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Walden University

College of Management and Technology

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Ravi Taklalsingh

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Walden University
2019

Abstract

Transfer Pricing Legislation: Effect on Multinational Enterprises in the United States

by

Ravi Taklalsingh

MBA, Heriot-Watt University, 2000

CMA, University of Ottawa, 1985

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Management

Walden University

February 2019

Abstract

Multinational enterprises (MNEs) engage in tax-planning strategies between their related parties that affect their profit and consequently their tax liability. Transfer pricing (TP) legislation addresses these tax planning strategies of MNEs resulting in increased tax revenues. Despite the updated 2006 TP legislation, shifting of profit and taxes is still occurring by MNEs; therefore, the implications of this legislation need to be examined. The purpose of this study was to compare the reporting of profit, before and after change in legislation, as well as to examine the cost of services mediation of the relationship between the status of the legislation and profit reported. The study's theoretical framework was a combination of economic and strategic management theories. This ex-post facto quantitative study addressed two research questions with the first examining the difference in the reporting of operating profit before and after the updated TP legislation. The second assessed how the cost of services mediates the relationship between the status of the TP legislation and the reporting of operating profits. Data collected on a sample of tax returns, representing 32 industry sectors for each of 14 years, from the Internal Revenue Service were used in applying statistical tests for answering these research questions. The results indicated that the updated TP regulations influenced MNEs for reporting greater profit than before the update as well as possibly inconsistent mediation with the proposed mediator of cost of services. These results support having TP legislation since it would increase tax revenues resulting in positive economic and social changes as well as contributing to achieving sustainable development.

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Dedication

I dedicate this doctoral study to my family including my loving wife Dhanmatee, my supportive children Nicholas, Samantha, and Aneil as well as my late mother Sumintra who have all been there for me as I travelled this challenging journey.

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I appreciate the support of my committee comprising Dr. Kenneth Sherman, Dr. Thomas Spencer, and Dr. Keri Heitner for allowing me to achieve this lifetime reward.

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Chapter 1: Introduction to the Study

Federal legislation on transfer pricing (TP) is associated with increased tax revenues. Multinational enterprises (MNEs) use TP to shift their worldwide profit from their high-tax home base to low or no-tax countries (Markle & Shackelford, 2012). According to the Organization for Economic Cooperation and Development (Organization for Economic Cooperation and Development [OECD], 2010), TP refers to the pricing of goods, services, and intangible properties transacted between related parties of MNEs. The OECD (2010) noted that these related parties are usually MNEs and their associated entities in different jurisdictions, where a substantial share of their global trade is conducted. In these related parties' transactions, their financial and commercial relations facilitate price setting that deviates from arm's length commercial values (OECD, 2010). Talab, Flayhh, and Yassir (2017) indicated that the global guiding principle in the management of TP is the arm's length standard (ALS). The transactions that are within the TP principles include global transactions, transactions between related parties, and transactions where goods or services have economic value. Therefore, a primary taxation issue is to determine the appropriate transfer price of the transactions between these related parties because TP can distort revenue, expenses, and consequent taxable profits calculated by each related entity within the relevant tax jurisdiction. One of the methods nations use to address this tax planning strategy of MNEs is to have TP legislation for treating with the international transactions between the related parties of MNEs (OECD, 2010).

In this study, I evaluated the impact of the United States 2006 updated TP regulations on MNEs operating profit reporting to the U.S. Treasury for the period 2000 to 2013. This study is relevant to tax administrations, MNEs, tax consultants, academics, and politicians with significant implications for tax revenue collection and, consequently, social and economic programs. Docksai (2013) attributed tax revenues to economic growth and job creation as well as facilitating health care, education, infrastructure projects, and social welfare programs. In Chapter 1, I present the background, problem statement, purpose of the study, research questions and hypothesis, theoretical framework, nature of the study, definitions, assumptions, scope and delimitations, limitations, significance of the study, and a summary.

Background of the Study

TP is a major international tax issue for both tax administrations and MNEs. Research done by international consulting firms, government agencies, and independent researchers has reflected countries' significant tax revenue losses and tax base erosion due to TP, as MNEs shift profit from high-tax to low-tax countries to minimize their global effective tax rate. These transfer prices are relevant for both tax administrators and taxpayers since they determine the revenue, expenses, consequent taxable profits, and tax liabilities of associated enterprises in different tax jurisdictions.

