptives SIC 3162

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	75	-4.89	43.56	10.2341	8.6479
Profit Margin on Sales % (3 yrs avg)	75	.14	43.03	10.3759	8.2027
Net Margin % (Operating Margin 3 yrs avg)	75	.15	75.52	12.5855	12.2539
Berry Ratio % (3yrs avg)	69	3.39	218.61	51.8013	40.6737
Return on Assets % (3 yrs avg)	75	-29.18	65.20	14.1977	13.3160
Valid N (listwise)	69				

Table 13B:

Correlations - 3162

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.934			
	N	75			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.938	.977		
	N	75	75		
Berry Ratio % (3yrs avg)	Pearson Correlation	.373	.419	.394	
	N	69	69	69	
Return on Assets % (3 yrs avg)	Pearson Correlation	.707	.657	.626	.252
	N	75	75	75	69

Correlation significant from +1 at 0.01 (One-tailed)

Correlation significant from +1 at 0.05 (One-tailed)

Table 14A: Descriptives SIC 3210

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	51	-3.01	42.74	9.8575	11.0648
Profit Margin on Sales % (3 yrs avg)	51	.22	41.05	9.2580	9.4401
Net Margin % (Operating Margin 3 yrs avg)	51	.22	69.64	11.6563	14.4011
Berry Ratio % (3yrs avg)	44	2.06	396.26	44.5155	59.3625
Return on Assets % (3 yrs avg)	51	-13.44	51.72	12.8922	13.6206
Valid N (listwise)	44				

Table 14B:

Correlations - 3210

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.877			
	N	51			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.874	.989		
	N	51	51		
Berry Ratio % (3yrs avg)	Pearson Correlation	.608	.590	.600	
	N	44	44	44	
Return on Assets % (3 yrs avg)	Pearson Correlation	.677	.598	.562	-.043
	N	51	51	51	44

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 15A: Descriptives SIC 3220

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	31	-3.24	36.30	8.7406	8.8021
Profit Margin on Sales % (3 yrs avg)	31	.55	48.45	9.6823	10.4081
Net Margin % (Operating Margin 3 yrs avg)	31	.55	93.97	12.7303	18.4546
Berry Ratio % (3yrs avg)	26	9.85	1145.05	94.1769	217.9906
Return on Assets % (3 yrs avg)	31	-2.32	41.72	12.6606	10.9973
Valid N (listwise)	26				

Table 15B:

Correlations - 3220

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.931			
	N	31			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.852	.977		
	N	31	31		
Berry Ratio % (3yrs avg)	Pearson Correlation	.329	.259	.192	
	N	26	26	26	
Return on Assets % (3 yrs avg)	Pearson Correlation	.749	.559	.406	.218
	N	31	31	31	26

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 16A: Descriptives SIC 3230

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	15	-1.47	14.41	3.9400	4.8637
Profit Margin on Sales % (3 yrs avg)	15	.33	11.98	4.5747	3.9089
Net Margin % (Operating Margin 3 yrs avg)	15	.33	13.61	4.9647	4.4417
Berry Ratio % (3yrs avg)	15	4.06	139.21	52.3127	42.0358
Return on Assets % (3 yrs avg)	15	-3.63	27.97	7.4807	8.7374
Valid N (listwise)	15				

Table 16B:

Correlations - 3230

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.948			
	N	15			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.949	.999		
	N	15	15		
Berry Ratio % (3yrs avg)	Pearson Correlation	.435	.491	.502	
	N	15	15	15	
Return on Assets % (3 yrs avg)	Pearson Correlation	.929	.918	.917	.523
	N	15	15	15	15

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 17A: Descriptives 3320

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	58	-1.09	43.79	9.7034	8.8866
Profit Margin on Sales % (3 yrs avg)	58	.03	32.52	8.9193	6.8117
Net Margin % (Operating Margin 3 yrs avg)	58	.03	48.20	10.4876	9.5214
Berry Ratio % (3yrs avg)	51	14.04	317.15	62.1065	45.3165
Return on Assets % (3 yrs avg)	58	-268.16	71.37	9.4309	39.8545
Valid N (listwise)	51				

Table 17B:

Correlations - 3320

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.655			
	N	58			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.666	.992		
	N	58	58		
Berry Ratio % (3yrs avg)	Pearson Correlation	.353	.545	.572	
	N	51	51	51	
Return on Assets % (3 yrs avg)	Pearson Correlation	.380	.359	.368	.171
	N	58	58	58	51

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 18A: Descriptives SIC 3410

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	24	-5.60	7.99	2.4733	3.2620
Profit Margin on Sales % (3 yrs avg)	24	.33	7.60	3.5617	2.1369
Net Margin % (Operating Margin 3 yrs avg)	24	.33	8.23	3.8400	2.2743
Berry Ratio % (3yrs avg)	22	5.00	69.66	25.2123	17.0459
Return on Assets % (3 yrs avg)	24	-2.09	22.49	6.1779	5.9636
Valid N (listwise)	22				

Table 18B:

Correlations - 3410

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.699			
	N	24			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.665	.989		
	N	24	24		
Berry Ratio % (3yrs avg)	Pearson Correlation	.419	.332	.334	
	N	22	22	22	
Return on Assets % (3 yrs avg)	Pearson Correlation	.806	.599	.615	.251
	N	24	24	24	22

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 19A: Descriptives SIC 5142

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	38	-3.03	17.20	5.8418	5.0782
Profit Margin on Sales % (3 yrs avg)	38	.40	16.33	6.1976	4.5323
Net Margin % (Operating Margin 3 yrs avg)	38	.40	19.52	6.8566	5.3093
Berry Ratio % (3yrs avg)	28	10.50	111.93	55.5546	31.4424
Return on Assets % (3 yrs avg)	38	-2.99	48.70	12.7868	12.1726
Valid N (listwise)	28				

Table 19B:

Correlations - 5142

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.925			
	N	38			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.928	.999		
	N	38	38		
Berry Ratio % (3yrs avg)	Pearson Correlation	.450	.560	.551	
	N	28	28	28	
Return on Assets % (3 yrs avg)	Pearson Correlation	.776	.712	.708	.259
	N	38	38	38	28

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 20A: Descriptives SIC 5143

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	70	-1.18	41.01	5.4424	6.2940
Profit Margin on Sales % (3 yrs avg)	70	.21	36.42	5.3651	5.6243
Net Margin % (Operating Margin 3 yrs avg)	70	.21	57.27	6.2327	8.0684
Berry Ratio % (3yrs avg)	63	3.75	146.82	35.6167	28.4537
Return on Assets % (3 yrs avg)	70	-2.25	38.78	11.0453	8.7716
Valid N (listwise)	63				

Table 20B:

Correlations - 5143

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.988			
	N	70			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.981	.986		
	N	70	70		
Berry Ratio % (3yrs avg)	Pearson Correlation	.710	.696	.705	
	N	63	63	63	
Return on Assets % (3 yrs avg)	Pearson Correlation	.819	.817	.764	.432
	N	70	70	70	63

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 21A: Descriptives SIC 5146

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	45	.13	26.67	6.9711	6.3133
Profit Margin on Sales % (3 yrs avg)	45	.13	26.72	6.9693	6.0672
Net Margin % (Operating Margin 3 yrs avg)	45	.13	36.47	7.9824	7.7519
Berry Ratio % (3yrs avg)	41	3.25	137.17	31.9159	32.3259
Return on Assets % (3 yrs avg)	45	.50	56.34	13.6760	11.6517
Valid N (listwise)	41				

Table 21B:

Correlations - 5146

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.985			
	N	45			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.981	.996		
	N	45	45		
Berry Ratio % (3yrs avg)	Pearson Correlation	.698	.689	.673	
	N	41	41	41	
Return on Assets % (3 yrs avg)	Pearson Correlation	.811	.775	.780	.446
	N	45	45	45	41

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 22A: Descriptives SIC 5155

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	32	-2.53	28.46	3.6609	5.4160
Profit Margin on Sales % (3 yrs avg)	32	.19	33.11	4.1606	5.8170
Net Margin % (Operating Margin 3 yrs avg)	32	.19	49.49	4.9772	8.6053
Berry Ratio % (3yrs avg)	28	5.20	135.25	27.6404	27.5266
Return on Assets % (3 yrs avg)	32	-6.96	41.98	7.4081	8.6441
Valid N (listwise)	28				

Table 22B:

Correlations - 5155

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.969			
	N	32			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.944	.990		
	N	32	32		
Berry Ratio % (3yrs avg)	Pearson Correlation	.097	.206	.212	
	N	28	28	28	
Return on Assets % (3 yrs avg)	Pearson Correlation	.960	.903	.861	.089
	N	32	32	32	28

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 23A: Descriptives SIC 5164

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	27	.36	25.98	7.7426	8.4766
Profit Margin on Sales % (3 yrs avg)	27	.42	26.60	7.0337	7.7587
Net Margin % (Operating Margin 3 yrs avg)	27	.43	36.24	8.3893	10.0626
Berry Ratio % (3yrs avg)	26	11.29	911.33	96.0862	193.8382
Return on Assets % (3 yrs avg)	27	-.27	90.69	16.3919	19.3356
Valid N (listwise)	26				

Table 23B:

Correlations - 5164

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.969			
	N	27			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.962	.997		
	N	27	27		
Berry Ratio % (3yrs avg)	Pearson Correlation	.553	.508	.499	
	N	26	26	26	
Return on Assets % (3 yrs avg)	Pearson Correlation	.391	.383	.345	.265
	N	27	27	27	26

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 24A: Descriptives SIC 5165

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profit Margin % (3 yrs avg)	21	.89	51.01	13.1862	12.7487
Profit Margin on Sales % (3 yrs avg)	21	2.00	49.92	11.6410	11.3478
Net Margin % (Operating Margin 3 yrs avg)	21	2.04	99.67	16.1405	22.1468
Berry Ratio % (3yrs avg)	20	14.94	86.52	46.6910	20.9199
Return on Assets % (3 yrs avg)	21	1.02	75.90	18.2767	15.8154
Valid N (listwise)	20				

Table 24B:

Correlations - 5165

		Profit Margin % (3 yrs avg)	Profit Margin on Sales % (3 yrs avg)	Net Margin % (Operating Margin 3 yrs avg)	Berry Ratio % (3yrs avg)
Profit Margin on Sales % (3 yrs avg)	Pearson Correlation	.784			
	N	21			
Net Margin % (Operating Margin 3 yrs avg)	Pearson Correlation	.796	.984		
	N	21	21		
Berry Ratio % (3yrs avg)	Pearson Correlation	.086	.538	.485	
	N	20	20	20	
Return on Assets % (3 yrs avg)	Pearson Correlation	.859	.836	.860	.178
	N	21	21	21	20

	Correlation significant from +1 at 0.01 (One-tailed)
	Correlation significant from +1 at 0.05 (One-tailed)

Table 25A: T-Test - Matched by Growth

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK	52	3.3227	7.8511	1.0887
	Japan	52	.7902	14.8561	2.0602
Profit Margin on Sales % (3 yrs avg)	UK	52	3.6638	7.6305	1.0582
	Japan	52	.7415	13.1884	1.8289
Net Margin % (Operating Margin 3 yrs avg)	UK	52	4.3256	8.8698	1.2300
	Japan	52	2.3760	13.1169	1.8190
Berry Ratio % (3yrs avg)	UK	45	40.1071	50.8374	7.5784
	Japan	46	36.0120	59.3327	8.7481
Return on Assets % (3 yrs avg)	UK	52	6.9004	12.5288	1.7374
	Japan	52	2.3729	14.4003	1.9970

Table 25B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference	
								Lower	Upper
Profit Margin % (3 yrs avg)	1.163	.283	1.087	102	.280	2.5325	2.3302	-1.3354	6.4004
			1.087	77.426	.280	2.5325	2.3302	-1.3467	6.4117
Profit Margin on Sales % (3 yrs avg)	1.020	.315	1.383	102	.170	2.9223	2.1130	-.5851	6.4297
			1.383	81.704	.170	2.9223	2.1130	-.5931	6.4377
Net Margin % (Operating Margin 3 yrs avg)	.401	.528	.888	102	.377	1.9496	2.1958	-1.6953	5.5945
			.888	89.575	.377	1.9496	2.1958	-1.6999	5.5992
Bemy Ratio % (3yrs avg)	.034	.855	.353	89	.725	4.0952	11.5939	-15.1757	23.3660
			.354	87.491	.724	4.0952	11.5742	-15.1464	23.3367
Return on Assets % (3 yrs avg)	.073	.787	1.710	102	.090	4.5275	2.6470	.1337	8.9213
			1.710	100.08	.090	4.5275	2.6470	.1329	8.9221

Table 26A: T-Test - Matched by Operating Profit

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK	26	5.3846	8.9255	1.7504
	Japan	25	-.8592	18.7409	3.7482
Profit Margin on Sales % (3 yrs avg)	UK	26	4.8454	8.4148	1.6503
	Japan	25	.1892	15.5414	3.1083
Net Margin % (Operating Margin 3 yrs avg)	UK	26	5.9669	10.4233	2.0442
	Japan	26	1.8604	13.5985	2.6669
Berry Ratio % (3yrs avg)	UK	25	37.8668	31.1246	6.2249
	Japan	22	41.0677	81.2806	17.3291
Return on Assets % (3 yrs avg)	UK	26	10.3719	26.5526	5.2074
	Japan	26	.8150	15.2637	2.9935

Table 26B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference		
								Lower	Upper	
Profit Margin % (3 yrs avg)	1.176	.283	1.529	49	.133	6.2438	4.0849	-6048	13.0924	
			1.509	34.055	.140	6.2438	4.1368	-7508	13.2385	
Profit Margin on Sales % (3 yrs avg)	.747	.392	1.338	49	.187	4.6562	3.4809	-1.1798	10.4921	
			1.323	36.643	.194	4.6562	3.5192	-1.2826	10.5949	
Net Margin % (Operating Margin 3 yrs avg)	.023	.881	1.222	50	.227	4.1065	3.3602	-1.5248	9.7379	
			1.222	46.838	.228	4.1065	3.3602	-1.5320	9.7451	
Bemy Ratio % (3yrs avg)	.811	.373	-.183	45	.856	-3.2009	17.5389	-32.6562	26.2543	
			-.174	26.385	.863	-3.2009	18.4132	-34.5899	28.1881	
Return on Assets % (3 yrs avg)	1.478	.230	1.591	50	.118	9.5569	6.0065	-.5094	19.6232	
			1.591	39.896	.119	9.5569	6.0065	-.5577	19.6716	

Table 27A: T-Test - Matched by Turnover

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK	42	5.6133	10.9080	1.6831
	Japan	42	2.9055	12.6697	1.9550
Profit Margin on Sales % (3 yrs avg)	UK	42	5.3095	8.9338	1.3785
	Japan	42	1.7112	11.6598	1.7991
Net Margin % (Operating Margin 3 yrs avg)	UK	42	6.7112	11.2082	1.7295
	Japan	42	3.2090	12.5952	1.9435
Berry Ratio % (3yrs avg)	UK	34	40.7574	33.8430	5.8040
	Japan	37	25.0757	21.7277	3.5720
Return on Assets % (3 yrs avg)	UK	42	8.7579	19.3521	2.9861
	Japan	42	5.4590	15.7996	2.4379

Table 27B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference		
								Lower	Upper	
Profit Margin % (3 yrs avg)	.065	.799	1.050	82	.297	2.7079	2.5797	-1.5839	6.9996	
			1.050	80.228	.297	2.7079	2.5797	-1.5850	7.0007	
Profit Margin on Sales % (3 yrs avg)	.208	.650	1.588	82	.116	3.5983	2.2665	-.1724	7.3691	
			1.588	76.801	.116	3.5983	2.2665	-.1753	7.3720	
Net Margin % (Operating Margin 3 yrs avg)	.008	.929	1.346	82	.182	3.5021	2.6016	-.8260	7.8302	
			1.346	80.909	.182	3.5021	2.6016	-.8266	7.8309	
Berry Ratio % (3yrs avg)	3.297	.074	2.342	69	.022	15.6817	6.6946	4.5202	26.8431	
			2.301	55.442	.025	15.6817	6.8151	4.2813	27.0821	
Return on Assets % (3 yrs avg)	.962	.330	.856	82	.395	3.2988	3.8549	-3.1144	9.7120	
			.856	78.844	.395	3.2988	3.8549	-3.1173	9.7150	

Table 28A: T-Test - Matched by Growth

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK	88	5.5953	8.9368	.9527
	USA	88	4.2625	8.4420	.8999
Profit Margin on Sales % (3 yrs avg)	UK	88	5.9570	8.3805	.8934
	USA	88	3.6719	8.5728	.9139
Net Margin % (Operating Margin 3 yrs avg)	UK	88	7.2474	10.5041	1.1197
	USA	88	4.8043	9.5459	1.0176
Berry Ratio % (3yrs avg)	UK	80	41.8162	31.8029	3.5557
	USA	81	49.2022	41.4780	4.6087
Return on Assets % (3 yrs avg)	UK	88	9.9005	18.3528	1.9564
	USA	88	7.2780	16.4997	1.7589

Table 28B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference		
								Lower	Upper	
Profit Margin % (3 yrs avg)	.010	.920	1.017	174	.311	1.3328	1.3105	-8343	3.5000	
			1.017	173.439	.311	1.3328	1.3105	-8343	3.5000	
Profit Margin on Sales % (3 yrs avg)	.231	.631	1.788	174	.076	2.2851	1.2780	.1718	4.3985	
			1.788	173.910	.076	2.2851	1.2780	.1718	4.3985	
Net Margin % (Operating Margin 3 yrs avg)	.049	.825	1.615	174	.108	2.4431	1.5131	-5.90E-02	4.9451	
			1.615	172.432	.108	2.4431	1.5131	-5.91E-02	4.9453	
Bery Ratio % (3yrs avg)	.335	.563	-1.267	159	.207	-7.3860	5.8303	-17.0322	2.2603	
			-1.269	149.826	.206	-7.3860	5.8209	-17.0200	2.2481	
Return on Assets % (3 yrs avg)	.063	.803	.997	174	.320	2.6225	2.6308	-1.7280	6.9730	
			.997	172.065	.320	2.6225	2.6308	-1.7282	6.9732	