U.S. TP Legislation

The United States introduced TP legislation in 1934, as part of the Internal Revenue Service (IRS) Code. Section 482 of the IRS Code ensures the reflection of profit related to controlled transactions and emphasizes consequences of the avoidance of taxes

relating to those transactions. Section 482 places the controlled taxpayer on par with an uncontrolled taxpayer by determining the taxable profit of the controlled taxpayer. Section 1.482-1 established the rules under Section 482 that must be followed by both the tax authorities in making allocations, as well as the taxpayers' use of the section (IRS, n.d.). The IRS indicated that applying the arm's length standard (ALS) produces the correct taxable profit of a controlled taxpayer, and that the ALS is determined by referring to the results of comparable transactions of uncontrolled taxpayers under comparable situations. Therefore, Section 482 of the U.S. tax code comprises tax law that is specific in determining the arm's length value of transactions between the controlled parties of MNEs.

TP Legislation's Effect on Profit Reporting in the United States

According to several studies done on the effect of TP legislation on profit reporting, TP requires specific legislation that provides more certainty with respect to transactions between the related parties of MNEs. The United States General Accounting Office (General Accounting Office [GAO], 1995) compiled a report in response to requests for data on TP issues relating to tax compliance of foreign-controlled corporations (FCCs) and United States-controlled corporations (USCCs). The GAO noted that the IRS, via Section 482 of the Internal Revenue Code (IRC), evaluates TP by considering the price charged between related parties, and then comparing them to prices between unrelated parties using the ALS. The results of the study indicated that FCCs were less likely to pay U.S. income taxes, possibly because of TP abuse (GAO, 1995). This effect of TP legislation on profit reporting is also reflected in the Department of the

Treasury (2007) report on earnings-stripping and TP. This Treasury Department study focused on earnings-stripping by FCCs and compared the profitability of FCCs to USCCs. Results showed FCCs reported less profit than their comparable USCCs in the nonfinancial sector (Department of the Treasury, 2007). The Department of the Treasury's second study focused on TP and included reviewing Section 482 of the U.S. IRC. This review prompted the implementation of 2006 TP regulations relating to services that determined the arm's length price. Further, the United States GAO (2008) noted that for the period 1989 to 2000 there was a greater likelihood that FCCs reported zero tax liability than USCCs and this may have been due to TP abuses. In short, the GAO found a difference in the reported profit between foreign-controlled MNEs and U.S.-controlled MNEs under the existing TP legislation. The results of these studies indicated that there must be continuous monitoring of TP rules to ensure their relevance for dynamic business conditions, and to prevent profit shifting through non-arm's length TP. Consequently, despite having TP legislation, MNEs engage in tax planning by reducing their reported profit. Thus, there was a need to examine the effect of updated TP legislation on operating profit reporting by MNEs.

Additional studies have indicated the effect of TP legislation on profit reporting by MNEs. The Joint Committee on Taxation (2010) reported on business restructuring, legislation, and the way U.S. MNEs utilize the IRC in determining their U.S. tax liability. International trade, as well as outbound and inbound foreign direct investment (FDI) by U.S. corporations, led to business restructuring resulting in TP arrangements between related parties that reduced tax liability in the United States (Joint Committee on

Taxation, 2010). The Joint Committee on Taxation applied Section 482 of the IRC in their study and concluded that there was a shifting of operating profit and taxes from the United States. Further, Taylor, Richardson, and Lanis (2015) echoed this concern about TP, noting that U.S. MNEs have used TP to reduce their corporate taxes to the extent that 24% of U.S.-controlled MNEs reported zero tax liability. Taylor et al. concluded that there is an association between the existence of MNEs and noncompliance with the ALS for determining transfer prices as required by Section 482 of the IRC. Therefore, these studies indicated that there was shifting of profit by MNEs despite having TP legislation.

Updated 2006 U.S. TP Legislation

While there was existing TP legislation, the United States updated this law in 2006 to react to both internal and external forces. It was necessary to update the previous 1968 regulations because of substantial manipulation by taxpayers, and because of extensive developments in the services sector since 1968 (Department of the Treasury, 2006). Hill (2006) supported this expansion of the services sector, noting that there had been a visible increase over the last two decades in this sector relating to the global transactions of MNEs. The Department of the Treasury (2006) noted that the 2006 regulations provided updated guidance in respect to transactions involving controlled services affecting controlled taxpayers through Section 482 of the IRC. In sum, this updated TP legislation was necessary because of substantial changes in the services sector. The updated legislation focused on the services sector with the goal of determining an arm's length value of services transactions between the related parties of MNEs.

Accordingly, future research could examine compliance with the ALP before and after introducing major changes to the U.S. TP legislation, such as the 2006 updated TP regulations that was the subject of my research. To the best of my knowledge, my study is the first to compare the reporting of profit, before and after change in legislation, by FCCs using a dependent samples *t*-test, as well as to examine the cost of services mediation of the relationship between the status of the legislation and profit reported. The results of this study provided information for making informed decisions on the effect of updated TP legislation on the reporting of profit in the United States. This study is relevant to tax administrations, MNEs, tax consultants, academics, and politicians, and has significant implications for tax revenue collection and the consequent social and economic programs.

Problem Statement

MNEs use TP to shift their worldwide profit and consequent tax burden from their high-tax home base to low or no-tax countries (Markle & Shackelford, 2012). Kaye (2014) has indicated that, via this profit-shifting behavior, U.S. MNEs have used TP to accumulate $1.95 trillion outside the United States. The general problem is that MNEs shift profit and taxes from the United States using existing TP legislation.

The specific problem is despite the updated 2006 TP legislation, shifting of profit and taxes is still occurring by MNEs. Taylor, Richardson, and Lanis (2015) confirmed that U.S. MNEs use TP to reduce their corporate taxes to the extent that 24% of U.S. MNEs reported zero tax liability. This problem has negatively impacted social and economic programs because of reduced collection of tax revenues. Docksai (2013)

reflected that governments should be active in investment that contributes to economic growth and job creation as well as facilitate health care, education, infrastructure projects, and social welfare programs with the primary source of finance for the investment being tax revenues. A possible cause of this problem is MNEs' strategy of complying with the legislation. This study, in which I investigated differences in reporting of profit, before and after the updated 2006 U.S. TP legislation, solves the problem by identifying either MNEs' adherence to arm's length pricing or engagement in tax management. Therefore, this study informs both economic and strategic management theories that propose arm's length pricing and global tax liability reduction respectively.

Purpose of the Study

The purpose of this causal-comparative study was to compare the reporting of profit, before and after change in legislation, as well as to examine the cost of services mediation of the relationship between the status of the legislation and profit reported. Therefore, the first part of the purpose of the study examined differences in reporting of profit by MNEs to the U.S. Treasury, before and after the updated TP legislation. The second part of the purpose of the study examined how the cost of services mediates the relationship between the status of the TP legislation and the profit reported.

Research Question(s) and Hypotheses

The research questions and hypotheses guiding my research were as follows:

Research Question 1(RQ1): What is the difference in the reporting of operating profit before and after the updated TP legislation?

Null Hypothesis (H_01): There is no difference in the reporting of operating profit before the updated TP legislation when compared to after the update.

Alternative Hypothesis (H_a1): There is a difference in the reporting of operating profit before the updated TP legislation when compared to after the update.

I used a matched pairs *t*-test to compare the data of one group of companies, before and after the updated TP legislation, for testing this first hypothesis.

Research Question 2 (RQ 2): How does the cost of services mediates the relationship between the status of the TP legislation and the reporting of operating profits?

Null Hypothesis (H_02): The cost of services does not mediate the relationship between the status of the TP legislation and the reporting of operating profits.

Alternative Hypothesis (H_a2): The cost of services mediates the relationship between the status of the TP legislation and the reporting of operating profits.

In testing the second hypothesis I used mediated hierarchical multiple regression to test the extent to which cost of services mediates the relationship between the status of the TP legislation and the profit reported in the United States.

To the best of my knowledge, this study was the first to measure differences before and after the change in TP legislation on MNEs reporting of operating profits to the U.S. Treasury using a dependent samples *t*-test. Another unique feature of the study was to examine the cost of services mediation of the relationship between the status of the TP legislation and MNEs reporting of operating profits to the U.S. Treasury.

Theoretical Foundation

TP is a method for the pricing of goods and services between a company's related parties or divisions. The theories that I tested for my study were the economic theory of the firm and strategic management theory. Hirshleifer's (1956) economic theory focused on the issue of interdivisional pricing of goods and services for maximizing the overall profit of the entire firm. Hirshleifer indicated that the market price might be the appropriate transfer price with this pricing having consequences for the entire firm including management's performance evaluation and international tax management. This theory indicates that interdivisional pricing is relevant in determining the overall profit of the firm. When applied to my study, this theory holds that I would expect my independent variable of status of legislation to influence the dependent variable of the reporting of operating profit because the independent variable establishes specific interdivisional pricing.

Strategic management theory provides insight into a comprehension of TP practiced by MNEs. MNEs consist of branches, subsidiaries, and affiliates having specific knowledge and activities and located in different countries. These related parties transact business between themselves at strategically created transfer prices that focus on tax management of the MNEs. This theory indicates that management strategy is relevant in determining the overall profit of MNEs as they engage in strategies for reducing their global tax liabilities. When applied to my study, this theory holds that I would expect my independent variable of status of legislation to influence the dependent variable of the

reporting of operating profit because the independent variable establishes specific interdivisional pricing that affects tax management strategies.