Table 29A: T-Test Matched by Operating Profit

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK	53	4.2704	7.5808	1.0413
	USA	53	6.0745	8.2115	1.1279
Profit Margin on Sales % (3 yrs avg)	UK	53	4.6291	6.5703	.9025
	USA	53	6.1613	7.4189	1.0191
Net Margin % (Operating)	UK	53	5.3438	7.2889	1.0012
	USA	53	7.2611	9.0499	1.2431
Berry Ratio % (3yrs avg)	UK	49	62.6459	177.4910	25.3559
	USA	50	51.0722	48.0246	6.7917
Return on Assets % (3 yrs)	UK	53	7.4470	11.8208	1.6237
	USA	53	9.8764	17.1273	2.3526

Table 29B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference		
								Lower	Upper	
Profit Margin % (3 yrs avg)	.908	.343	-1.175	104	.243	-1.8042	1.5351	-4.3519	.7436	
			-1.175	103.34	.243	-1.8042	1.5351	-4.3520	.7437	
Profit Margin on Sales % (3 yrs avg)	.602	.440	-1.126	104	.263	-1.5323	1.3612	-3.7914	.7269	
			-1.126	102.50	.263	-1.5323	1.3612	-3.7917	.7272	
Net Margin % (Operating Margin 3 yrs avg)	1.041	.310	-1.201	104	.232	-1.9174	1.5961	-4.5664	.7317	
			-1.201	99.483	.233	-1.9174	1.5961	-4.5675	.7327	
Berry Ratio % (3yrs avg)	1.076	.302	.445	97	.657	11.5737	26.0193	-31.6370	54.7844	
			.441	54.858	.661	11.5737	26.2497	-32.3449	55.4923	
Return on Assets % (3 yrs avg)	3.793	.054	-.850	104	.397	-2.4294	2.8585	-7.1736	2.3147	
			-.850	92.378	.398	-2.4294	2.8585	-7.1790	2.3201	

Table 30A: T-Test - Matched by Turnover

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK	68	5.4679	9.8865	1.1989
	USA	68	3.9312	8.3794	1.0162
Profit Margin on Sales % (3 yrs avg)	UK	68	5.5835	9.6293	1.1677
	USA	68	1.1332	23.7250	2.8771
Net Margin % (Operating Margin 3 yrs avg)	UK	68	7.0710	11.5223	1.3973
	USA	68	3.7126	12.2103	1.4807
Berry Ratio % (3yrs avg)	UK	62	45.5829	29.2807	3.7186
	USA	59	68.6605	122.2516	15.9158
Return on Assets % (3 yrs avg)	UK	68	9.4163	14.1496	1.7159
	USA	68	8.5519	16.9719	2.0581

Table 30B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference		
								Lower	Upper	
Profit Margin % (3 yrs avg)	1.161	.283	.978	134	.330	1.5368	1.5716	-1.0663	4.1398	
			.978	130.495	.330	1.5368	1.5716	-1.0668	4.1403	
Profit Margin on Sales % (3 yrs avg)	.513	.475	1.433	134	.154	4.4503	3.1050	-.6926	9.5932	
			1.433	88.491	.155	4.4503	3.1050	-.7110	9.6116	
Net Margin % (Operating Margin 3 yrs avg)	.666	.416	1.650	134	.101	3.3584	2.0359	-1.37E-02	6.7305	
			1.650	133.552	.101	3.3584	2.0359	-1.38E-02	6.7305	
Berry Ratio % (3yrs avg)	5.004	.027	-1.444	119	.151	-23.0776	15.9841	-49.5753	3.4201	
			-1.412	64.323	.163	-23.0776	16.3445	-50.3547	4.1995	
Return on Assets % (3 yrs avg)	.676	.412	.323	134	.748	.8644	2.6796	-3.5738	5.3026	
			.323	129.799	.748	.8644	2.6796	-3.5748	5.3036	

Table 31A: T-Test - Matched by Growth

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK-Other	21	2.4095	5.1089	1.1149
	Japan-UK	21	-.2538	8.3176	1.8150
Profit Margin on Sales % (3 yrs avg)	UK-Other	21	1.7367	8.0020	1.7462
	Japan-UK	21	1.2481	5.4441	1.1880
Net Margin % (Operating Margin 3 yrs avg)	UK-Other	21	2.3414	7.4875	1.6339
	Japan-UK	21	1.5400	5.2899	1.1543
Berry Ratio % (3yrs avg)	UK-Other	16	36.8288	22.4397	5.6099
	Japan-UK	18	23.9606	27.7979	6.5520
Return on Assets % (3 yrs avg)	UK-Other	21	3.4143	8.8813	1.9381
	Japan-UK	21	1.7671	9.7593	2.1297

Table 31B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference		
								Lower	Upper	
Profit Margin % (3 yrs avg)	.746	.393	1.250	40	.218	2.6633	2.1301	-9.234	6.2501	
			1.250	33.211	.220	2.6633	2.1301	-.9409	6.2675	
Profit Margin on Sales % (3 yrs avg)	.686	.412	.231	40	.818	.4886	2.1120	-3.0677	4.0448	
			.231	35.248	.818	.4886	2.1120	-3.0791	4.0562	
Net Margin % (Operating Margin 3 yrs avg)	.837	.366	.401	40	.691	.8014	2.0005	-2.5672	4.1700	
			.401	35.983	.691	.8014	2.0005	-2.5761	4.1790	
Berry Ratio % (3yrs avg)	.001	.978	1.473	32	.151	12.8682	8.7366	-1.9306	27.6670	
			1.492	31.733	.146	12.8682	8.6256	-1.7462	27.4826	
Return on Assets % (3 yrs avg)	.012	.914	.572	40	.571	1.6471	2.8795	-3.2015	6.4958	
			.572	39.650	.571	1.6471	2.8795	-3.2025	6.4968	

Table 32A: T-Test - Matched by Operating Profit

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK-Other	9	2.4611	10.4700	3.4900
	Japan-UK	9	2.0211	5.0396	1.6799
Profit Margin on Sales % (3 yrs avg)	UK-Other	9	5.1744	8.5727	2.8576
	Japan-UK	9	2.4611	4.5434	1.5145
Net Margin % (Operating Margin 3 yrs avg)	UK-Other	9	6.1856	9.1066	3.0355
	Japan-UK	9	2.7278	4.8460	1.6153
Berry Ratio % (3yrs avg)	UK-Other	6	51.9633	29.2384	11.9365
	Japan-UK	8	31.7475	15.7032	5.5519
Return on Assets % (3 yrs avg)	UK-Other	9	4.0667	16.2600	5.4200
	Japan-UK	9	2.1567	8.0028	2.6676

Table 32B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference		
								Lower	Upper	
Profit Margin % (3 yrs avg)	7.768	.013	.114	16	.911	.4400	3.8732	-6.3222	7.2022	
			.114	11.518	.912	.4400	3.8732	-6.4874	7.3674	
Profit Margin on Sales % (3 yrs avg)	1.851	.193	.839	16	.414	2.7133	3.2341	-2.9330	8.3597	
			.839	12.165	.418	2.7133	3.2341	-3.0442	8.4709	
Net Margin % (Operating Margin 3 yrs avg)	2.007	.176	1.006	16	.330	3.4578	3.4386	-2.5456	9.4611	
			1.006	12.194	.334	3.4578	3.4386	-2.6626	9.5782	
Berry Ratio % (3yrs avg)	3.324	.093	1.674	12	.120	20.2158	12.0767	-1.3083	41.7400	
			1.536	7.158	.168	20.2158	13.1645	-4.6427	45.0744	
Return on Assets % (3 yrs avg)	8.683	.009	.316	16	.756	1.9100	6.0409	-8.6367	12.4567	
			.316	11.661	.757	1.9100	6.0409	-8.8828	12.7028	

Table 33A: T-Test - Matched by Turnover

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK-Other	11	3.6500	4.5249	1.3643
	Japan-UK	11	2.3927	4.6126	1.3907
Profit Margin on Sales % (3 yrs avg)	UK-Other	11	3.6564	4.4259	1.3345
	Japan-UK	11	2.7627	3.7219	1.1222
Net Margin % (Operating Margin 3 yrs avg)	UK-Other	11	4.0027	4.9155	1.4821
	Japan-UK	11	2.9845	4.0719	1.2277
Berry Ratio % (3yrs avg)	UK-Other	8	24.5313	15.0972	5.3377
	Japan-UK	10	28.5820	28.2088	8.9204
Return on Assets % (3 yrs avg)	UK-Other	11	6.9964	8.2597	2.4904
	Japan-UK	11	3.4691	6.1384	1.8508

Table 33B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference		
								Lower	Upper	
Profit Margin % (3 yrs avg)	.080	.780	.645	20	.526	1.2573	1.9482	-2.1028	4.6174	
										Equal variances assumed
Profit Margin % (3 yrs avg)	.389	.540	.513	20	.614	.8936	1.7436	-2.1136	3.9008	
										Equal variances not assumed
Net Margin % (Operating Margin 3 yrs avg)	.437	.516	.529	20	.603	1.0182	1.9246	-2.3011	4.3375	
										Equal variances not assumed
Bery Ratio % (3yrs avg)	.981	.337	-.365	16	.720	-4.0508	11.0972	-23.4251	15.3236	
										Equal variances assumed
Return on Assets % (3 yrs avg)	1.588	.222	1.137	20	.269	3.5273	3.1028	-1.8242	8.8787	
										Equal variances not assumed

Table 34A: T-Test - Matched by Growth

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK-Other	46	-.6620	13.1345	1.9366
	USA-UK	46	2.1067	15.4154	2.2729
Profit Margin on Sales % (3 yrs avg)	UK-Other	46	-.4967	11.5683	1.7057
	USA-UK	46	2.8476	17.2287	2.5402
Net Margin % (Operating Margin 3 yrs avg)	UK-Other	46	.5307	9.2491	1.3637
	USA-UK	46	5.4922	16.7124	2.4641
Berry Ratio % (3yrs avg)	UK-Other	39	38.2969	40.9083	6.5506
	USA-UK	42	39.4000	26.4281	4.0780
Return on Assets % (3 yrs avg)	UK-Other	46	1.5848	15.4177	2.2732
	USA-UK	46	3.9552	16.8704	2.4874

Table 34B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference		
								Lower	Upper	
Profit Margin % (3 yrs avg)	.716	.400	-.927	90	.356	-2.7687	2.9860	-7.7313	2.1939	
			-.927	87.787	.356	-2.7687	2.9860	-7.7326	2.1952	
Profit Margin on Sales % (3 yrs avg)	1.031	.313	-1.093	90	.277	-3.3443	3.0598	-8.4295	1.7408	
			-1.093	78.722	.278	-3.3443	3.0598	-8.4371	1.7484	
Net Margin % (Operating Margin 3 yrs avg)	3.650	.059	-1.762	90	.082	-4.9615	2.8163	-9.6421	-.2810	
			-1.762	70.201	.082	-4.9615	2.8163	-9.6559	-.2672	
Berry Ratio % (3yrs avg)	1.124	.292	-.145	79	.885	-1.1031	7.5981	-13.7491	11.5430	
			-.143	64.221	.887	-1.1031	7.7162	-13.9808	11.7747	
Return on Assets % (3 yrs avg)	.871	.353	-.703	90	.484	-2.3704	3.3697	-7.9707	3.2298	
			-.703	89.280	.484	-2.3704	3.3697	-7.9712	3.2303	

Table 35A: T-Test - Matched by Operating profit

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK-Other	22	2.7432	6.0617	1.2924
	USA-UK	22	7.5355	13.5729	2.8938
Profit Margin on Sales % (3 yrs avg)	UK-Other	22	3.0827	4.9028	1.0453
	USA-UK	22	8.5141	12.2459	2.6108
Net Margin % (Operating Margin 3 yrs avg)	UK-Other	22	3.4177	4.9428	1.0538
	USA-UK	22	12.0514	20.6383	4.4001
Berry Ratio % (3yrs avg)	UK-Other	19	27.4011	15.0389	3.4502
	USA-UK	19	40.1226	32.8170	7.5287
Return on Assets % (3 yrs avg)	UK-Other	22	6.4905	8.2063	1.7496
	USA-UK	22	10.9600	11.7364	2.5022

Table 35B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference		
								Lower	Upper	
Profit Margin % (3 yrs avg)	4.475	.040	-1.512	42	.138	-4.7923	3.1692	-10.1228	.5382	
										Equal variances assumed
Profit Margin on Sales % (3 yrs avg)	6.578	.014	-1.931	29.057	.141	-4.7923	3.1692	-10.1769	.5923	
										Equal variances not assumed
Profit Margin on Sales % (3 yrs avg)	6.578	.014	-1.931	29.057	.141	-4.7923	3.1692	-10.1769	.5923	
										Equal variances assumed
Net Margin % (Operating Margin 3 yrs avg)	6.399	.015	-1.908	42	.063	-5.4314	2.8123	-10.1615	-.7012	
										Equal variances not assumed
Net Margin % (Operating Margin 3 yrs avg)	6.399	.015	-1.908	42	.063	-5.4314	2.8123	-10.2181	-.6447	
										Equal variances assumed
Berry Ratio % (3yrs avg)	8.246	.007	-1.536	36	.133	-8.6336	4.5245	-16.2437	-1.0236	
										Equal variances not assumed
Berry Ratio % (3yrs avg)	8.246	.007	-1.536	36	.133	-8.6336	4.5245	-16.3825	-.8847	
										Equal variances assumed
Return on Assets % (3 yrs avg)	2.806	.101	-1.464	42	.151	-12.7216	8.2816	-26.7035	1.2603	
										Equal variances not assumed
Return on Assets % (3 yrs avg)	2.806	.101	-1.464	42	.151	-4.4695	3.0532	-9.6049	.6658	
										Equal variances assumed
Return on Assets % (3 yrs avg)	2.806	.101	-1.464	42	.152	-4.4695	3.0532	-9.6186	.6795	
										Equal variances not assumed

Table 36A: T-Test - Matched by Turnover

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK-Other	33	2.5488	11.2676	1.9614
	USA-UK	33	.7385	13.9393	2.4265
Profit Margin on Sales % (3 yrs avg)	UK-Other	33	1.6488	6.9041	1.2018
	USA-UK	33	2.0503	12.1288	2.1114
Net Margin % (Operating Margin 3 yrs avg)	UK-Other	33	2.1303	6.7053	1.1673
	USA-UK	33	3.9352	15.0256	2.6156
Berry Ratio % (3yrs avg)	UK-Other	25	43.2820	44.8167	8.9633
	USA-UK	25	30.0404	25.3249	5.0650
Return on Assets % (3 yrs avg)	UK-Other	33	3.5761	10.4751	1.8235
	USA-UK	33	2.9330	17.5710	3.0587

Table 36B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference	
								Lower	Upper
Profit Margin % (3 yrs avg)	.793	.376	.580	64	.564	1.8103	3.1201	-3.3972	7.0179
			.580	61.306	.564	1.8103	3.1201	-3.4006	7.0212
Profit Margin on Sales % (3 yrs avg)	1.526	.221	-.165	64	.869	-.4015	2.4295	-4.4563	3.6533
			-.165	50.767	.869	-.4015	2.4295	-4.4719	3.6689
Net Margin % (Operating Margin 3 yrs avg)	2.108	.151	-.630	64	.531	-1.8048	2.8642	-6.5853	2.9756
			-.630	44.259	.532	-1.8048	2.8642	-6.6168	3.0071
Berry Ratio % (3yrs avg)	2.944	.093	1.286	48	.205	13.2416	10.2954	-4.0261	30.5093
			1.286	37.909	.206	13.2416	10.2954	-4.1171	30.6003
Return on Assets % (3 yrs avg)	2.099	.152	.181	64	.857	.6430	3.5610	-5.3004	6.5864
			.181	52.195	.857	.6430	3.5610	-5.3202	6.6062

Table 37A: T-Test - Companies with Operating Losses

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK	115	-4.9361	7.9218	.7387
	Japan	27	-12.9626	22.1074	4.2546
Profit Margin on Sales % (3 yrs avg)	UK	115	-6.3336	9.9705	.9298
	Japan	27	-12.7256	18.0438	3.4725
Net Margin % (Operating Margin 3 yrs avg)	UK	115	-5.3640	6.6896	.6238
	Japan	28	-9.3575	11.6133	2.1947
Berry Ratio % (3yrs avg)	UK	100	49.9100	134.1639	13.4164
	Japan	24	15.3046	18.8527	3.8483
Return on Assets % (3 yrs avg)	UK	115	-8.9236	19.3613	1.8055
	Japan	28	-13.0332	27.9204	5.2765

Table 37B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference		
								Lower	Upper	
Profit Margin % (3 yrs avg)	42.154	.000	3.151	140	.002	8.0265	2.5471	3.8089	12.2441	
			1.859	27.586	.074	8.0265	4.3182	.6768	15.3762	
Profit Margin on Sales % (3 yrs avg)	18.544	.000	2.513	140	.013	6.3920	2.5431	2.1811	10.6028	
			1.778	29.826	.086	6.3920	3.5948	.2895	12.4945	
Net Margin % (Operating Margin 3 yrs avg)	17.888	.000	2.407	141	.017	3.9935	1.6594	1.2459	6.7411	
			1.750	31.490	.090	3.9935	2.2816	.1268	7.8602	
Bemy Ratio % (3yrs avg)	1.493	.224	1.257	122	.211	34.6054	27.5342	-11.0309	80.2417	
			2.479	112.677	.015	34.6054	13.9574	11.4572	57.7536	
Return on Assets % (3 yrs avg)	1.370	.244	.917	141	.361	4.1096	4.4821	-3.3115	11.5308	
			.737	33.583	.466	4.1096	5.5768	-5.3236	13.5429	

Table 38A: T-Test - Companies with Operating Losses

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK	115	-4.9361	7.9218	.7387
	USA	36	-4.2192	8.1620	1.3603
Profit Margin on Sales % (3 yrs avg)	UK	115	-6.3336	9.9705	.9298
	USA	36	-11.9428	29.4716	4.9119
Net Margin % (Operating Margin 3 yrs avg)	UK	115	-5.3640	6.6896	.6238
	USA	36	-7.6917	10.8033	1.8005
Berry Ratio % (3yrs avg)	UK	100	49.9100	134.1639	13.4164
	USA	34	81.6244	152.6206	26.1742
Return on Assets % (3 yrs avg)	UK	115	-8.9236	19.3613	1.8055
	USA	36	-10.6456	23.4469	3.9078