These theories affect the operations of tax administrations and MNEs and present a view of TP that can be used to explain, describe, predict, and control having specific TP legislation. Consequently, there was a need to assess the effect of updated transfer pricing legislation on the reporting of operating profit in the United States, which is the subject of my research in ensuring arm's length reporting.

Nature of the Study

This study involved examining the effect of the status of TP legislation on the reporting of profit. As such, I adopted a quantitative approach with the ex-post facto or causal-comparative research design for investigating differences pre- and post-implementation and how one variable mediates the relationship between two other variables. Landrum and Garza (2015) indicated that the goal of quantitative research is in examining differences in the dependent variable based on the levels of the independent variable, as well as the extent of the relationship between variables, using numerical analyses of data for testing this comparison and relationship. In causal-comparative research design, it is necessary to gather as much demographic data as possible and use inferential statistics in demonstrating differences in the dependent variable, pre- and post-implementation, as well as how one variable mediates the relationship between two other variables. Since the IRS has already implemented the independent variable in the proposed study, this existing variable could not be manipulated; the casual comparative research design is the most suitable design for the study.

The purpose of this causal-comparative study was to compare the reporting of profit, before and after change in legislation, as well as to examine the cost of services mediation of the relationship between the status of the legislation and profit reported. I used a matched pairs t-test to compare the data of one group of companies, before and after the updated TP legislation, for testing this first hypothesis. In testing the second hypothesis I used mediated hierarchical multiple regression to test the extent to which cost of services mediates the relationship between the status of the U.S. TP legislation and the profit reported in the United States. Therefore, my study included analyzing existing data relating to the effect of the updated U.S. TP legislation on the reporting of operating profit.

Several previous researchers have used the quantitative approach with the ex-post facto design. The United States General Accounting Office (1995) compiled a report in response to requests for data on the TP issues relating to tax compliance of FCCs and USCCs using tax data for 1990 and 1991. The Department of the Treasury (2007) report resulted from studies on earnings-stripping and transfer pricing. The earnings stripping study focused on comparing the profitability of FCCs to USCCs using data from income tax returns filed with the U.S. IRS (Department of the Treasury, 2007). Department of the Treasury’s second study focused on transfer pricing, using tax returns data, and included a review of Section 482 of the U.S. IRC. Additionally, the United States Government Accountability Office (GAO) (2008) accessed data from the IRS’s SOI database containing samples of tax returns for several years. Additionally, McDonald (2008) researched U.S. tax return data, using a regression model, in determining whether

operating profit shifting occurred with controlled foreign corporations through transfer pricing. McDonald's study extended work done by Grubert (2003) in respect of using tax return data for determining operating profit shifting. Further, Avi-Yonah (2007) examined U.S. TP legislation in concluding that the United States should continue to apply the ALS in taxation for determining transaction values between related parties. The Joint Committee on Taxation report submitted to the House Committee on Ways and Means (2010) noted that this document dealt with business restructuring, legislation, case studies of U.S. MNEs, and the way the structure of these MNEs utilize the IRC in determining their U.S. tax liability. Additionally, Klassen, Lang, and Wolfson (1993) studied operating profit shifting by U.S. MNEs in response to global changes in tax rates using samples of both U.S. and non-U.S. based operations. The inquiry required performing regression analysis on existing data from financial statements extracted from Compustat for the period 1984-1990. Finally, Grubert (2012) extracted data from a sample of income tax files relating to U.S.-based MNEs including information contained in the tax return Form 1120 and Form 5470 that has financial statements' data. Grubert (2012) used regression analysis on the data in concluding that U.S.-foreign tax rate differentials affected the location of the foreign portion of global profits for U.S.-based MNEs. Therefore, my research is consistent with previous studies that applied the ex-post facto research approach of examining existing data and noting the effect on profit reporting.

Definitions

Arm's Length Standard: The value of transactions between unrelated parties (OECD, 2017)

Controlled taxpayer: Transactions between related parties (OECD, 2017)

Legislation: Law that has been enacted by a process.

Multinational Enterprise: MNEs have related parties bonded by a common interest and include branches, associates, subsidiaries, joint ventures, trade partners and other forms of businesses in different countries. (OECD, 2017)

Operating profit: Means gross profit less operating expenses. Operating profit includes all operating profit derived from the business activity being evaluated by the comparable profits method, but does not include interest and dividends (Reg.1. 482).

Total Services Cost: Total services costs include all costs directly identified with provision of the controlled services, as well as all other costs reasonably allocable to such services (Reg.1. 482).