Table 38B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means									
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference				
								Lower	Upper			
Profit Margin % (3 yrs avg)	.884	.349	-.470	149	.639	-.7169	1.5238	-3.2390	1.8052			
			-.463	57.160	.645	-.7169	1.5480	-3.3050	1.8712			
Profit Margin on Sales % (3 yrs avg)	3.678	.057	1.755	149	.081	5.6092	3.1962	.3190	10.8994			
			1.122	37.538	.269	5.6092	4.9991	-2.8217	14.0401			
Net Margin % (Operating Margin 3 yrs avg)	1.724	.191	1.552	149	.123	2.3277	1.4996	-.1543	4.8097			
			1.222	43.713	.228	2.3277	1.9055	-.8745	5.5299			
Bemy Ratio % (3yrs avg)	1.038	.310	-1.149	132	.253	-31.7144	27.5964	-77.4273	13.9985			
			-1.078	51.435	.286	-31.7144	29.4124	-80.9808	17.5520			
Return on Assets % (3 yrs avg)	.598	.441	.442	149	.659	1.7220	3.8950	-4.7248	8.1687			
			.400	50.826	.691	1.7220	4.3047	-5.4901	8.9341			

Table 39A: T-Test - Companies with Operating Losses

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK-Other	47	-4.4077	19.2578	2.8090
	Japan-UK	18	-6.5411	9.0664	2.1370
Profit Margin on Sales % (3 yrs avg)	UK-Other	48	-12.8577	32.2997	4.6621
	Japan-UK	19	-208.3742	870.8393	199.7842
Net Margin % (Operating Margin 3 yrs avg)	UK-Other	48	-7.9798	12.8560	1.8556
	Japan-UK	19	-12.0537	21.8982	5.0238
Berry Ratio % (3yrs avg)	UK-Other	42	33.5598	38.9498	6.0101
	Japan-UK	16	39.6425	42.0738	10.5185
Return on Assets % (3 yrs avg)	UK-Other	48	-13.7106	25.0873	3.6210
	Japan-UK	19	-5.8332	16.3502	3.7510

Table 39B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference		
								Lower	Upper	
Profit Margin % (3 yrs avg)	.454	.503	.450	63	.654	2.1335	4.7444	-5.7869	10.0538	
			.604	60.143	.548	2.1335	3.5295	-3.7629	8.0298	
Profit Margin on Sales % (3 yrs avg)	10.657	.002	1.571	65	.121	195.5165	124.4332	-12.1172	403.1502	
			.978	18.020	.341	195.5165	199.8386	-150.9959	542.0290	
Net Margin % (Operating Margin 3 yrs avg)	1.244	.269	.946	65	.348	4.0739	4.3053	-3.1100	11.2578	
			.761	23.082	.455	4.0739	5.3555	-5.1034	13.2512	
Bery Ratio % (3yrs avg)	.337	.564	-.520	56	.605	-6.0827	11.6958	-25.6442	13.4787	
			-.502	25.403	.620	-6.0827	12.1144	-26.7633	14.5978	
Return on Assets % (3 yrs avg)	.641	.426	-1.263	65	.211	-7.8775	6.2347	-18.2809	2.5260	
			-1.511	50.414	.137	-7.8775	5.2136	-16.6136	.8587	

Table 40A: T-Test - Companies with Operating Losses

Group Statistics

	Origin	N	Mean	Std. Deviation	Std. Error Mean
Profit Margin % (3 yrs avg)	UK-Other	47	-4.4077	19.2578	2.8090
	USA-UK	42	-11.7969	20.1640	3.1114
Profit Margin on Sales % (3 yrs avg)	UK-Other	48	-12.8577	32.2997	4.6621
	USA-UK	42	-13.2200	22.9909	3.5476
Net Margin % (Operating Margin 3 yrs avg)	UK-Other	48	-7.9798	12.8560	1.8556
	USA-UK	42	-9.4943	11.7023	1.8057
Berry Ratio % (3yrs avg)	UK-Other	42	33.5598	38.9498	6.0101
	USA-UK	37	32.8311	38.5543	6.3383
Return on Assets % (3 yrs avg)	UK-Other	48	-13.7106	25.0873	3.6210
	USA-UK	42	-15.8638	21.1011	3.2560

Table 40B:

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference	
								Lower	Upper
Profit Margin % (3 yrs avg)	1.187	.279	1.767	87	.081	7.3892	4.1809	.4383	14.3402
			1.763	84.839	.082	7.3892	4.1918	.4182	14.3603
Profit Margin on Sales % (3 yrs avg)	.146	.704	.060	88	.952	.3623	5.9891	-9.5937	10.3183
			.062	84.652	.951	.3623	5.8583	-9.3804	10.1050
Net Margin % (Operating Margin 3 yrs avg)	.000	.999	.581	88	.563	1.5145	2.6056	-2.8169	5.8459
			.585	87.852	.560	1.5145	2.5892	-2.7897	5.8187
Bery Ratio % (3yrs avg)	.394	.532	.083	77	.934	.7287	8.7404	-13.8231	15.2805
			.083	75.937	.934	.7287	8.7347	-13.8161	15.2734
Return on Assets % (3 yrs avg)	.001	.979	.437	88	.663	2.1532	4.9262	-6.0359	10.3423
			.442	87.875	.659	2.1532	4.8696	-5.9420	10.2483

Table 41 A and B: T-Test (Manufacturing Industries Matched by Gross Profit - UK Vs. JAPAN)

Group Statistics

Origin	N	Mean	Std. Deviation	Std. Error Mean
tax 2000 UK	47	2862.53	8570.61	1250.15
tax 2000 Japan	47	940.47	1753.44	255.77
tax 1999 UK	47	2094.83	3751.03	547.14
tax 1999 Japan	47	931.72	1660.36	242.19
tax 1997 UK	47	1765.43	3053.35	445.38
tax 1997 Japan	47	801.81	1208.99	176.35
tax 1996 UK	47	1727.89	3226.97	470.70
tax 1996 Japan	47	764.94	1402.99	204.65

Independent Samples Test

	Levene's Test for Equality of Variances		t	df	t-test for Equality of Means				
	F	Sig.			Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference	
								Lower	Upper
tax 2000	3.571	.062	1.506	92	.135	1922.06	1276.05	-198.20	4042.32
			1.506	49.844	.138	1922.06	1276.05	-216.60	4060.72
tax 1999	5.198	.025	1.944	92	.055	1163.11	598.35	168.90	2157.31
			1.944	63.359	.056	1163.11	598.35	164.31	2161.91
tax 1997	6.895	.010	2.012	92	.047	963.62	479.02	167.68	1759.55
			2.012	60.078	.049	963.62	479.02	163.36	1763.87
tax 1996	6.244	.014	1.876	92	.064	962.96	513.27	110.12	1815.79
			1.876	62.790	.065	962.96	513.27	106.07	1819.85

Table 42 A and B: T-Test (Manufacturing Industries Matched by Gross Profit - UK Vs. USA)

Group Statistics

Origin	N	Mean	Std. Deviation	Std. Error Mean
tax 2000 UK	202	2144.63	5849.95	411.60
USA	202	1448.83	3927.21	276.32
tax 1999 UK	202	2067.17	4875.84	343.06
USA	202	1252.63	3598.46	253.19
tax 1997 UK	202	1881.96	5329.40	374.98
USA	202	2357.70	13375.67	941.11
tax 1996 UK	202	1749.13	5479.17	385.51
USA	202	1494.84	4576.77	322.02

Independent Samples Test

	Levene's Test for Equality of Variances		t	df	Sig. (2-tailed)	t-test for Equality of Means			90% Confidence Interval of the Difference	
	F	Sig.				Mean Difference	Std. Error Difference	Lower	Upper	
tax 2000 Equal variances assumed	2.445	.119	1.404	402	.161	695.80	495.75	-121.52	1513.12	
Equal variances not assumed			1.404	351.586	.161	695.80	495.75	-121.79	1513.39	
tax 1999 Equal variances assumed	4.838	.028	1.910	402	.057	814.54	426.38	111.59	1517.48	
Equal variances not assumed			1.910	369.862	.057	814.54	426.38	111.45	1517.63	
tax 1997 Equal variances assumed	1.560	.212	-.470	402	.639	-475.75	1013.06	-2145.93	1194.44	
Equal variances not assumed			-.470	263.250	.639	-475.75	1013.06	-2147.97	1196.47	
tax 1996 Equal variances assumed	.040	.841	.506	402	.613	254.29	502.31	-573.85	1082.43	
Equal variances not assumed			.506	389.649	.613	254.29	502.31	-573.91	1082.49	

Table 43 A and B: T-Test (Wholesale Industries Matched by Gross Profit - UK Vs. JAPAN)

Group Statistics

Origin	N	Mean	Std. Deviation	Std. Error Mean
tax 2000 UK	41	1407.39	1913.46	298.83
tax 2000 Japan	41	729.78	1295.90	202.39
tax 1999 UK	41	1438.76	1973.27	308.17
tax 1999 Japan	41	680.12	1017.35	158.88
tax 1997 UK	41	1152.85	1411.34	220.42
tax 1997 Japan	41	714.95	926.57	144.71
tax 1996 UK	41	920.78	1171.67	182.98
tax 1996 Japan	41	867.22	1293.17	201.96

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference	
								Lower	Upper
tax 2000 Equal variances assumed	4.972	.029	1.877	80	.064	677.61	360.92	77.00	1278.22
tax 2000 Equal variances not assumed			1.877	70.316	.065	677.61	360.92	76.03	1279.19
tax 1999 Equal variances assumed	10.095	.002	2.188	80	.032	758.63	346.72	181.65	1335.62
tax 1999 Equal variances not assumed			2.188	59.861	.033	758.63	346.72	179.37	1337.90
tax 1997 Equal variances assumed	7.435	.008	1.661	80	.101	437.90	263.67	-.88	876.68
tax 1997 Equal variances not assumed			1.661	69.079	.101	437.90	263.67	-1.69	877.50
tax 1996 Equal variances assumed	.115	.735	.197	80	.845	53.56	272.53	-399.96	507.08
tax 1996 Equal variances not assumed			.197	79.234	.845	53.56	272.53	-400.01	507.13

Table 44 A and B: T-Test (Wholesale Industries Matched by Gross Profit - UK Vs. USA)

Group Statistics

Origin	N	Mean	Std. Deviation	Std. Error Mean
tax 2000 UK	80	1657.19	4290.99	479.75
USA	80	1197.15	3692.59	412.84
tax 1999 UK	80	1390.88	3281.68	366.90
USA	80	967.04	2289.21	255.94
tax 1997 UK	80	2632.75	11108.36	1241.95
USA	80	1154.54	2830.37	316.45
tax 1996 UK	80	1493.38	4464.90	499.19
USA	80	1323.84	3708.63	414.64

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference	
								Lower	Upper
tax 2000									
Equal variances assumed	.788	.376	.727	158	.468	460.04	632.93	-587.18	1507.25
Equal variances not assumed			.727	154.565	.468	460.04	632.93	-587.31	1507.39
tax 1999									
Equal variances assumed	.988	.322	.947	158	.345	423.84	447.35	-316.33	1164.01
Equal variances not assumed			.947	141.164	.345	423.84	447.35	-316.85	1164.53
tax 1997									
Equal variances assumed	3.466	.065	1.153	158	.250	1478.21	1281.63	-642.32	3598.74
Equal variances not assumed			1.153	89.215	.252	1478.21	1281.63	-652.01	3608.43
tax 1996									
Equal variances assumed	.047	.828	.261	158	.794	169.54	648.93	-904.16	1243.24
Equal variances not assumed			.261	152.854	.794	169.54	648.93	-904.37	1243.45

Table 44 A and B: T-Test (Wholesale Industries Matched by Gross Profit - UK Vs. USA)

Group Statistics

Origin	N	Mean	Std. Deviation	Std. Error Mean
tax 2000 UK	80	1657.19	4290.99	479.75
tax 2000 USA	80	1197.15	3692.59	412.84
tax 1999 UK	80	1390.88	3281.68	366.90
tax 1999 USA	80	967.04	2289.21	255.94
tax 1997 UK	80	2632.75	11108.36	1241.95
tax 1997 USA	80	1154.54	2830.37	316.45
tax 1996 UK	80	1493.38	4464.90	499.19
tax 1996 USA	80	1323.84	3708.63	414.64

Independent Samples Test

	Levene's Test for Equality of Variances		t	df	t-test for Equality of Means							
	F	Sig.			Sig. (2-tailed)	Mean Difference	Std. Error Difference	90% Confidence Interval of the Difference				
								Lower	Upper			
tax 2000												
Equal variances assumed	.788	.376	.727	158	.468	460.04	632.93	-587.18	1507.25			
Equal variances not assumed			.727	154.565	.468	460.04	632.93	-587.31	1507.39			
tax 1999												
Equal variances assumed	.988	.322	.947	158	.345	423.84	447.35	-316.33	1164.01			
Equal variances not assumed			.947	141.164	.345	423.84	447.35	-316.85	1164.53			
tax 1997												
Equal variances assumed	3.466	.065	1.153	158	.250	1478.21	1281.63	-642.32	3598.74			
Equal variances not assumed			1.153	89.215	.252	1478.21	1281.63	-652.01	3608.43			
tax 1996												
Equal variances assumed	.047	.828	.261	158	.794	169.54	648.93	-904.16	1243.24			
Equal variances not assumed			.261	152.854	.794	169.54	648.93	-904.37	1243.45			

Table 45: Japanese Companies (Manufacturing Industries)

ANOVA

Tax paid

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1096248.596	1	1096248.6	.479	.490
Within Groups	426058284.1	186	2290635.9		
Total	427154532.7	187			

Means Plots

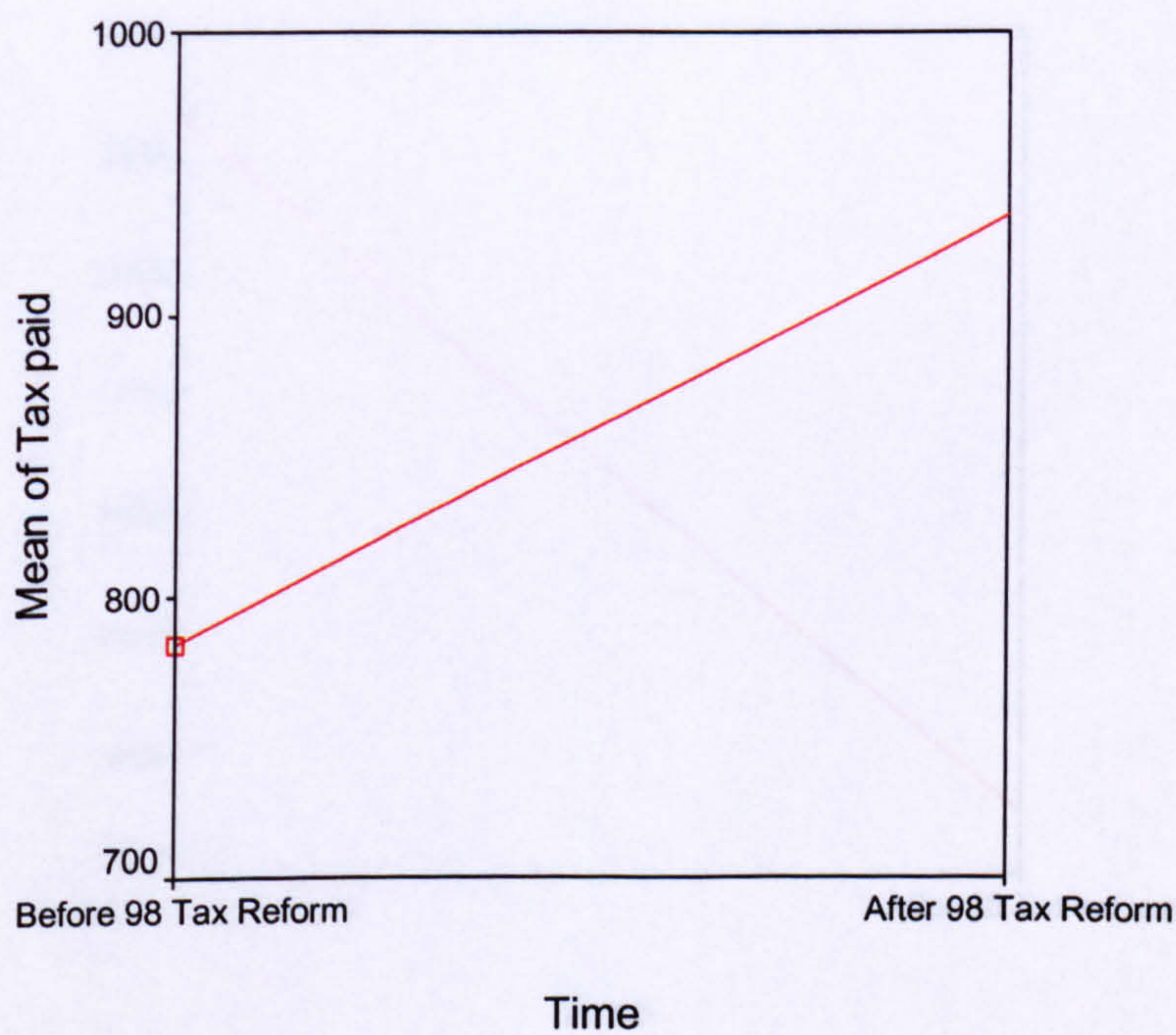


Table 46: US Companies (Manufacturing Industries)

ANOVA

tax Paid

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	66911658.817	1	66911658.8	1.174	.279
Within Groups	45952763063	806	57013353.7		
Total	46019674722	807			

Means Plots

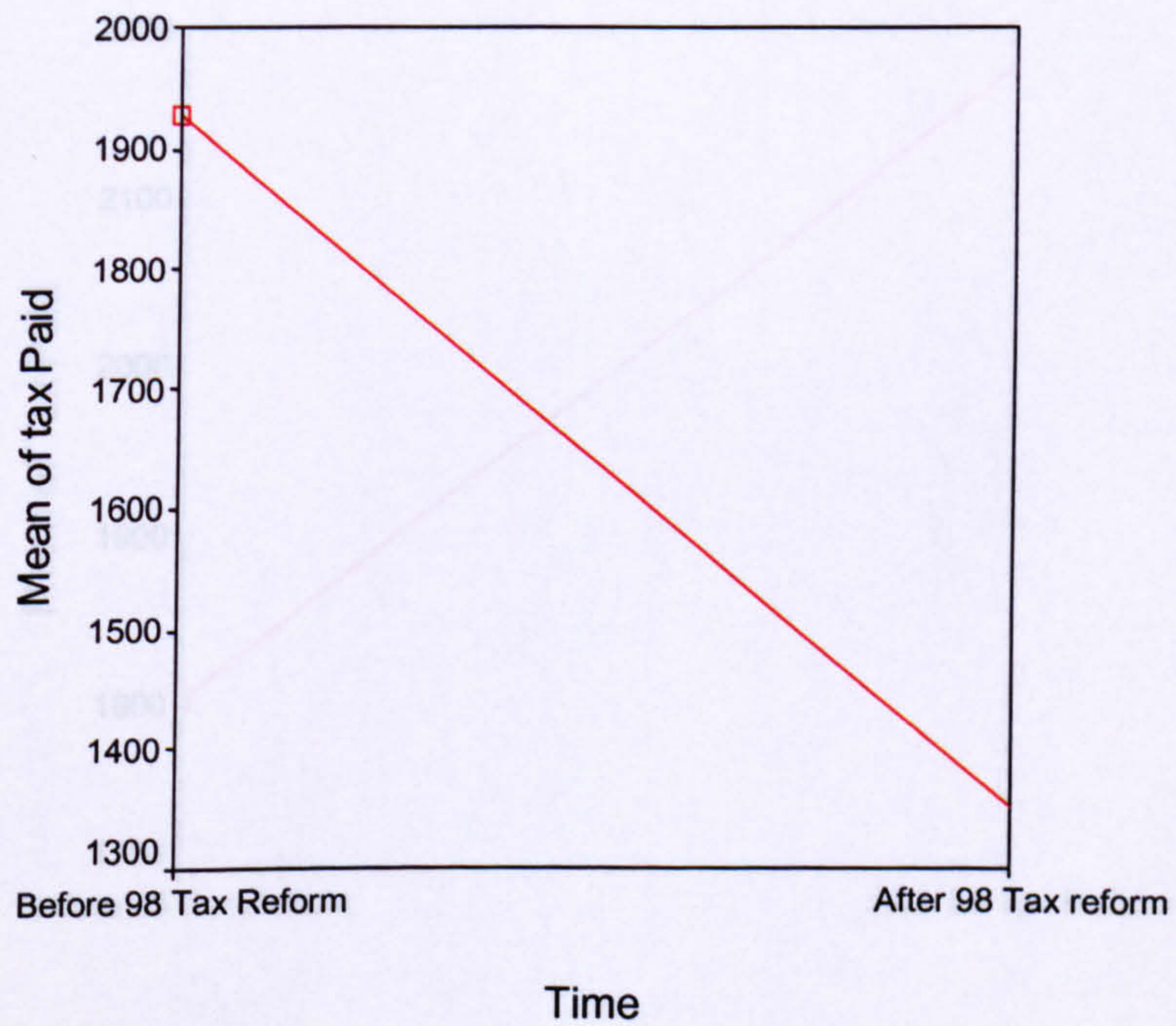


Table 47: UK Companies (Manufacturing Industries)

ANOVA

Tax Paid

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	34777531.120	1	34777531.1	1.219	.270
Within Groups	28361625535	994	28532822.5		
Total	28396403066	995			

Means Plots

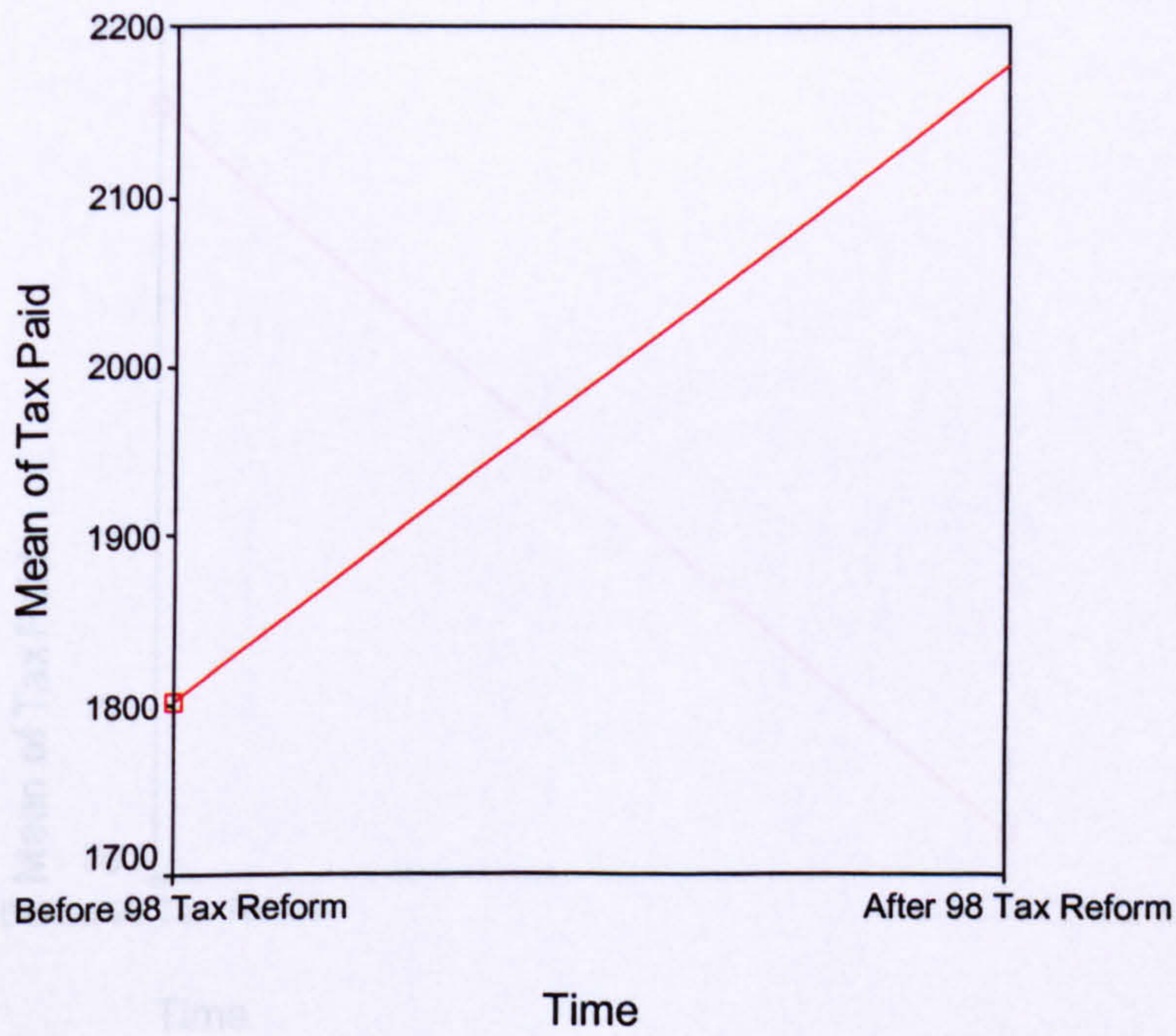


Table 48: Japanese Companies (Wholesale Industries)

ANOVA

Tax Paid

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	304182.738	1	304182.74	.234	.629
Within Groups	210333566	162	1298355.3		
Total	210637749	163			

Means Plots

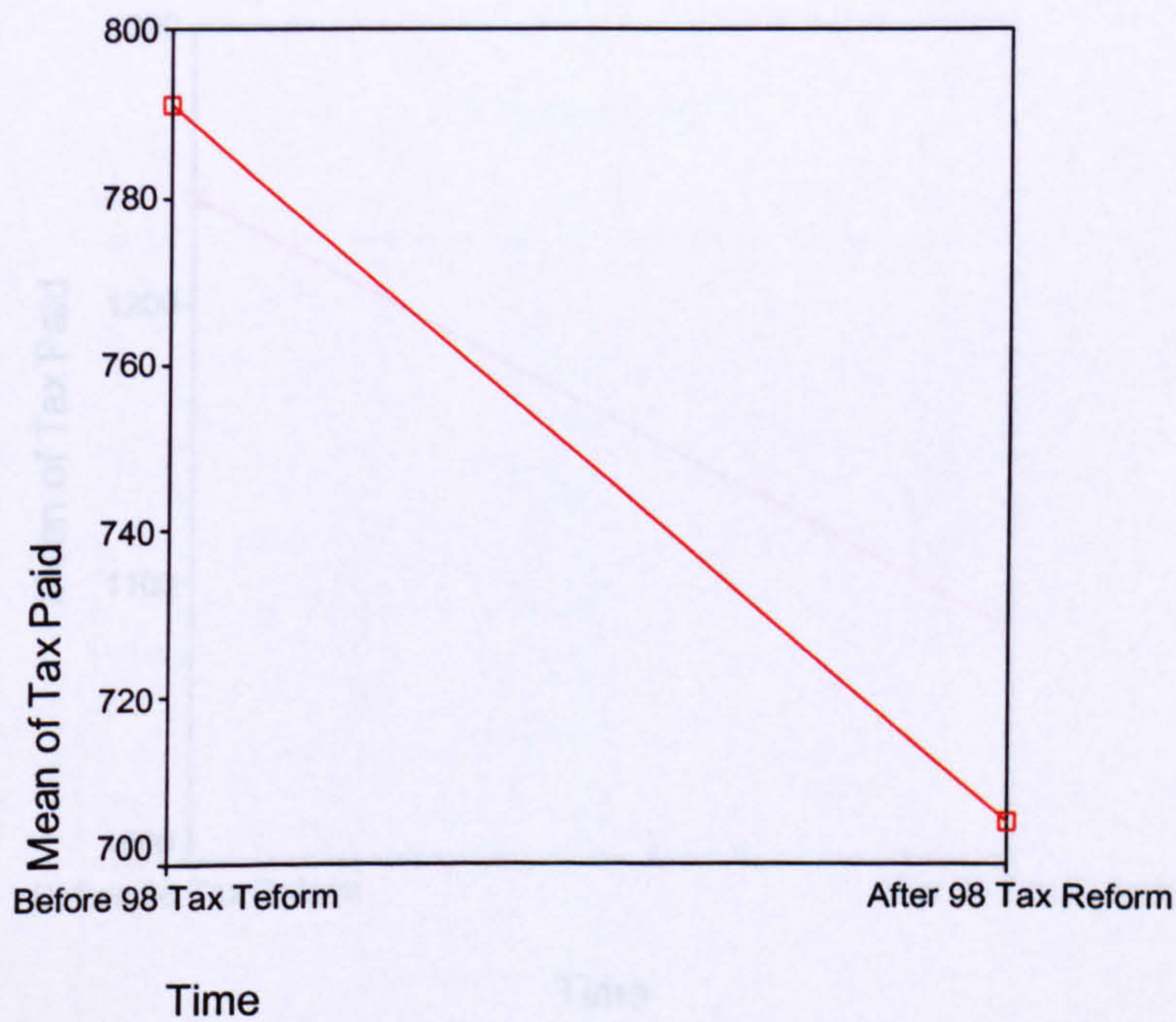


Table 49: US Companies (Wholesale Industries)

ANOVA

Tax Paid

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1974275.703	1	1974275.703	.195	.659
Within Groups	3213874980	318	10106525.1		
Total	3215849256	319			

Means Plots

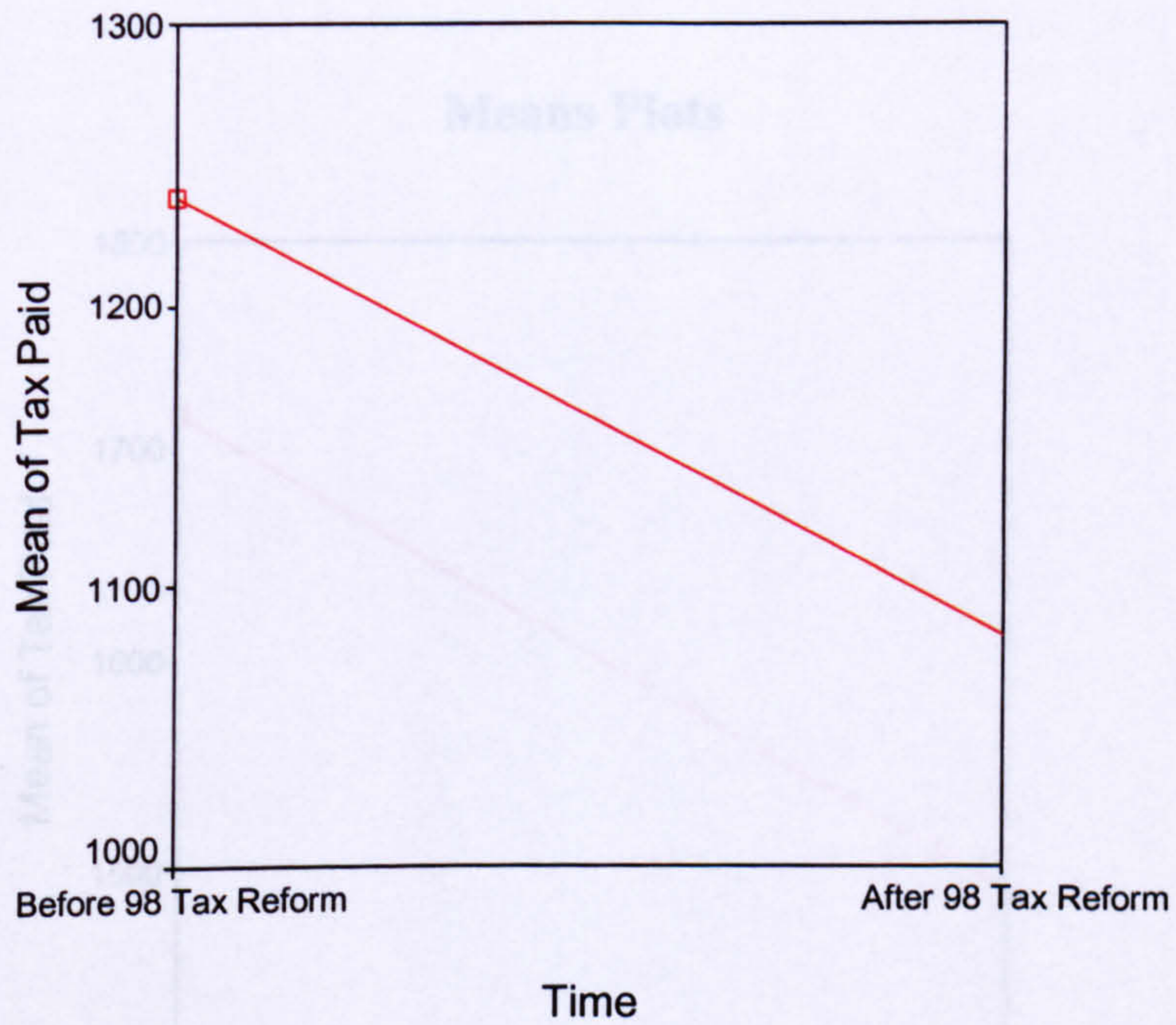


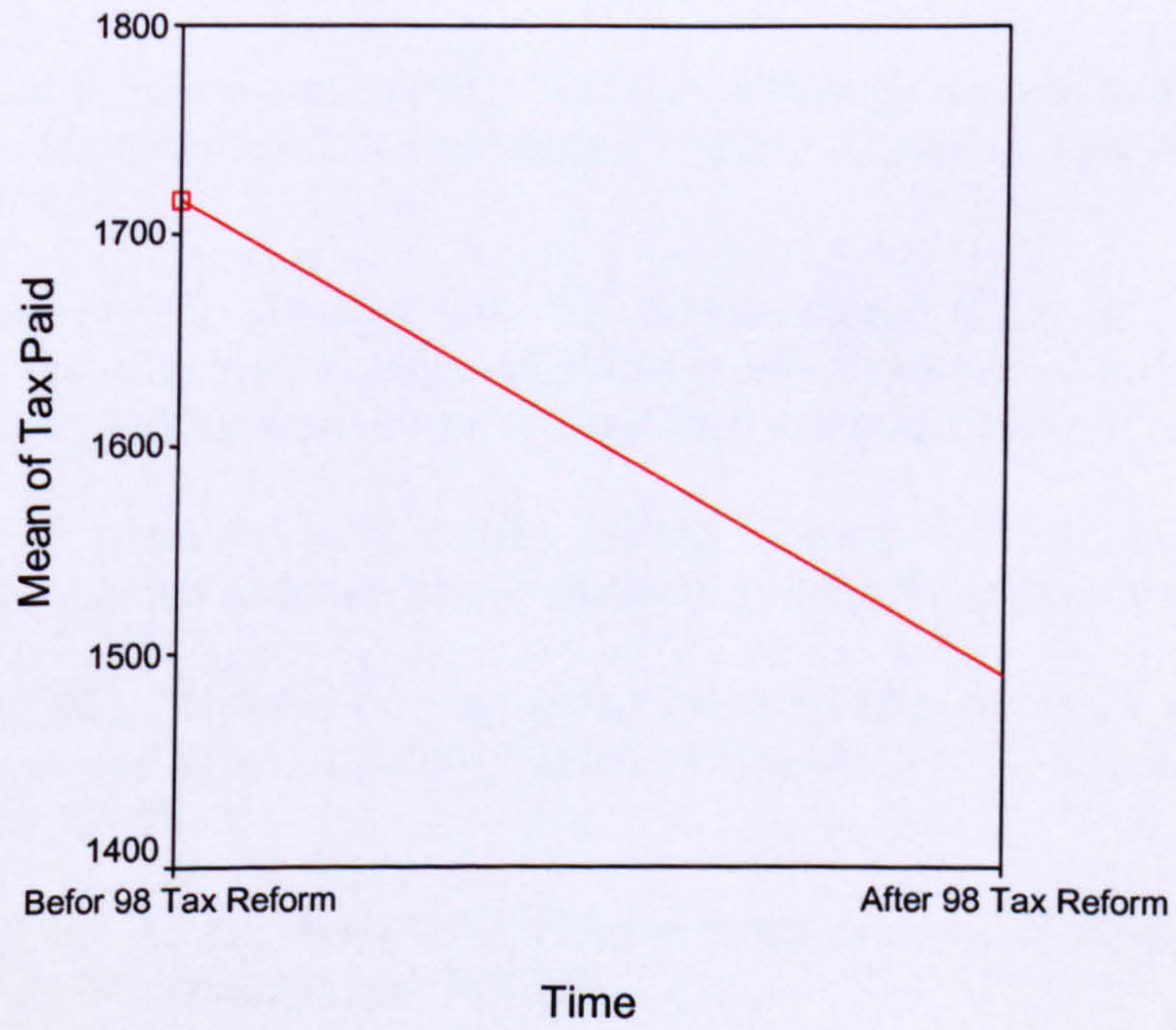
Table 50: UK Companies (Wholesale Industries)

ANOVA

Tax Paid

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6153105.752	1	6153105.75	.209	.648
Within Groups	14178856624.6	482	29416715.0		
Total	6153105.752	483			

Means Plots



Bibliography

Abdel-khalik, A. R. and E. J. Lusk (1974), "Transfer Pricing - A Synthesis." *Accounting Review*, January, pp. 8-23.