Transfer price: TP refers to the pricing of goods, services, and intangible properties transacted between related parties of MNEs. (OECD, 2017)

Transfer pricing regulations: An authorized rule or law designed to regulate conduct by ensuring that related companies transact business at similar prices as they would with nonrelated companies (Reg.1. 482). The independent variable of the updated TP legislation has two levels consisting of before and after the update.

Uncontrolled taxpayer: Transactions between unrelated parties (OECD, 2017)

Assumptions

My quantitative research comprised taking data from the SOI database and involved analyzing this existing data comprising financial data on a sample of MNEs in the services sector; I assumed that this sample is representative of the population. In my

research, I compared data, from the SOI division of the IRS, on FCCs in determining whether the FCCs are complying with TP legislation; I assumed that FCCs are aware of the TP legislation. I also assumed that the existing data on the dependent variables located on the website are current and not changed as at the time of extraction. I also assumed that the parent company controls the related parties of MNEs. I assumed that the controlled MNEs in the service industry might have either complied with the changes to the U.S. transfer pricing regulations or adhered to instructions from their parent company. The framework of this research required synthesizing several studies on transfer pricing; I assumed that transfer pricing was the significant factor influencing the behaviour of MNEs. Finally, I assumed that the updated TP regulations influenced the controlled MNEs in the services sector to comply with their reporting of profits to the U.S. Treasury.

Scope and Delimitations

The purpose of this study was to compare the reporting of profit, before and after change in legislation, as well as to examine the cost of services mediation of the relationship between the status of the legislation and profit reported. However, the accuracy of the conclusion depends on the causal relationship between the independent and dependent variable where there is the possibility that changes in the dependent variable are attributable to causes other than the independent variable. In my research study, I collected archived data from the SOI division of the IRS, focusing on data from the income tax returns of FCCs. In addition, the theories that I tested for my study were the economic theory and strategic management theory; however, other theories might

also have been applicable. Finally, the study and analysis of the entire U.S. income tax legislation are beyond the scope of this study. I focused instead on the sections relating to the international transactions of MNEs.

Limitations

There are some limitations in using existing data for recent studies. A primary weakness of the ex-post facto design is the lack of controls or inability to manipulate all the independent variables that influence the facts, because firm conclusions should consider other possible reasons for the result (Lord, 1973). Lord (1973) commented on the uncertainty as to whether the causative element is among the factors studied, as well as the outcome may result from a combination and interaction of factors as against one single factor. Lord noted further limitations of this design in that two factors may be related to other factors not observed or recognized. Therefore, this study using existing data may have some specific restrictions.

In addition to the limitations of using existing data, SOI noted that there must be caution when comparing data by industrial groupings. For Tax Years 1998, 2000, 2002, and 2004, CFCs were classified under the North American Industry Classification System (NAICS), which differs from the Standard Industrial Classification (SIC) system used before Tax Year 1998. While there was no effect on most industries by the implementation of NAICS, there were changes to the groupings of some economic activities. The most meaningful change was the movement of the management of companies and enterprises sector from finance, insurance, and real estate under the SIC system to the services sector under NAICS. Furthermore, CFCs were classified by

industry based on their principal business activity as reported on Form 5471. However, assets, receipts, and profits might also have a relationship to secondary business activities. It was not possible to measure the extent of these secondary business activities due to these activities not being detailed on Form 5471. Therefore, this change in industry classification must be considered when collecting data for the study.

Significance of the Study

The results of this study provided information for making informed decisions on the effect of updated TP legislation on the reporting of operating profit in the United States. This study was significant for contributing to both strategic management and economic theories, advancing management practice, and fostering positive social change.

Significance to Strategic Management Theory

TP is a method for the pricing of goods and services between a company's related parties or its divisions. Strategic management theory provides insight into a comprehension of TP practiced by MNEs. Bao (2015) noted that the strategic management theory should expose phenomena affecting the survival and growth of organizations and so provide the basis for strategic management practice. Furthermore, organizational strategies connect with the organization's functions and units and should be integrated into achieving a complete strategic management theory (Bao, 2015). This strategic management theory indicates that management strategy is relevant in determining the overall profit of the MNEs as they engage in strategies for reducing their global tax liabilities.

MNEs consist of branches, subsidiaries, and affiliates having specific knowledge and activities and are located in different countries. These related parties transact business between themselves at transfer prices that focus on strategic tax management of the MNEs. Betts, Laud, Mir, and Vicari (2015) indicated that in the globalization period MNEs such as Toyota, Walmart, Proctor & Gamble, and Apple engage in structural changes as they strategically manage their supply chains. With respect to TP, the pricing between subsidiaries should be determined by the head office of the MNE when there are multiple, large, or long-term orders in negotiation; however, when there are ad hoc or one-off transfers between subsidiaries, market-based pricing should prevail (Betts et al., 2015). Also, Martini (2015) stated that TP is relevant to MNEs for the dual purposes of coordination of managerial decisions and profit allocation as MNEs apply TP policies with respect to international taxation. Finally, Plesner Rossing and Rohde (2014) concluded that TP encompasses several organizational features including resource allocation, performance evaluation, business strategy, and tax management.