Abdel-khalik, A. R. and Ajinkya, B. B. (1983), "An Evaluation of the Everyday Accountant and Researching His Reality." *Accounting, Organizations and Society*, vol. 8, no. 4, pp. 375-385

Abernethy, M.A. - Chua, W.F. - Lockett, P.F. - Selto, F.H. (1999), "Research in Managerial Accounting: Learning from Others' Experiences", *Accounting and Finance*, Vol. 39, pp. 1-27.

Abdullah, F. A. (1987) *Financial Management for the Multinational Firm*, Hemel Hempstead: Prentice Hall.

Abdallah, W. M. (1989), *International Transfer Pricing Policies: Decision Making Guidelines for Multinational Companies*. New York: Quorum Books.

Ackelsberg, R. and G. Yuki (1979), "Negotiated transfer pricing and conflict resolution in organizations." *Decision Sciences*, 10, July, pp. 387-398

Agarwal, S. and S. Rawaswami (1992) "Choice of Foreign Market Entry Mode: Impact of Ownership, Location and Internalization Factors", *Journal of International Business Studies*, 23(1): 1-28.

Al-Eryani, M. (1987), Policies of US Multinational Corporations on Pricing Intracompany Transfers with Foreign Affiliates in More Developed and Less Developed Countries (Theory and Evidence). Unpublished PhD dissertation, Kent State University.

Al-Eryani, M., P. Alam and S. H. Akhter (1990), "Transfer Pricing Determinants of US Multinationals." *Journal of International Business Studies*, Third Quarter, pp. 409-425.

Aliber, R. Z. (1985), "Transfer Pricing: A Taxonomy of Impacts on Economic Welfare", in *Multinationals and Transfer Pricing* edited by Rugman, A. M. and L. Eden. London: Croon Helm. pp. 82-97.

Allingham, M. and A. Sandmo (1972), "Income tax evasion: A theoretical analysis." *Journal of Public Economics*, 1, pp. 323-338.

Altshuler, R. and T. S. Newlon (1991), "The Effects of US Tax Policy on The Income Repatriation Patterns of US Multinational Corporations." *NBER Working Paper No. 3925*.

Anctil, R. M., and S. Dutta (1999), "Negotiated Transfer Pricing and Divisional vs. Firm-Wide Performance Evaluation," *The Accounting Review*, vol. 74, no. 1, pp. 87-104.

Anthony, R. N. and J. Dearden (1980), *Management Control Systems*. (Fourth edition)

- Homewood, ILL: R.D.Irwin.
- Anthony, R. N., Dearden, J. and N. Bedford (1984), *Management Control Systems*. (Fifth edition). Homewood, ILL: R.D.Irwin.
- Anscombe, F.J. (1973) "Graphs in Statistical Analysis," *The American Statistician*, 27(1), February: 17-21.
- Armstrong, M. A. (1998) "The Political Economy of International Transfer Pricing, 1945-1994: State, Capital and the Decomposition of Class," *Critical Perspectives in Accounting*, vol. 8, pp. 391-432.
- Arpan, J. S. (1972a), *International Intercorporate Pricing: Non-American Systems and Views*. New York: Praeger.
- Arpan, J.S. (1972b), "International Intercorporate Pricing: Non-American Systems and Views." *Journal of International Business Studies*, Spring, pp. 1-18.
- Arpan, J. S. (1988), "International Transfer Pricing" in *Issues in Multinational Accounting* eds. Nobes, C. and R. Parker. Oxford: Philip Allan. pp. 161-177.
- BIC (1973), *Setting Intercorporate Pricing Policies*. Business International Corporation
- BIC (1991), *International Transfer Pricing*. Business International and Ernst and Young, Research Report No. F-202.
- Babbie, E. (1994) *The Practice of Social Research*, 7th edition, Belmont, CA: Wadsworth Publishing Company.
- Bailey, A. D. and W. J. Boe (1976), "Goal And Resource Transfers In The Multigoal Organisation." *The Accounting Review*, vol. 51 no. 3, July, pp. 559-573
- Barnett, R. J. and Mueller, R. E. (1974) *Global Reach: The Power of the Multinational Corporation*, New York: Simon & Schuster.
- Baumol, W. J. and T. Fabian (1964) "Decomposition, Pricing for Decentralization and External Economies", *Management Science*, September, 11(1): 1-32.
- Bavishi, V. B. and H. E. Wyman (1980) "Foreign Operations Disclosures by US based and Multinational Corporations: Are they Adequate?", *International Journal of Accounting*, 16(1): 153-68.
- Bazerman, M. H., Magliozzi, T. and Margaret Neale (1985) "Integrative Bargaining in a Competitive Market," *Organizational Behavior and Human Decision Processes*, vol. 35, pp. 294-313.

Bazerman, M. H. and Margaret Neale (1985) "The effect of externally set goals on reaching integrative agreements in competitive markets," *Journal of Occupational Behavior*, vol. 6, pp. 19-32.

Becker, H. (1995), "Comments on Profit Methods proposed by the OECD Discussion Report," *intertax*, 256, 5, pp. 256-259

Belkaoui, A. (1994) *International and Multinational Accounting*, London: The Dryden Press.

Benke R. L. and J. Don Edwards (1980) *Transfer Pricing: Techniques and Uses*, New York: N. A. A.

Benvignati, A.M. (1985), "An Empirical Investigation of International Transfer Pricing by US Manufacturing Firms" in *Multinationals and Transfer Pricing* edited by Rugman, A. M. and L. Eden. London: Croon Helm. pp. 193-211

Benvignati, A.M, (1987), "Domestic Profit Advantages of Multinational Firms." *Journal of Business*, vol. 60, no. 3, pp. 449-461.

Bernard, J. T. and R. J. Wiener (1990) "Multinational Corporations, Transfer Prices and Taxes: Evidence from the US Petroleum Industry" in *Taxation in a Global Economy*, edited by Razin, A. and J. Slemrod, Chicago: The University of Chicago Press.

Berry, J. (1992), "Transfer Pricing in The United Kingdom", *International Bureau of Fiscal Documentation*, March 1992, pp. 134-135.

Berry, A. J, and D. T. Otley (1994) "Case Study Research in Management Accounting and Control." *Management Accounting Research*, 5, pp. 45-65.

Bierman, H. J. (1959) "Pricing Inter-company Transfers", *The Accounting Review*, July, 34: 429-32.

Birnkrant, H., Cole, R. T., Guerard, L. P. and H. N. Higinbotham (1993), "An APA: Now is the Time to Consider This Option", *Tax Management Transfer Pricing Special Report*, Report No. 4, Vol. 1, No. 25, April 28, 1993.

Blessing, P. H. (2002), "US targets foreign-based companies," *International Tax Review*, Vol. 13, 8, pp. 29-31.

Bolander, S. F., Gooding, C. W. and W. G. Mister (1999), "Transfer Pricing Strategies and Lot Sizing Decisions," *Journal of Managerial Issues*, vol. 11, no. 2, pp. 155-165.

Bonfiglio, J.D. (1995), "Tax Planning Strategies for Multinationals Under the New Transfer Pricing Regulations." *The International Tax Journal*, 4, 21, pp. 1-15.

- Bonturi, M. and K. Fukasaku (1993), "Globalisation and Intra-Firm Trade: An Empirical Note." *OECD Economic Studies*, no. 20, Spring, pp. 145-159.
- Borkowski, S. C. (1988) "An Investigation into the Divergence of Theory from Practice Regarding Transfer Pricing Methods", unpublished PhD dissertation, Temple University.
- Borkowski, S. C. (1990), "Environmental and Organizational Factors Affecting Transfer Pricing: A Survey." *Journal of Management Accounting Research*, vol. 2, Fall, pp. 78-99.
- Borkowski, S. C. (1992a). "Organizational and International Factors Affecting Multinational Transfer Pricing." *Advances in International Accounting*, vol. 5, pp. 173-192.
- Borkowski, S. C. (1992b) "Choosing a Transfer Pricing Method: A Study of the Domestic and International Decision Process", *Journal of International Accounting, Auditing and Taxation*, 1(1): 33-49.
- Borkowski, S. C. (1992c), "Section 482, Revenue Procedure 91-22, and the Realities of Multinational Transfer Pricing." *International Tax Journal*, Spring, pp. 59-68
- Borkowski, S. C. (1996) "Advance Pricing (Dis)Agreements: Differences in Tax Authority and Transnational Corporation Opinions" *International Tax Journal*, Summer, 22(3): 23-34.
- Borkowski, S. C. (1996), "An Analysis (Meta- and Otherwise) of Multinational Transfer Pricing." *The International Journal of Accounting*, vol. 31, no. 1, pp. 39-53
- Borkowski, S. C. (1997a), "Factors Motivating Transfer Pricing Choices of Japanese and United States Transnational Corporations." *Journal of International Accounting, Auditing and Taxation*, 6(1), pp. 25-47.
- Borkowski, S. C. (1997b), "The Transfer Pricing Concerns of Developed and Developing Countries", *The International Journal of Accounting*, vol. 32, no. 3, pp. 321-336.
- Borstell, T. (1997) "Transfer Pricing: Introduction", *International Tax Review (Supplement)*, April: 3-8.
- Borstell, T., Huibregtse, S., Miyamoto, A. and E. Sporken (1997), "OECD: Global Theory, Local Practice," *International Tax Review*, May, pg.36.
- Boyns, T., Edwards, J. R. and C. Emmanuel (1999), "A longitudinal study of the determinants of transfer pricing change," *Management Accounting Research*, vol. 10, pp. 85-108.
- Brean, D. (1985), "Financial Dimensions of Transfer Pricing", in *Multinationals and Transfer Pricing* edited by Rugman, A. M. and L. Eden. London: Croon Helm. pp. 149-

- Brech, M. and M. Sharp (1984), "Inward Investment: Policy Options for the UK," *Chatham House Papers 21*. London: Routledge.
- Breiman, L., Friedman, J. H., Olshen, R. A. and C. J. Stone (1984), *Classification and Regression Trees*. Belmont, California: Wadsworth International Group
- Bromwich, M. and S. Inoue (1994) *Management Practices and Cost Management Problems in Japanese-Affiliated Companies in the United Kingdom*, CIMA.
- Brooke, M. Z. and H. L. Remmers (1970) *The Strategy of Multinational Enterprises: Organization and Finance*, London: Longman.
- Broom, H. N. (1948) "A Method of Accounting for Inter-departmental Profits", *The Accounting Review*, October, 23(4): 417-20.
- Buckley, P. J. and M. C. Casson (1976), *The Future of the Multinational Enterprise*, London: Macmillan.
- Buckley, P. J. (1989) *The Multinational Enterprise: Theory and Applications*, London: Macmillan.
- Buckley, P. J. and M. C. Casson (1991), *The Future of the Multinational Enterprise*, 2nd edition, London: Macmillan.
- Buckley, P. J. and J. F. Hughes (1997) "Japanese Transfer Pricing Policy: A Note", *Applied Economic Letters*, 4: 13-17.
- Buckley, P. J. and M. C. Casson (1999), "Analyzing Foreign Market Entry Strategies: Extending the Internalization Approach," *Journal of International Business Studies*, 29, 3, pp. 539-562.
- Burns, J. O. (1980), "Transfer Pricing Decisions in US Multinational Corporations." *Journal of International Business Studies*, vol. 11, no. 2, Fall, pp. 23-39.
- Burns, P. (2002) "Supplement: United States," *International Tax Review*, 10, pp. 85-89.
- Bursk, E. C., Dearden, J., Hawkins, D. F. and V. M. Longstreet (1971), *Financial Control of Multinational Operations*. Research Foundation of Financial Executives Institute
- Burton, R. M., and Borge Obel (1988), "Opportunism, Incentives, and the M-Form Hypothesis," *Journal of Economic Behavior and Organization*, vol. 10, pp. 99-119.
- Business International Corporation and Ernst & Young (BIC and E&Y) (1991)

International Transfer Pricing, New York: BIC.

Calvet, R. L. (1981) "A Synthesis of Foreign Direct Investment Theories and Theories of the Multinational Firm", *Journal of International Business Studies*. Spring/Summer: 43-59.

Casley, A. (1999), "CPM vs. TNMM," *Tax Planning International Review*, pp. 3-8.

Casley, A. and A. Abu-El-Ata (2002), "Transfer Pricing When Losses Rises." *ITPJ*, July/August 2002, pp. 138-144.

Casson, M. (1979) *Alternatives to the Multinational Enterprise*, London: Macmillan.

Casson, M.C. (1987), *The Firm and the Market: Studies On Multinational Enterprises and the Scope Of The Firm*. London: Blackwell.

Caves, R. E. (1971) "International Corporations: the Industrial Economics of Foreign Investment", *Economica*, Feb: 1-27.

Chalos, P. and S. Haka (1990), "Transfer pricing under bilateral bargaining." *The Accounting Review*, 65 (3), pp. 624-641.

Chalos, P., Hakas, S. F. and S. P. Ravenscroft (1993), "Bargaining Behavior in a Transfer Pricing Experiment," *Organizational Behavior and Human Decision Processes*, vol. 55, pp. 414-443.

Chan, K. H. and L. Chow (1997) "An Empirical Study of Tax Audits in China on International Transfer Pricing", *Journal of Accounting and Economics*, 23(1997): 83-112.

Chan, K. H. and L. Chow (1997), "International Transfer Pricing for Business Operations in China: Inducements, Regulation and Practice" in *International Transfer Pricing in China*. Oxford: Blackwell Publishers Ltd., pp. 1269-1289

Chang, J. (1992) "Transfer Pricing and Tax Strategies for Multinational Companies in Taiwan", unpublished D.B.A. dissertation, United States International University.

Choi, F. D. S. and G. G. Mueller (1992), *International Accounting*, (Second edition), Englewood Cliffs, NJ: Prentice Hall International.

Coase, R. (1937), "The Nature of the Firm." *Economica*, 4, pp. 386-405.

Colbert, G. J. and B. H. Spicer (1995), "A Multi-Case Investigation of a Theory of the Transfer Pricing Process." *Accounting, Organizations and Society*, vol. 20, no. 6, pp. 423-456.

Cole, R. T. (ed.) (1999), *Practical Guide to U.S. Transfer Pricing*. New York: Panel

Publishers.

Collins, J., Kemsley, D. and M. Lang (1998), "Cross-jurisdictional income shifting and earnings valuation." *Journal of Accounting Research*, vol. 36, no. 2, pp. 209-229.

Collins, J. H. and D. A. Shackelford (1998), "Global Organizations And Taxes: An Analysis Of The Dividend, Interest, Royalty, And Management Fee Payments Between US Multinationals' Foreign Affiliates." *Journal of Accounting and Economics*, 24, pp. 151-173.

Conference Board (1970), *Intercompany Transaction in the Multinational Firm*. New York: The Conference Board.

Cook, P.W., Jr, (1955) "Decentralisation and the Transfer Pricing Problem", *The Journal of Business*, 28(2): 87-94.

Cools, M. (1999), "International Commercial Databases for Transfer Pricing Studies," *ITPJ*, September/October, pp. 167-182.

Coopers and Lybrand (1993), *International Transfer Pricing*. London: CCH International.

Coopers and Lybrand (1997) *International Transfer Pricing: 1997-1998*, Bicester, Oxfordshire: CCH Editions Ltd.

Crain, T. L. and R. H. Stitts (1994) "A Comparison of Gross Profit Margins Between Foreign-controlled Domestic Corporations and Comparable US-controlled Domestic Corporations", *Journal of International Accounting, Auditing and Taxation*, 3(1): 85-101.

Cravens, K. S. (1992), *A Comparative Investigation of Transfer Pricing Practices in an International Environment*. Unpublished PhD dissertation, Texas A&M University.

Cravens, K. S. and W. T. Shearon, Jr. (1996), "An Outcome-Based Assessment of International Transfer Pricing Policy." *International Journal of Accounting*, vol. 31, no. 4, pp. 419-443.

Cravens, K. S. (1997), "Examining the Role of Transfer Pricing as a Strategy for Multinational Firms." *International Business Review*, vol. 16, no. 2, pp. 127-145.

Crow, S. and E. Sauls (1994), "Setting the Right Transfer Price." *Management Accounting*, December, pp. 41-47.

Culbertson, R. E. (1995), "A Rose by Any Other Name: Smelling the Flowers at the OECD's (Last) Resort," *Tax Notes International*, August, pp. 370-382.

Curet, O. and J. Elliott (1997), "Understanding Transfer Pricing: A Case-Based

Reasoning Approach." *European Journal of Information Systems*, 6, pp. 97-106.

Cyert, R.M. and J.G. March (1963) *A Behavioral Theory of the Firm*, Hemel Hempstead: Prentice-Hall.

Czechowicz, Choi, F. D. S and V. B. Bavishi (1982), *Assessing Foreign Subsidiary Performance: Systems & Practices of Leading Multinational Companies*. New York: Business International Corporation.

Davies, D. R. (2000), "The new United Kingdom transfer pricing rules," *The International Tax Journal*, Fall, pp. 58-69.

Dean, J. (1955) "Decentralisation and Intra-company Pricing", *Harvard Business Review*, 33(4), July-August: 65-74.

Dearden, J. (1960) "Interdivisional Pricing", *Harvard Business Review*, January-February, 38(1): 117-25.

Dejong, D. V., Forsythe, R., Kim, J. and W. C. Uecker (1989), "A Laboratory Investigation of Alternative Transfer Pricing Mechanisms," *Accounting, Organizations and Society*, vol. 14, no. 1/2, pp. 41-64.

Deloitte & Touche (1997), *The Ten Percenters - Fast Growing SMEs in Great Britain*. Second Report, London: Deloitte & Touche.

Deloitte & Touche (1998), *The Ten Percenters - Fast Growing SMEs in Great Britain*. Third Report, London: Deloitte & Touche.

Deloitte Touche Tohmatsu (1995), "TR 95/D23." *International Transfer Pricing*, Special Edition - October 1995, Deloitte Touche Tohmatsu.

Deloitte Touche Tohmatsu (1997), "UK Inland Revenue announces comprehensive review of Transfer Pricing Law and Practice." *The Arm's Length Standard*, Special Edition, October 1997.

Deloitte Touche Tohmatsu (1998a), "The New UK Transfer Pricing Regulations." *The Arm's Length Standard*, Special Edition, Deloitte Touche Tohmatsu, March 1998.

Deloitte Touche Tohmatsu (1998b), "International Transfer Pricing." *Deloitte Touche Tohmatsu*, January-April.

Deloitte Touche Tohmatsu (1999), "Strategy Matrix for Global Transfer Pricing: Comparison of Methods, Documentation, Penalties and Other Issues," *Deloitte Touche Tohmatsu*, 1 January.

Dent, J. F. and M. Ezzamel (1987), "Organisational Control and Management

Accounting" in *Advanced Management Accounting: An Organisational Approach*, ed. M.Ezzamel. London: Cassell Education

Diewart, W. E. (1985), "Transfer Pricing and Economic Efficiency", in *Multinationals and Transfer Pricing* edited by Rugman, A. M. and L. Eden. London: Croon Helm. pp. 47-81.

Dillow, C. (1989), *A Return to the Trade Surplus? The Impact of Japanese Investment on the UK*. London: Nomura.

Doyle, P., J. Saunders and V. Wong (1992), "Competition in Global Markets: A Case Study of American and Japanese Competition in the British Market." *Journal on International Business Studies*, 3rd quarter, pp. 419-442.

Driffield, N. and M. Munday (1998), "The impact of foreign direct investment on UK manufacturing: is there a profit squeeze in domestic firms?" *Applied Economics*, 30, pp. 705-709.

Drury, C. (1994) "Survey of Management Accounting in UK Building Societies", *CIMA Report*.

Drury, C., S. Braund, P. Osborne and M. Tayles (1993) "A Survey of Management Accounting Practices in UK Manufacturing Companies", *ACCA Research Report No. 32*.

Dunning, J. H. (1977) "Trade, Location of Economic Activity and the MNE: A Search for an Eclectic Approach" in *The International Allocation of Economic Activity*, edited by Ohlin, B. et al, London: Macmillan. Reprinted as Chapter 3 in Dunning, J.H. (1981) *International Production and the Multinational Corporation*, London: George Allen & Unwin.

Dunning, J. H. (1979) "Explaining Changing Patterns of International Production: In Defense of the Eclectic Theory", *The Oxford Bulletin of Economics and Statistics*, 41: 269-96. Reprinted as Chapter 4 in Dunning, J. H. (1981) *International Production and the Multinational Corporation*, London: George Allen & Unwin.

Dunning, J. H. (1980), "Towards An Eclectic Theory Of International Production." *Journal of International Business Studies*, vol. 11, Spring/Summer, No. 1, pp. 9-31.

Dunning, J. H. (1981), *International Production and the Multinational Enterprise*. London: Allen and Unwin

Dunning, J. H. (1986), *Japanese Participation in British Industry*. London: Croom Helm.

Dunning, J. H. (1988), *Explaining International Production*. London: Allen and Unwin.

Dunning, J. H. (1993), *Multinational Enterprises and the Global Economy*. MA:

Addison-Wesley.

Dunning, J. H. and R. Pearce (1995), Chapter 2 "The nature and growth of MNEs" in Nobes and Parker (1995), *Comparative International Accounting*. (Fourth edition). London: Prentice Hall.

Dunning, J. H. (1998), "Location and the Multinational Enterprise: A Neglected Factor?" *Journal of International Business Studies*, vol. 29, no. 1, First Quarter, pp. 45-66.

Easterby-Smith, M., Thorpe, R. and A. Lowe (1991) *Management Research: An Introduction*. London: Sage Publications Ltd.

Easterby-Smith, M., Thorpe, R. and A. Lowe (1996) *Management Research: An Introduction*. London: Sage Publications Ltd.

Eccles, R. G. (1983), "Control with Fairness in Transfer Pricing." *Harvard Business Review*, 61(6), pp. 149-161.

Eccles, R. G. (1985), *The Transfer Pricing Problem: A Theory for Practice*. Lexington, MA: Lexington Books.

Eccles, R. and H. White (1988), "Price and Authority in Inter-Profit Center Transactions," *American Journal of Sociology*, 94, pp. S17-S51.

Eden, L. (1985), "The Microeconomics of Transfer Pricing", in *Multinationals and Transfer Pricing* edited by Rugman, A. M. and L. Eden. London: Croon Helm. pp. 13-46.

Eden, L. ed. (1994), "Who Does What after NAFTA? Location Strategies of U.S. Multinationals" in *Multinationals in North America*. Calgary: University of Calgary Press, pp. 193-252.

Eden, L. (1998), *Taxing Multinationals: Transfer Pricing and Corporate Income Taxation in North America*. Toronto: University of Toronto Press.

Eden, M. Tina Dacin, William P. Wan (2001), "Standard across borders: crossborder diffusion of the arm's length standard in North America," *Accounting Organizations and Society*, 26: pp.1-23.

EIU (1994), *International Transfer Pricing 1994*. Ernst & Young, New York: EIU

Elliott, J. (1994) "Keeping Transfer Pricing at Arm's Length." *Professional Investor*, December, pp. 42-44.

Elliott, J. (1995), "Developments in Transfer Pricing." *British Tax Review*, no. 4, pp. 348-357.

- Elliott, J. (1998a), "International Transfer Pricing: The Consultative Document." *Management Accounting*, vol. 76, no. 3, March, pp. 34-35.
- Elliott, J. and C. R. Emmanuel (1998), *A Field Study Investigation of International Transfer Pricing Policy (ITP) in 12 Organisations*. CIMA Research Grant.
- Elliott, J. (1999), *Managing International Transfer Pricing Policies: A Grounded Theory Study*. Unpublished PhD Dissertation, University of Glasgow.
- Elliott, J. and C. R. Emmanuel (2000), *International Transfer Pricing: A Study in Cross-border Transactions*. London: CIMA Publishing.
- Emmanuel, C. R. (1999), "Income Shifting and International Transfer Pricing: A Three-Country Example," *ABACUS*, Vol. 35, No. 3, pp. 252-267.
- Emmanuel, C. R., Otley, D. and K. Marchant (1990), *Accounting for Management and Control*. (Second edition). London: Chapman and Hall.
- Emmanuel, C. R. and M. Mehafdi (1994), *Transfer Pricing*. London: The Chartered Institute of Management Accountants and Academic Press.
- Emmanuel, C. R. and M. Mehafdi (1996), "Transfer Pricing," *Management International Review*, vol. 36, no. 2, pg. 186.
- Emmanuel, C. R. and M. Mehafdi (1998), "An Investigation of Empirical Research in Transfer Pricing." *European Accounting Association 21st Annual Congress*, Antwerp, April 6-8, 1998.
- Ernst & Young (1993) *Rethinking Intragroup Services: The Conflict Between Theory and Practice in Transfer Pricing*, London: Ernst & Young Thought Leadership Series.
- Ernst & Young (1995), *Transfer Pricing: Risk Reduction and Advance Pricing Agreements*. Ernst & Young.
- Ernst & Young (1996) *Transfer Pricing Monitor -1996*, New York: Ernst & Young.
- Ernst & Young (1997a), "Ernst & Young Transfer Pricing 1997 Global Survey." *Tax Notes International*, September 8, pp. 761- 777.
- Ernst & Young (1997b), "Modernisation Of The UK's Transfer Pricing Legislation." *News*, Issue 4, Winter, p.9-10.
- Ernst & Young (1999), *Transfer Pricing 1999 Global Survey*. London: Ernst & Young International, Inc.
- Ernst & Young (2000), *Transfer Pricing in the UK*. London: Ernst & Young

International, Inc.

Ernst & Young (2001), *Transfer Pricing 2001 Global Survey: Making Informed Decisions in Uncertain Times*. London: Ernst & Young International, Inc.

Ezzamel, M. (1987), "Transfer Pricing" in *Advanced Management Accounting: An Organisational Approach*, ed. M. Ezzamel. London: Cassell Education.

Feinschreiber, R. (2000), *Transfer Pricing International: A Country-by-Country Guide*. New York: John Wiley & Sons, Inc.

Feinschreiber, R. ed. (2001), *Transfer Pricing Handbook*. 3rd Edition, Vol. 1, New York: John Wiley & Sons, Inc.

Ferguson, R. C. (1981) "Transfer Pricing: Selecting Suitable Methods", *Cost and Management*, 55 (2): 53-7.

Field, A. (2000), *Discovering Statistics: Using SPSS for Windows*. London: Sage Publications, Inc.

Fleischman, R. F. and L. D. Parker (1990) "Managerial Accounting Early in the British Industrial Revolution: The Carlton Company, A Case Study", *Accounting and Business Research*, 20(79): 211-21.

Foster, S. D. (1994), *An Empirical Investigation of the Ability of Multinational Enterprises to Affect Their United States Income Tax Liability*. Unpublished PhD Dissertation, Virginia Polytechnic Institute and State University.

Fregmen, J. (1970) "Transfer Pricing and Management Goal", *Management Accounting (NAA)*, December, 52: 25-31.

Freund, J. E., F. J. Williams and B. M. Perles (1993) *Elementary Business Statistics: The Modern Approach*, 6th edition, Englewood Cliffs, New Jersey: Prentice-Hall International Inc.

Gianni, M.B. (1997) "Transfer Pricing Penalties: A Tougher Standard", *The Practical Accountant*, March, 30(3): 39-44.

Gibbins, M., Richardson, A. and J. Waterhouse (1990), "The Management of Corporate Financial Disclosure: Opportunism, Ritualism, Policies, and Processes." *Journal of Accounting Research*, vol. 28, no. 1, Spring, pp. 121-143.

Gideon, K. W. (1990) "Statement before the Ways and Means Oversight Subcommittee Hearing on Foreign-owned Businesses in the US", *Daily Tax Report*, June 13: L25-9.

Gideon, K. W., B. Slone, R. B. Stack and D. J. Charles (1996) "Advance Pricing

Agreements", *International Tax Review*, June: 9-12.

Gill, J. and P. Johnson (2002), *Research Methods for Managers*. London: Sage Publications Ltd, 3rd Edition.

Giovannini, A., Hubbard, R. G. and J. Slemrod (1993), "Introduction" in *Studies in International Taxation* edited by A. Giovannini, R. G. Hubbard and J. Slemrod. Chicago: NBER/University of Chicago.

Glaser, B. G. and A. L. Strauss (1967), *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago: Aldine.

Goetz, W. E. (1967) "Transfer Prices: An Exercise in Relevancy and Goal Congruence", *The Accounting Review*, July, 42(3): 435-40.

Gould, J. R. (1964) "Economic Price Determination", *Journal of Business*, January: 61-7.

Govindarajan, V. and B. Ramamurthy (1983) "Transfer Pricing Policies in Indian Companies", *Chartered Accountant (India)*, November, 32(5): 296-301.

Grabski, S. V. (1985), "Transfer Pricing in Complex Organizations: A Review and Integration of Recent Empirical and Analytical Research." *Journal of Accounting Literature*, Vol. 4, pp. 33-71.

Granick, D. (1975) "National Differences in the Use of Internal Transfer Prices", *California Management Review*, XVII(4): 28-40.

Granovetter, M. (1985), "Economic action and social structure: the problem of embeddedness," *American Journal of Sociology*, vol. 91, no. 3, pp. 481-510.

Greenberg, P. S. and R. H. Greenberg (1997), "Social Utility in a Transfer Pricing Situation: The Impact of Contextual Factors," *Behavioral Research in Accounting*, vol. 9, pp. 113-153.

Greene, J. and M. G. Duerr (1970) *Intercompany Transactions in the Multinational Firm*, New York: The Conference Board.

Greene, J. and M. D'Oliveira (1982), *Learning to Use Statistical Tests in Psychology: A Student's Guide*, Milton Keynes : Open University Press.

Grubbs, F. E. (1969) "Procedures for Detecting Outlying Observations in Samples", *Technometrics*, 11(1): 1-21.

Grubert, H. (1985), "Unresolved Issues In Transfer Pricing Methods", in *Multinational and Transfer Pricing* edited by Rugman, A. M. and L. Eden. London: Croon Helm. pp. 64-169.

Grubert, H. and J. Mutti (1991), "Taxes, Tariffs and Transfer Pricing in Multinational Corporate Decision Making." *The Review of Economics and Statistics*, 73, May, pp. 285-293

Grubert, H., Goodspeed, T. and D. Swenson (1993), "Explaining the Low Taxable Income of Foreign-Controlled Companies in the United States", in *Studies in International Taxation* edited by A. Giovannini, R. G. Hubbard and J. Slemrod. Chicago: NBER/University of Chicago.

Grubert, H. (1993), "Taxes and Foreign Controlled Companies in the United States", *Foreign Direct Investment in the United States: An Update*, US Department of Commerce, June 1993, pp. 90-98.

Hansen, D. R., R. L. Crosser and D. Laufer (1992) "Moral Ethics v. Tax Ethics: The Case of Transfer Pricing Among Multinational Corporations", *Journal of Business Ethics*, September, 11: 679-86.

Harris, M., C. H. Krievell and A. Rajiv (1982) "Asymmetric Information, Incentives and Intra-firm Resource Allocation", *Management Science*, June, 28: 605-20.

Harris, D. G. (1993), "The Impact of US Tax Law Revision on Multinational Corporations' Capital Location and Income-Shifting Decisions." *Journal of Accounting Research*, vol. 31 supplement 1993, pp. 111-140.

Harris, D. G, Morck, R., Slemrod, J. and B. Yeung (1993), "Income Shifting in US Multinational Corporations", in *Studies in International Taxation* edited by A. Giovannini, R. G. Hubbard and J. Slemrod. Chicago: NBER/University of Chicago.

Hartman, D. (1985), "Tax Policy and Foreign Direct Investment." *Journal of Public Economics*, 26, pp. 107-121.

Herbert, M. and D. Morris (1989), "Accounting Data for Value Chain Analysis", *Strategic Management Journal*, 10: 175-88.

Hielscher, K., T. Kaneko and T. Katsushima (2000), "Application of Transactional Profit Methods." *ITPJ*, September/October, pp. 188-192.

Higson, C. and J. Elliott (1993), "Effective Tax Rates on UK and Foreign Income -The Impact of the UK Budget Proposals." *British Tax Review*, 5, p.330-340.

Higson, C. and J. Elliott (1994), "The Incentive to Locate a Multinational Firm: The Effect of Proposed Tax Reform in the UK." *Journal of International Tax and Public Finance* 1:1, pp. 81-97.

Hines, F. R. and E. M. Rice (1990), "Fiscal Paradise: Foreign Tax Havens And American Business." *The Quarterly Journal of Economics*, 109, pp. 149-182.

- Hirshleifer, J. (1956), "On the Economics of Transfer Pricing." *The Journal of Business*, July, pp. 172-184.
- Hirshleifer, J. (1957) "Economics of the Divisionalised Firm", *Journal of Business*, April, (40): 96-108.
- Hirshleifer, J. (1964), "Internal Pricing and Decentralization", in *Management Controls: New Directions in Basic Research* by Bonini, C. P., R. J. Jaedicke and H. Wagner, Maidenhead: McGraw-Hill.
- Hoaglin, D. C., F. Mosteller and J. W. Tukey, editors (1983) *Understanding Robust and Exploratory Data Analysis*, New York: John Wiley & Sons Inc.
- Hoffman, M. D. (2001), "International Taxation and the Income Shifting Behaviour of Multinational Enterprises" unpublished PhD Dissertation, University of Alberta.
- Holland, J. (1993) *International Financial Management*, 2nd edition, Oxford: Blackwells.
- Hood, N. and S. Young (1979) *The Economics of Multinational Enterprise*, London: Longman.
- Horiguchi, D. (2002) "Supplement: Japan," *International Tax Review*, 10, pp. 95-103
- Hoshower, L. B. and L. A. Mandel (1986), "Transfer Pricing Policies of Diversified US-Based Multinationals." *The International Journal of Accounting*, 22 (1), Fall, pp. 51-59.
- Howard, K., Sharp, J. A. and A. M. Mostafa (1982), "Current Issues in Transfer Pricing." *Managerial Finance*, vol. 8, no. 3-4, pp. 1-36.
- Howell, D. C. (1997) *Fundamental Statistics for the Behavioral Sciences*, 3rd edition, Boston, Mass: PWS-KENT Publishing Company.
- Humphrey, C. and R. W. Scapens (1996), "Theories And Case Studies Of Organizational Accounting Practices: Limitation Or Liberation?" *Accounting, Auditing & Accountability Journal*, vol9, no 4, p.86-106.
- Hymer, S. H. (1960), "The International Operation of National Firms: A Study of Foreign Direct Investment." Unpublished PhD Dissertation.
- Hymer, S. H. (1976) Revised edition: *The International Operation of National Firms: A Study of Direct Foreign Investment*, Cambridge, Mass.: MU Press.
- Iglewicz, B. (1983) "Robust Scale Estimators and Confidence Intervals for Location" in *Understanding Robust and Exploratory Data Analysis*, edited by Hoaglin, D. C., F. Mosteller and J. W. Tukey (1983) New York: John Wiley & Sons, Inc.

Inland Revenue (1981), *Guidance Notes: The Transfer Pricing Of Multinational Enterprises*. 26 January 1981, London: Inland Revenue.

Inland Revenue (1997a), *Modernisation of the Transfer Pricing Legislation*. Consultative Document, 10 October 1997.

Inland Revenue (1997b), "Strengthening Tax Rules for Multinationals." *Inland Revenue Press Release*, IR6, 2nd July 1997.