One of the findings in the literature revealed that there is a relationship between TP and business strategy with tax management resulting from strategic decisions (Plesner Rossing & Rohde, 2014). This study investigating differences in reporting of profit, before and after the updated 2006 U.S. TP legislation, contributes to solving the problem of MNEs’ shifting of profit and taxes as they engage in strategic tax management. As applied to my study, this theory holds that I would expect my independent variable of status of legislation to influence the dependent variable of operating profit reporting

because the independent variable establishes specific interdivisional pricing as well as influences tax management strategies.

Significance to Economic Theory

TP is a method for the pricing of goods and services between a company's related parties or its divisions. One of the early pioneers in the field of TP was Hirshleifer (1956) who focused on the issue of interdivisional pricing of goods and services in maximizing the overall profit of the entire firm. Hirshleifer indicated that the market price might be the appropriate transfer price with this pricing having profound consequences for the entire firm including management's performance evaluation and international tax management. Also, Chitic and Birman (2012) referred to the classical economists, Adam Smith and David Ricardo who noted that the basis of price is the economic value of the transaction, which is an estimate of the price for the transaction and represents the market's interpretation. Therefore, economic theory forms the basis of TP and when the markets are perfectly competitive, the transaction is at arm's length (Chitic & Birman, 2012). Thimmesch (2015) presented another view of this economic theory in asserting the need for analyzing cost and benefit or expected utility. Compliance with this economic model is primarily dependent on penalties for noncompliance as well as taxpayers' perception of the discovery of this noncompliance (Thimmesch, 2015).

TP is based on economic theory with market values or the ALS determining transaction figures, as well as behavioral economics, which can explain management's decision-making in respect of tax compliance. This study investigating differences in reporting of profit, before and after the updated 2006 U.S. TP legislation, contributes to

solving the problem of MNEs' shifting of profit and taxes as they engage in interdivisional pricing for determining the overall profit of the firm. As applied to my study, this theory holds that I would expect my independent variable of status of legislation to influence the dependent variable of the reporting of operating profit because the independent variable establishes specific interdivisional pricing.

Significance to Practice

This study is relevant to tax administrations, MNEs, tax consultants, academics, and politicians since it affects tax revenue collection and the consequent social and economic programs. Therefore, there is information for making informed decisions, on the effect of the updated TP legislation, by tax administrations and MNEs. Specifically, the study revealed additional information about differences in reporting of operating profit to the U.S. Treasury, before the updated 2006 U.S. TP legislation compared to after the update. Also, the study showed the cost of services mediation of the relationship between the status of the U.S. TP legislation and the operating profit reported to the U.S. Treasury. Knowledge of the status of legislation showed both MNEs adherence to the arm's length price and engagement in strategic tax management for reducing their global tax liabilities.

Significance to Social Change

Positive contribution to society is a relevant goal to pursue. Walden University (2013) noted that individuals could have positive social change in their environment when they believe that they can change the status quo and then they proceed to take action leading to positive outcomes. In addition to individuals having the will to effect

positive social change, a vital component is the financing of the various programs, facilitated through additional tax revenues at the disposal of countries. Docksai (2013) indicated that there was a boost in the economies of several countries after the global financial crisis of 2008 attributing tax revenues to economic growth and job creation as well as facilitating health care, education, infrastructure projects, and social welfare programs. Docksai (2013) concluded that governments should be active in investment that contributes to economic growth with the primary source of finance for the investment being tax revenues. Additionally, Benshalom (2014) noted that through globalization the world has become quite interconnected with growth in some economies while others are in relative poverty as they are falling behind in infrastructure and living standards. Therefore, there needs to be a system for wealth redistribution in an international context, with international taxation policies such as TP, facilitating this indirect redistribution of wealth (Benshalom, 2014). Finally, Oshionebo (2013) showed that the OECD guidelines mandate responsible behavior by MNEs in respecting human and workers' rights as well as environmental and developmental sustainability. However, Oshionebo concluded that despite the goals of the OECD guidelines, MNEs are yet to effect significant positive changes in behavior. Tax revenue is needed to deliver public services, alleviate poverty, and provide sustainable development. As such, this study on changes in TP regulations and its effect on operating profit reporting has significant implications for revenue collection and the consequent social and economic programs that will improve social and human conditions.

Summary and Transition

In this chapter, I indicated that TP is a significant international tax issue that requires having TP legislation in countries. This need for having TP legislation is dependent on the study that revealed additional information about differences in reporting of operating profit to the U.S. Treasury, before the updated 2006 U.S. TP legislation compared to after the update. The issues of TP require specific TP legislation that provides a greater degree of certainty in respect of transactions between related parties of MNEs; consequently, there is an urgent need for TP legislation that would provide the framework for guiding the actions of both MNEs and tax authorities. The nature of this study was a quantitative research using the ex-post facto or causal-comparative design to answer my research questions. The purpose of this causal-comparative study was to compare the reporting of profit, before and after change in legislation, as well as to examine the cost of services mediation of the relationship between the status of the legislation and profit reported.

TP legislation has been introduced and is evolving as it adapts to the interactions between MNEs and tax administrations. Therefore, countries are now recognizing the need for having similar TP legislation because information will now be available for making informed decisions on transfer pricing legislation by the management of the economy or the state. Analyzing the existing system for dealing with international transactions between related parties of MNEs could result in adopting a transfer pricing regime, which would contribute to achieving sustainable development. Chapter 2 will be my literature review while Chapter 3 will provide details on my methodology. In this

chapter, I focused on the ability of MNEs to reduce their tax liabilities by exploiting tax rules, indicating that there is an urgent need to have effective legislation for the taxation of MNEs; more details will be provided in Chapter 2.

Chapter 2: Literature Review

MNEs use TP to shift their worldwide profit and consequent tax burden from their high-tax home base to low or no-tax countries (Markle & Shackelford, 2012). Kaye (2014) has indicated that, via this profit-shifting behavior, U.S. MNEs have used TP to accumulate $1.95 trillion outside the United States. The general problem is that MNEs shift profit and taxes from the United States using existing TP legislation.

The specific problem is that, despite the updated 2006 TP legislation, shifting of profit and taxes is still occurring by MNEs. Taylor, Richardson, and Lanis (2015) confirmed that U.S. MNEs use TP to reduce their corporate taxes to the extent that 24% of U.S. MNEs reported zero tax liability. This problem has negatively impacted social and economic programs because of reduced collection of tax revenues. Docksai (2013) reflected that governments should be active in investment that contributes to economic growth and job creation as well as facilitate health care, education, infrastructure projects, and social welfare programs with the primary source of finance for the investment being tax revenues. A possible cause of this problem is MNEs' strategy of complying with the legislation.

In this study, I investigated differences in reporting of profit, before and after the updated 2006 U.S. TP legislation, which solves the problem by identifying either MNEs' adherence to arm's length pricing or engagement in tax management. Therefore, this study informs both economic and strategic management theories that propose arm's length pricing and global tax liability reduction, respectively. The purpose of this causal-comparative study was to compare the reporting of profit, before and after change in

legislation, as well as to examine the cost of services mediation of the relationship between the status of the legislation and profit reported.

In my literature review, I organized the literature into five sections. In the first section, I discuss the theory of TP. In the second section, I emphasize that TP remains the most significant international tax issue facing both tax administrations and MNEs today and in the future. The next section includes information on the independent variable of the existing legislative framework. In the fourth section, I include a comparison of several TP regimes. The last section includes literature relating to the research method and methodology.

Literature Search Strategy

The resources for this literature review included peer-reviewed journals, research by the major accounting firms that consult with MNEs on their potential tax liabilities, international organizations that guide tax administrations, and U.S. government sources. The majority of the TP literature that I reviewed was published between 2012 and 2017. The key words that I used in retrieving articles from Walden University's library databases and Google Scholar included: *transfer pricing, profit shifting, transfer pricing legislation, profit reporting,* and *base erosion*. The library databases I searched included Thoreau Multi-Database Search, Business Source Complete, ABI/INFO Complete, Academic Search Complete, and ProQuest Central. In addition, I accessed major sources of research on the topic of TP from a wide variety of public and private sources including the Government Accounting Office (GAO), the Internal Revenue Code, and Code of Federal Regulations. Further sources included the United Nations (UN), Organization for

Economic Co-operation and Development (OECD), International Monetary Fund (IMF), Ernst and Young (E&Y), and Price Waterhouse Coopers (PWC).

Theoretical Foundation

TP is a method for the pricing of goods and services between a company's related parties or its divisions. The theories that I tested for my study are economic theory and strategic management theory. These theories affect the operations of tax administrations and MNEs and present a view of TP that can explain, describe, predict, and control having specific TP legislation. Consequently, there was a need to assess the effect of updated TP legislation on the reporting of profit in the United States in ensuring arm's length reporting.