Inland Revenue (1998a), "Modernisation of the Transfer Pricing Legislation: Outcome of Consultations." *Inland Revenue Press Release*, IR25, 17 March 1998.

Inland Revenue (1998b), *Modernisation of the Transfer Pricing Legislation: Outcome of Consultations*. Inland Revenue, 17 March 1998.

Inland Revenue (1998c), "Transfer Pricing and Advance Pricing Agreements." *Inland Revenue Press Release*, IR26, 17 March 1998.

Jacob, J. (1995), "Taxes and Transfer Pricing: Income Shifting and the Volume of Intra-Firm Transfers" unpublished PhD Dissertation, Northwestern University.

Jacob, J. (1996), "Taxes and Transfer Pricing: Income Shifting and the Volume of Intrafirm Transfers." *Journal of Accounting Research*, vol. 34, no. 2, Autumn, pp. 301-312.

Japanese National Tax Agency (1986), *Special Taxation Measures Law*, Article 66-5 (later renumbered Article 66-4).

Jenkinson, M. W. (1914) "Some Principles of Accounting Affecting Cost Accounts", *The Accountant*, April 18, L(2054): 573-7.

Johnson, H. (1970), "The Efficiency and Welfare Implications of the International Corporation" in *The International Corporation*. MA: MIT Press.

Johnson, W. A. and R. J. Kirsch (1991), "International Transfer Pricing and Decision Making in United States Multinationals." *International Journal of Management*, vol. 8, no. 2, pp. 554-561.

Jones, C. S. (1985) "An Empirical Study of the Evidence for Contingency Theories of Management Accounting Systems in Conditions of Rapid Change." *Accounting, Organizations and Society*, vol. 10, no. 3, pp. 303-328.

Kahan, J. P. (1968), "Effects of Level of Aspiration in an Experimental Bargaining Situation," *Journal of Personality and Social Psychology*, vol. 8, no. 2, pp. 154-159.

Kantor, J., Lefebvre, C. and L. Lin (1993), "Economic Determinants of International

Transfer Pricing and the Related Accounting Issues, with Particular Reference to Asian Pacific Countries," *The International Journal of Accounting*, vol. 28, pp. 49-70.

Kanodia, C. (1979) "Risk Sharing and Transfer Pricing Systems under Certainty", *Journal of Accounting Research*, Autumn, 5(3): 367-79.

Kaplan, R. S. and A. A. Atkinson (1989), *Advanced Management Accounting Theory*. (Second edition) Englewood Cliffs, NJ: Prentice Hall.

Kast, F. E. and J. E. Rosenzweig (1985), *Organization and Management -A Systems and Contingency Approach*. (Fourth edition). New York: McGraw Hill.

Kato, H., Ishida, S. and A. Miyamoto (1994), "Japanese Transfer Pricing Audits," *Tax Management Transfer Pricing Special Report*, The Bureau of National Affairs, 13 April, pg. 5.

Kelly, J. (1995) "Accountancy: Transfer Pricing comes out of the Shadows", *Financial Times*, November 23: 11.

Kim, Kee Hee (2002), "Looking at NAFTA Eight Years Later," Allied Academies International Conference, Proceedings of the Academy of International Business Research, Vol. 2, No. 2, pg.19.

Kim, S. H. and S. W. Miller (1979), "Constituents of the International Transfer Pricing Decision." *Columbia Journal of World Business*, vol. 14, no. 1, Spring, pp. 69-77.

Kim, W. S. and E. O. Lyn (1990) "FDI Theories and the Performance of Foreign Multinationals Operating in the US", *Journal of International Business Studies*, First Quarter: 41-54.

Kindleberger, C. P. (1969) *American Business Abroad*, New Haven: Yale University Press.

Kinnear, P. R. and C. D. Gray (1997) *SPSS for Windows Made Simple*, 2nd edition, Hove, East Sussex: Psychology Press.

Klassen, K., Lang, M. and M. Wolfson (1993), "Geographic Income Shifting by Multinational Corporations in Response to Tax Rate Changes." *Journal of Accounting Research*, vol. 31 supplement 1993, pp. 141-173.

Klein, B., Crawford, R. C. and A. Alchian (1978), "Vertical Integration, Appropriate Rents, and Competitive Contracting Process," *Journal of Law and Economics*, vol. 21, pp. 297-326.

Kotter, J. P. (1976), "Organizational Design", in *Organizational Behavior and Administration - Cases and Readings*, ed. Lawrence, P .R., L. B. Bains and J. W. Lorsch,

3rd Edition. Illinois: Richard D Irwin, Inc.

KPMG (1994), *Review of Internal Revenue Service Statistics on Foreign Controlled Corporations 1986 through 1990*. Prepared for Organization for International Investment, Prepared by Policy Economics Group, KPMG Peat Marwick, January 1994.

KPMG (1995), "Is the Transactional Net Margin Method in the OECD Transfer Pricing Guidelines a Comparable Profits Method in Disguise?" *Transfer Pricing News*, November 1995, L. Olson and K. Boatman.

KPMG (1996), "Country Profile: Australia," *Transfer Pricing News*, November, J. Donaldson.

Lall, S. (1979), "Transfer pricing and developing countries: Some problems of investigation," *World Development*, 7, pp. 59-71.

Lambert, D. R. "Transfer Pricing and Inter-divisional Conflict", *California Management Review*, Summer, 21(4): 70-5.

Larson, R. L. (1974) "Decentralization in Real Life", *Management Accounting (NAA)*, March, 55: 28-32.

Laster, D. S. and R.N. McCauley (1994), "Making Sense of the Profits of Foreign Firms in the United States." *Federal Reserve Bank of New York Quarterly Review*, Summer, Fall, pp.44-75.

Laughlin, R. (1995), "Empirical Research in Accounting: Alternative Approaches And A Case: For 'Middle Range' Thinking." *Accounting, Auditing and Accountability Journal*, 8 (1), pp.63-87.

Lawless, J. (1998) "Challenge of going global." *The Sunday Times*, 26 April 1998, pg. 9.

Lawrence, P. R. and J.W. Lorsch (1967), *Organization and Environment*. Harvard Business School.

Lecraw, D. J. (1983), "Performance of Transnational Corporations in Less Developed Countries." *Journal of International Business Studies*, Spring/Summer, pp. 15-33.

Lecraw, D. J. (1985), "Some Evidence of Transfer Pricing by Multinational Corporations", in *Multinationals and Transfer Pricing* edited by Rugman, A. M. and L. Eden. London: Croon Helm. pp. 223-240.

Leedy, P. D. (1997), *Practical Research: Planning and Design*. New Jersey: Merrill Prentice Hall.

Leitch, R. A. and K. S. Barrett (1992), "Multinational Transfer Pricing: Objectives and

Constraints." *Journal of Accounting Literature*, vol. 11, pp. 47-92.

Liang, T., Chandler, J.S., Han, I. and J. Roan (1992), "An Empirical Investigation Of Some Data Effects Of The Classification Accuracy Of Probit, ID3, And Neural Networks." *Contemporary Accounting Research*, vol. 9, no. 1, Fall, pp. 306-328.

Libby, R. and J. L. Luft (1997), "Profit Comparisons, Market Prices and Managers' Judgments About Negotiated Transfer Prices," *The Accounting Review*, vol. 72, no. 2, pp. 217-229.

Lin, L., Lefebvre, C. and J. Kantor (1993), "Economic Determinants of International Transfer Pricing and the Related Accounting Issues, with Particular Reference to Asian Pacific Countries." *The International Journal of Accounting*, 28, pp. 49- 70.

Lincoln, Y. S. and E. G. Guba (1985), *Naturalistic Enquiry*. Newbury Park: Sage.

Litwin, M. S. (1995), *How to Measure Survey Reliability and Validity*. Volume 7, The Survey Kit. Thousand Oaks: Sage.

Livens, L. (1995), *UK Transfer Pricing Guide*. London: Moores Rowland.

Livesey, F. (1967) "The Pricing of Internal Transfers", *The Accountant*, July 22, 157(4828): 99-104.

Llewellyn, S. (1992), "The Role of Case Study Methods in Management Accounting Research: A Comment." *British Accounting Review*, 24, pp. 17-31.

Locke, K. (1996), "Rewriting The Discovery of Grounded Theory after 25 years?", *Journal of Management Inquiry*, vol. 5, no. 3, September; pp. 239-245.

Luft, J. L. and R. Libby (1997), "Profit Comparisons, Market Prices and Managers' Judgements about Negotiated Transfer Prices." *The Accounting Review*, vol. 72, no. 2, April, pp. 217-229.

Lyles, M. A. and R. K. Reger (1993), "Managing for Autonomy in Joint Ventures: A Longitudinal Study of Upward Influence." *Journal of Management Studies*, 30(3), May, pp. 383-404.

Lyons, J. and A. Fernandez (2002), "Why the PATA proposal increases the compliance burden," *International Tax Review*, vol. 13, 9, pp. 26-29.

McAulay, L. and C. R. Tomkins (1992), "A Review of the Contemporary Transfer Pricing Literature with Recommendations for Future Research." *British Journal of Management*, vol. 3, pp. 101-122.

McDermott, J. and L. McDermott (1996), "What To Beware Of Under Final US Penalty

Regulations." *International Tax Report*, July, pp.1-5.

McKenzie, D.P. and R. S. Forsyth (1995), "Classification by Similarity: An Overview of Statistical Methods of Case-Based Reasoning." *Computers in Human Behavior*, vol. 11, no. 2, pp. 273-288.

Maclachlan, J. E. (1990), "United Kingdom." *IFL Rev Special Supplement*, September, pp. 72-80.

Mackie-Mason, J.K. (1993) "Comment" on Grubert, H, T. Goodspeed and D. Swenson "Explaining the Low Taxable Income of Foreign-controlled Companies in the United States" in *Studies in International Taxation*, NBER Project Report, edited by Giovannini, A., R. G. Hubbard and J. Slemrod, pp. 270-75, Chicago: The University of Chicago Press.

Magee, S. P. (1977) "Information and Multinational Enterprises: An Appropriability Theory of Direct Foreign Investment" in *The New International Economic Order*, edited by J. N. Bhagwati, pp.317-40, Cambridge, Mass: MIT Press.

Marais, M. L., Patel, J. M. and M. A. Wolfson (1984), "The Experimental Design Of Classification Models: An Application Of Recursive Partitioning and Bootstrapping To Commercial Bank Loan Classifications." *Journal of Accounting Research*, vol. 22 (Supplement), pp. 87 –114.

Marir, F. and I. Watson (1994) "Case-Based Reasoning: A Categorised Bibliography", *The Knowledge Engineering Review*, vol. 9, no. 4, pp. 355-381.

Marshall, C. and G. B. Rossman (1995), *Designing Qualitative Research*. (Second edition). Thousand Oaks: Sage.

Mathewson, C. and G. D. Quirin (1979), *Fiscal Transfer Pricing in Multinational Corporations*. Toronto: Ontario Economic Council.

Mautz, R. K. (1968) *Financial Reporting by Diversified Companies*, Financial Executives Research Foundation.

Maxwell, J.A. (1996), *Qualitative Research Design -An Interactive Approach*. Thousand Oaks: Sage.

Mays, Jr., R. L. (1982), "Divisional Performance Measurement and Transfer Prices," *Management Accounting*, pp. 20-24.

Mednick, R. (1979) "Companies Slice and Serve up their Financial Results under FASB 14", *Financial Executive*, March: 44-56.

Meer-Kooistra, J. van der (1994), *The Coordination Of Internal Transactions: The*

Functioning Of Transfer Pricing Systems in the Organisational Context." Management Accounting Research, vol. 5 no. 2, June, pp. 123-152.

Mehafdi, M. (1990), Behavioural. Aspects Of Transfer Pricing In UK Decentralised Companies. Unpublished PhD dissertation, Thames Polytechnic, London (in collaboration with Glasgow University).

Mehafdi, M. and C. R. Emmanuel (1992) "Behavioural Aspects of Domestic Transfer Pricing From a Corporate Management Perspective: A Survey of Large Decentralised Companies in the U.K.", unpublished Wards Seminar Series Paper - Glasgow University, Feb 19.

Mehafdi, M. and C. R. Emmanuel (1997), "Convergence, Divergence in Transfer Pricing Research: A Forty Year Survey." *Department of Accounting and Finance, University of Glasgow; Working Paper 97/9.*

Milburn (1978) "International Transfer Pricing in a Financial accounting Context", University Microfilms International (UMI), Michigan.

Miles, M. B. and A. M. Huberman (1984), *Qualitative Data Analysis: A Sourcebook of New Methods.* Beverly Hills: Sage.

Miles, M.B. and A. M. Huberman (1994), *Qualitative Data Analysis: An Expanded Sourcebook.* (Second edition). Thousand Oaks: Sage.

Morgan, G. and L. Smircich (1980), "The Case for Qualitative Research." *Academy of Management Review*, vol. 5, no. 4, pp. 491-500.

Morris, J. (1988), "The Japanese are here: for better or worse?" *Welsh Economic Review*, vol. 1, no. 1, pp. 45-47.

Morris, J., Munday, M. and B. Wilkinson (1993), *Working for the Japanese.* London: Athlone.

Morse, J. M. (1994), "Emerging from the Data" in Morse, J.M (ed.) *Critical Issues in Qualitative Research Methods.* Thousand Oaks: Sage.

Mostafa, A. M. (1981) "A Study of the Determinants of Transfer Pricing", unpublished Ph.D. dissertation, Bradford University.

Mostafa, A. M., Sharp, J. A. and K. Howard (1984), "Transfer Pricing - A Survey Using Discriminant Analysis." *Omega*, vol. 12, no. 5, pp. 465-474.

Munday, M., Morris, J. and B. Wilkinson (1995), "Factories or warehouses – a Welsh perspective on Japanese transplant manufacturing," *Regional Studies*, vol. 29, no. 1, pp. 1-17.

- Munday, M. and M. J. Peel (1997) "The Japanese Manufacturing Sector in the UK: A Performance Appraisal", *Accounting and Business Research*, Winter, 28(1): 19-39.
- Murray, J. Y., Wildt, A. R. and M. Kotabe (1995), "Global Sourcing Strategies of US Subsidiaries of Foreign Multinationals." *Management International Review*, vol. 35, pp. 307-324.
- Natke, P. A. (1985), "A Comparison of Import Pricing by Foreign and Domestic Firms in Brazil", in *Multinationals and Transfer Pricing* edited by Rugman, A. M. and L. Eden. London: Croon Helm. pp. 212-222.
- Neighbour, J. (2002), "Transfer pricing: Keeping it at arms' length," *The OECD Observer*, 230, pp. 29-30.
- Newbold, P. (1991), *Statistics for Business and Economics*. (Third edition). Prentice Hall International.
- Nitsch, D., P. Beamish and S. Makino (1995) "Characteristics and Performance of Japanese Foreign Direct Investment in Europe", *European Management Journal*, 13(3): 276-85.
- Norusis, J. (1999) *SPSS for Windows: Base System User's Guide - Release 8.0*, Chicago, IL: SPSS Inc.
- Miyazawa, Kiichi (1998), "Towards a New International Financial Architecture." Published speech at the Foreign Correspondents Club of Japan, December 15.
- OECD (1979) *Transfer Pricing and Multinational Enterprises*, Paris: OECD.
- OECD (1984) *Transfer Pricing and Multinational Enterprises: Three Tax Issues*, Paris: OECD.
- OECD (1994), *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations. Discussion Draft of Part I: Principles and Methods*. Report of the OECD Committee on Fiscal Affairs, Paris.
- OECD (1995a), *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations. Discussion Draft of Part II*. Report of the OECD Committee on Fiscal Affairs, Paris.
- OECD (1995b), *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations*. 28 July 1995, Report of the OECD Committee on Fiscal Affairs, Paris.
- OECD (1997), *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations 1997: Update*. Report of the OECD Committee on Fiscal Affairs, Paris.

OECD (1998), *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations 1998: Update*. Report of the OECD Committee on Fiscal Affairs, Paris.

Ogley, A. (1993), *Principles of International Tax - A Multinational Perspective*. London: Interfisc Publishing.

Ohkawa, K., E. Kawakami, M. T. Campbell, H. Senda and H. Musahl (1997) "Tax Developments Yearbook 1997: Japan", October: 41-47.

Ohmae, K. (1988), "Getting Back to Strategy," *Harvard Business Review*, vol. 66, no. 6, November/December, pp. 149-156.

Otley, D.T. (1980), "The Contingency Theory of Management Accounting: Achievement and Prognosis." *Accounting, Organizations and Society*, vol. 5, no. 4, pp. 413-428.

Owens, J. (1993), "Globalisation: The Implications for Tax Policies." *Fiscal Studies*, vol. 14, no. 3, pp. 21-44.

Oyelere, P. B. and C. R. Emmanuel (1996), "Seeking Evidence of International Transfer Pricing Abuse," Working Paper 96/3, Department of Accounting and Finance, University of Glasgow.

Oyelere, P. B. (1998), "International Transfer Pricing Practices, Performance and Post-Performance Distribution Differences Among UK-Based Multinational Enterprises: A Foreign-Owned Versus UK-Owned Firms' Comparison" unpublished PhD Dissertation, The Queen's University of Belfast.

Oyelere, P. B. and C. R. Emmanuel (1998), "International transfer pricing and income shifting: evidence from the UK," *The European Accounting Review*, 7:4, pp. 623-635.

Pagan, J. C. and J. S. Wilkie (1993) *Transfer Pricing Strategy in a Global Economy*, Amsterdam: IBFD Publications BV.

Perlmutter, H. V. (1969) "The Tortuous Evolution of the Multinational Corporation", *Columbia Journal of World Business*, January-February, 4: 9-18.

Picciotto, S. (1992) "International taxation and intra-firm pricing in transnational corporate groups." *Accounting, Organizations and Society*, 17 (8), pp. 759-792.

Pickle, Honorable J. J., "Statement of July 12, 1990," *Tax Underpayments by US Subsidiaries of Foreign Companies*, Hearings before the Subcommittee on Oversight of the Committee on Ways and Means, House of Representatives, One Hundred First Congress, Second Session, July 12, 1990, Serial 101-23.

Pierpoint, P. (1994), "The Harmonisation Of Corporate Taxation Within the European Community." in *Issues in Business Taxation*, edited by Pointon. J. Aldershot: Avebury.

pp .181-194.

Piper, A. G. (1996), "Internal Trading", *Accountancy*, October: 733-36.

Piper, A. G. (1996), "Secret corporation tax," *Sunday Business*, Special Report, 9 June, pp. 12-13

Plasschaert, S. (1980) *Transfer Pricing and Multinational Corporations: An Overview of Mechanisms and Regulations*, Aldershot: Gower.

Plasschaert, S. R. F. (1994), "The Multiple Motivations for Transfer Pricing Modulations in Multinational Enterprises and Governmental Counter-Measures: An Attempt at Clarification." *Management International Review*, Special Issue, vol. 34, pp .36-50.

Podsakoff, P. M. and D. R. Dalton (1987), "Research Methodology in Organization Studies," *Journal of Management*, 13, pp. 419-441.

Poniachek, H. A. (1988), *Pricing Intercompany Transactions: Issues and Problems Concerning Transfer Prices*. Unpublished white paper, October 12, 1988.

Porter, M. E. (1980), *Competitive Strategy: Techniques for Analysing Industries and Competitors*. New York: Free Press.

Porter, M. E. (1985), *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: Free Press.

Porter, M. E. (1990), *The Competitive Advantage of Nations*. London: The Macmillan Press Ltd.

Prusa, T. J. (1988), "International Trade Policies, Incentives, and Firm Behavior" unpublished PhD Dissertation, Stanford University.

Puxty, A.G. (1993), *The Social & Organizational Context of Management Accounting*. London: Academic Press in association with CIMA.

Qian, G. (1996), "The Effect of Multinationality Measures upon the Risk-Return Performance of US Firms." *International Business Review*, vol. 5, no. 3, pp. 247-265.

Raby, N. (1997) "Transfer Pricing: United States", *International Tax Review (Supplement)*, April: 93-105.

Radebaugh., L. H. and S. J. Gray (1993) *International Accounting and Multinational Enterprises.*, 3rd edition, New York: John Wiley and Sons, Inc.

Reich, R. (1990), "Who is us?" *Harvard Business Review*, January/February, pp. 53-64

- Riordan, M. and O. E. Williamson (1985), "Asset Specificity and Economic Organization," *International Journal of Industrial Organization*, vol. 3, no. 4, December, pp. 365-378.
- Roach, D., and M. Watanabe (1999), "The Cost Plus Method in Japan," *International Transfer Pricing Journal*, May/June, pg. 93.
- Rodprasert, Harit, "The Effects of Regulating Inter-Jurisdictional Allocations of Corporate Taxable Profits" unpublished PhD Dissertation, Yale University.
- Rolfe, C. (1997) "UK Transfer Pricing Document Stirs up Debate", *International Tax Review*, November, 8(10): 3.
- Rolfe, C. and A. Casley (1997) "Transfer Pricing: United Kingdom", *International Tax Review (Supplement)*, April: 87-92.
- Ronen, J. and G. McKinney (1970) "Transfer Pricing for Divisional Autonomy", *Journal of Accounting Research*, Spring, 8(1): 99-112.
- Rose, D. - Sullivan, O. (1996), "Introducing Data Analysis for Social Scientists", 2nd Edition, Buckingham: Open University Press.
- Rosenzweig, P. M. (1994), "The New 'American Challenge': Foreign Multinationals in the United States." *California Management Review*, Spring, pp. 107-123.
- Rozeq, R. P. (1996), "Applying the Best Method Rule When Reliable Internal Comparable Intangibles Exist." *Tax Notes International*, April, pp. 1191-1204.
- Ruding, O. (1994), "International Tax Policy at the Crossroads: New Developments and Possible Avenues for Reform." *Bulletin for International Fiscal Documentation*, December, pp. 619-623.
- Rugman, A. (1980) " A New Theory of the Multinational Enterprise: Internationalization Versus Internalization", *Columbia Journal of World Business*, Spring: 23-29.
- Rugman, A. M. (1981), *Inside the Multinationals: The Economies of Internal Markets*. London: Croon Helm Series in International Business.
- Rugman, A. M., ed. (1982), *New Theories of the Multinational Enterprise*, London: Croon Helm.
- Rugman, A. M. and L. Eden, eds. (1985) "Introduction" in *Multinationals and Transfer Pricing*. London: Croon Helm, pp. 1-10.
- Rugman, A. M., Lecraw, D. J. and L. D. Booth (1985) *International Business: Firm and Environment*, New York: McGraw-Hill.

Rugman, A. M. (1986), "New Theories of the Multinational Enterprise: An Assessment on Internalization Theory," *Bulletin of Economic Research*, 38, pp. 101-118.

Rushinek, A. and S. F. Rushinek (1988), "Multinational Transfer-Pricing Factors: Tax, Custom Duties, Antitrust/Dumping Legislation, Inflation, Interest, Competition, Profit/Dividend, and Financial Reporting." *International Journal of Accounting Education and Research*, 23 (Spring), pp. 95-111.

Rutges, D., Sporken, E. and B. Larking (2002), "The arm's length principle – when the burden of proof shifts," *International Tax Review*, Vol. 13, 8, pp. 51-53.

Ryan, B., Scapens, R. W. and M. Theobald (1992), *Research Method and Methodology in Finance and Accounting*. London: Academic Press.

Salkin, G. R. and J. S. H. Kornbluth (1973) *Linear Programming in Financial Planning*, Haymarket.

Scapens, R. W., J. T. Sale and P. A. Tikkas (1982) "Financial Control of Divisional Capital Investment", *ICMA Occasional Paper Series*.

Schjelderup, G. and L. Sorgard (1997), "Transfer Pricing As A Strategic Device For Decentralised Multinationals." *International Tax and Public Finance*, 4, pp. 277-290.

Scholes, M. S. and M. A. Wolfson (1992), *Taxes and Business Strategy - A Planning Approach*. Englewood Cliffs, NJ : Prentice Hall.

Schweikart, J. (1985), "Contingency Theory as a Framework for Research in international Accounting." *International Journal of Accounting*, Fall, p.89-98.

Searle, J. (2002) "Supplement: United Kingdom," *International Tax Review*, 10, pp. 90-94.

Self, H. (1995), "OECD Transfer Pricing Guidelines: Part II." *British Tax Review*, no. 4, pp. 358-362.

Shackelford, D. (1993), "Discussion of the Impact of U.S. Tax Law Revision on Multinational Corporations' Capital Local and Income-Shifting Decisions and Geographic Income Shifting by Multinational Corporations in Response to Tax Rate Changes," *Journal of Accounting Research*, 31, PP.174-182.

Sharp, D. and F. H. Wu, "An Empirical Study of Transfer Pricing Practice," *International Journal of Accounting*, pp. 71-99.

Shaub, H. J. (1978), "Transfer Pricing in a Decentralized Organization," *Management Accounting*, pp. 33-42.

Siegel, S. and N. J. Castellan, Jr. (1988) *Nonparametric Statistics*, 2nd edition, New York: McGraw-Hill, Inc.

Slagmulder, R. (1997), "Using Management Control Systems To Achieve Alignment Between Strategic Investment Decisions And Strategy." *Management Accounting Research*, vol. 8, pp. 103-139.

Smith, L. C. (1990) "Review of the Internal Revenue Service Statistics on Taxable Income and Tax Liability of Foreign Domestic Controlled Corporations", *KPMG Peat Marwick Policy Economics Group Paper*.

Soin, K. (1995), "Management control in the financial services sector", in *Management Control – Theories, Issues and Practices*, eds. Berry, A. J., Broadbent, J. and D. Otley. London: MacMillan Press.

Solomons, D., (1965), *Divisional Performance Measurement and Control*. Homewood, IL: R. D. Irwin.

Sparkes, J. R., Buckley, P. J. and H. Mirza (1987), "A Note on Japanese pricing policy," *Applied Economics*, vol. 19, no. 6, pp. 729-732.

Spetzler, W. (1997) "Transfer Pricing: Germany", *International Tax Review (Supplement)*, April: 33-8.

Spicer, B. H. (1988), "Towards an Organizational Theory of the Transfer Pricing Process." *Accounting, Organizations and Society*, vol. 13, no. 3, pp. 303-22.

Spicer, B. H., (1992), "The Resurgence Of Cost And Management Accounting: A Review Of Some Recent Developments in Practice, Theories And Case Research Methods." *Management Accounting Research*, 3, pp. 1-37.

Srinivasan, T. N. (1973), "Tax evasion: A model." *Journal of Public Economics*, 2, pp. 339-346

Stablein, M. (1996), "Data in organization studies," in S. Clegg, C. Handy and W. Nord (Eds.) *Handbook of Organizational Studies*, Sage.

Stewart, F. (1981) "Taxation and the Control of Transfer Pricing", in *Multinationals Beyond the Market*, edited by Murray, R., London: The Harvester Press Ltd.

Stitt, I. (1995), "Transfer Pricing for the Next Century." *Accountancy*, November, pp. 92-94.

Stone, W.E. (1959), "Management Practices With Respect To Internal Transfer Pricing in Large Manufacturing Companies." *The Accounting Review*, vol. 34, no. 4, October, pp. 631-632.

Strange, R. (1993), *Japanese Manufacturing Investment in Europe: Its Impact on the UK Economy*. London: Routledge.

Stround, A. W. and C. D. Masters (1991) *Transfer Pricing*, London: Butterworths.

Sunday Times (1992), "Insight," 22 March, pp. 1,16.

Swaneveld, H., Nagarajan, V. and M. Przysuski (2002) "Canada cracks down on profit split," *International Tax Review*, Vol. 13, 5, pp. 35-36.

Sweeney, P. (1992) "The Transfer Pricing Bomb", *Global Finance*, December, 6(12): 32-3.

Swierenga, R. J. and J. H. Waterhouse (1982), "Organizational Views of Transfer Pricing." *Accounting, Organizations and Society*, vol. 7, no. 2, pp. 149-165.

Taly, M. (1996), "Comparison of CPM and TNMM Transfer Pricing Methods: A Point of View," *Tax Notes International*, 351, 29 January.

Tan, B. and T. Vertinsky (1995), "Strategic Alliances of Japanese Electronic Firms and the Scale of their Subsidiaries in the US and Canada." *International Business Review*, vol. 4, no. 3, pp. 373-386.

Tang, R. Y. W. (1979), *Transfer Pricing Practices in the USA and Japan*. New York: Praeger.

Tang, R. Y. W. and K. H. Chan (1979), "Environmental Variables Of International Transfer Pricing: A Japan-United States Comparison." *Abacus*, 15, June, pp. 3-12.

Tang, R. Y. W. (1981), *Multinational Transfer Pricing: Canadian and British Perspectives*. Toronto: Butterworths.

Tang, R. Y. W. (1982), "Environmental Variables of Multinational Transfer Pricing: A UK Perspective." *Journal of Business Finance and Accounting*, 9,2, pp. 179-189.

Tang, R. Y. W. (1992), "Transfer Pricing Practices in the 1990s." *Management Accounting*, February, pp. 22-26.

Tang, R. Y. W. (1993), *Transfer Pricing Practices in the 1990's*. Westport, CT: Quorum Books.

Tax Analysts (2002), "EU Commission announces establishment of EU joint transfer pricing forum based on OECD Guideline," Tax Analysts Press Release, March 27.

Tax Executive Institute (1998) "Consultative Document on Modernization of the Transfer Pricing Legislation" *Tax Executive*, January/February, 50(1): 69- 72.

Taylor, A. O. (1997), "Transfer Pricing: Fundamental Change in the United Kingdom." *Tax Management Transfer Pricing Report*, vol. 6, no. 15, November 12, pp. 545-547.

Taylor, J. (1993), "An analysis of the factors determining the geographical distribution of Japanese manufacturing investment in the UK 1984-1991," *Urban Studies*, vol. 30, no. 7, pp. 1209-1224.

Teece, D. J. (1982), "A Transaction Cost Theory of the Multinational Enterprise." *University of Reading Discussion Papers in International Investment and Business Studies*, No. 66 - An abstract appears in Casson (ed) (1983), *The Growth of International Business*, pp. 51-62.

The Times (1994) *Times 1000 -1995*, London: Times Books.

Thietart et al, R. (2001) *Doing Management Research: A Comprehensive Guide*. London: Sage Publications Ltd.

Thomas, A. L. (1980) *Behavioral Analysis of Joint Cost Allocations and Transfer Pricing*, New York: Stipes Publishing.

Thompson, J. (1967), *Organizations in Action*. New York: McGraw-Hill.

Ticehurst, G. W. and A. J. Veal (2000), *Business Research Methods: A Managerial Approach*. Australia: Pearson Education.

Tretiak, P. L. (1993), "Tax Planning for US Multinationals," *The International Tax Review*, Winter, pp. 67-81.

Trevor, M. (1985), *Japanese Industrial Knowledge: Can It Help British Industry?* Aldershot: Gower.

Twoorkowski, N. (1999), "The Effects of US Tax Policy Revisions on the Patterns of Persistent Near-Zero Taxable Income of Foreign-Controlled Corporations" unpublished PhD Dissertation, Nova Southeastern University.

Tyrrall, D. and M. Atkinson (1999), *International Transfer Pricing: A Practical Guide for Finance Directors*. London: Pearson Education Limited.

UNCTAD (1993), *World Investment Report 1993 - Transnational Corporations and Integrated International Production*. New York and Geneva: United Nations Publications.

UNCTAD (1994), *World Investment Report -Transnational Corporations, Employment*

- and the Workplace*. New York and Geneva: United Nations Publications.
- UNCTAD (1997a), *World Investment Report - Transnational Corporations, Market Structure and Competition Policy*. New York and Geneva: United Nations Publications
- UNCTAD (1997b), *World Investment Report - Transnational Corporations, Market Structure and Competition Policy: Overview*. New York and Geneva: United Nations Publications.
- US Internal Revenue Service (1992) *Proposed s482 Regulations*. Notice of Proposed Rule Making INTL-0372-88 and INTL-0401-88, January 30th 1992.
- US Internal Revenue Service (1993) *Temporary and Proposed s482 Regulations*. TD 8470, INTL-0401-88, FR 5263, January 21st 1993.
- US Internal Revenue Service (1994) *Internal Revenue Service Final Regulations*. TD 8552, Relating to Intercompany Transfer Pricing under Section 482.
- US Internal Revenue Service (1994), *Internal Revenue Code, Vol. 1*, Chicago, IL: Commerce Clearing House, Inc.
- US Internal Revenue Service (1994), *Internal Revenue Code*. Washington, DC: US Department of the Treasury.
- Vaitsos, C. V. (1974) *Inter-country Income Distribution and Transnational Corporations*, Oxford: Clarendon Press.
- Vancil, R. F. (1979), *Decentralisation: Managerial Ambiguity by Design*. Homewood, IL: Dow Jones-Irwin.
- Velleman, P. F. and D. C. Hoaglin (1981) *Applications, Basics and Computing of Exploratory Data Analysis*, Boston, Mass.: Duxbury Press.
- Vernon, R. (1971) *Sovereignty at Bay: The Multinational Spread of US Enterprises*. New York: Basil Books.
- WSJ (1993), "Foreign Firms' Income is Understated." *Wall Street Journal*, Friday, June 4, 1993.
- Walker, G. (1988), "Strategic Sourcing, Vertical Integration, and Transaction Costs." *Interfaces*, May-June, pp. 62-73.
- Watson, D. J. H. and J. V. Baulmer (1975), "Transfer Pricing: A Behavioral Context." *Accounting Review*, July, pp. 466-474.
- Weichenrieder, A. (1996), "Transfer pricing, double taxation, and the cost of capital,"

Scandinavian Journal of Economics, vol. 98, no. 3, pp. 445-452.

Wheeler, J. E. (1988) "An Academic Look at Transfer Pricing in a Global Economy," *Tax Notes*, July 4: 87-96.

Wheeler, J. E. (1990) *Hearings on Tax Underpayments by Foreign-Owned US Subsidiaries*, House Ways and Means Oversight Sub-Committee of the United States House of Representatives: 1-15.

Willard, K. L. (1994), "Do Taxes Level the Playing Field?" *The Columbia Journal of World Business*, Winter, pp. 20-28.

Williamson, O. E. (1975), *Markets and Hierarchies: Analysis and Antitrust Implications: A Study in the Economics of Internal Organization*. New York: Free Press.

Williamson, O. E. (1979) "Transaction Cost Economics: The Governance and Contractual Relations", *The Journal of Law and Economics*, October: 233-61.

Williamson, O. E. (1985), *The Economic Institutions of Capitalism*. New York: Free Press.

Willmott, H. C. (1983), "Paradigms for Accounting Research: A Comment on Tomkins and Groves "Everyday Accountant and Researching his Reality"." *Accounting, Organizations and Society*, vol. 8, no. 4, pp. 389-405.

Wilson, G. P. (1993), "The Role of Taxes in Location and Sourcing Decisions" in *Studies in International Taxation* edited by A. Giovannini, R. G. Hubbard and J. Slemrod. Chicago: NBER/University of Chicago.

Woodward, J. (1965), *Industrial Organization: Theory and Practice*. Oxford: Oxford University Press.

Wright, D. R., C. K. Nelson and J. C. Kasdan (1995), "TNMM – The OECD's Response to CPM: Are They Really Different?" *European Taxation*, October, pp. 306-314.

Wright, D. (2000), "Practical Applications of Transactional Profit Methods." *ITPJ*, September/October, pp. 198-203.

Wu, F. and D. Sharp (1979), "An empirical study of transfer pricing practice." *International Journal of Accounting*, 14 (2), Spring, pp. 71-99.

Yoost, D. A., and D. Miyajima (1997) "Japan Pursues Foreign Multinationals", *International Tax Review*, September, 8(8): 49-56.

Yunker, P. J. (1982), *Transfer Pricing and Performance Evaluation in Multinational*

Corporations: A Survey Study. New York: Praeger.

Yunker, P. J. (1983), "A Survey Study of Subsidiary Autonomy, Performance Evaluation and Transfer Pricing in Multinational Corporations." *Columbia Journal of World Business*, Fall, pp. 51-64.

Zacly, C. (1993), "What Do Multinationals Think Of Global Tax Issues?" *International Tax Review*, October, vol. 4, no. 10, pp. 13-16.

Zegel, T. J., S. K. Pearlman and D. Whitefield (1996) "An International Perspective on Advance Pricing Agreements for Financial Institutions", *The Journal of Bank Taxation*, Spring, 9(3): 117-123.