Economic Theory

One of the early pioneers in the field of TP was Hirshleifer (1956), who focused on the issue of interdivisional pricing of goods and services in maximizing the overall profit of the entire firm. Hirshleifer indicated that the market price might be the appropriate transfer price with this pricing having consequences for the entire firm including performance management and international tax management. Also, Chitic and Birman (2012) referred to the classical economists, Adam Smith and David Ricardo, who noted that the economic value of the transaction is an estimate of the price for the transaction and represents the market's interpretation. Therefore, economic theory is the basis for TP, with market values or the arm's length standard (ALS) determining transaction figures.

Behavioral economics presents another view of this economic theory. Thimmesch (2015) purported that tax compliance is affected by economic theory in asserting the need for analyzing cost and benefit or expected utility. Compliance with this economic model is dependent on penalties for noncompliance as well as the taxpayers' perception of the discovery of this noncompliance (Thimmesch, 2015). Consequently, behavioral economics can explain management's decision making in respect to tax compliance.

Economic theory indicates that interdivisional pricing is relevant in determining the overall profit of the firm. When applied to my study, this theory holds that I would expect my independent variable of status of legislation to influence the dependent variable of the reporting of operating profit because the independent variable establishes specific interdivisional arm's length pricing. Knowledge of profit reporting by a sector after updated legislation would inform economic theory. Economic theory proposes interdivisional market or arm's length prices; therefore, profit reporting showed management's adherence to the arm's length price and management's engagement in strategic tax management.

Strategic Management Theory

The other theory that I used as part of my theoretical framework was the strategic management theory. Bao (2015) stated that theory relates to causality, which is a connection to phenomena through cause and the resulting effect. Bao goes on to indicate that strategic management theory should expose phenomena affecting the survival and growth of organizations and so provide the basis for strategic management practice.

Further, organizational strategies integrate with the organization's functions and subunits in achieving total strategic management (Bao, 2015). MNEs consist of branches, subsidiaries, and affiliates having specific knowledge and activities and located in different countries where these related parties transact business between themselves at transfer prices that focused on strategic tax management of the MNE.

MNEs are strategically managing their organizations as indicated by several researchers. Betts, Laud, Mir, and Vicari (2015) noted that in the globalization period, MNEs such as Toyota, Walmart, Proctor & Gamble, and Apple are engaging in structural changes as they strategically manage their supply chains. With respect to TP, the head office of the MNE determines the pricing between subsidiaries when there are multiple, large, or long-term orders in negotiation; however, when there are ad hoc or one-off transfers between subsidiaries market-based pricing should prevail (Betts et al., 2015). Additionally, Martini (2015) reported that TP is relevant to MNEs for the dual purposes of coordination of managerial decisions and profit allocation as MNEs apply TP policies in respect of international taxation. Finally, Plesner Rossing and Rohde (2014) indicated that TP possesses organizational features including resource allocation, performance evaluation, business strategy, and tax management. Plesner, Rossing, and Rohde go on to state that changes in TP regulations and its effect on tax systems, including TP behaviors, have not been thoroughly explored. One of the findings in the literature revealed a relationship between TP and business strategy with strategic decisions driven by tax management (Plesner Rossing & Rohde, 2014). Consequently, MNEs engage in strategic management as they determine the prices of transactions between their related parties.

Strategic management theory indicates that management strategy is relevant in determining the overall profit of the multinational enterprise as they engage in strategies for reducing their global tax liabilities. When applied to my study, this theory holds that I would expect my independent variable of status of legislation to influence the dependent variable of the reporting of profit because the independent variable establishes specific interdivisional arm's length pricing that affects tax management strategies. Knowledge of profit reporting by a sector after updated legislation informs strategic management theory. Strategic management theory proposes that management engage in strategies to reduce their global tax liabilities; therefore, profit reporting support strategic tax management.

Literature Review

The Significance of TP

TP is a major international tax issue for both tax administrations and MNEs, with support from research done by international consulting firms, government agencies, and independent researchers. Their research reflected the effect on countries' tax revenue collection, tax planning by MNEs, and global attention to TP. These transfer prices are relevant for both tax administrations and MNEs since they determine the revenue, expenses, consequent taxable profits, and tax liabilities of associated enterprises in different tax jurisdictions.

Effect on countries' tax revenue collection. Researchers indicated significant tax revenue losses and tax base erosion due to profit shifting. International agencies have supported the significance of TP as reflected in the associated losses in tax revenue to

countries. Transfer pricing issues comprised a significant part of the reports approved and issued by the G20 and OECD on base erosion and profit shifting (Andrus & Oosterhuis, 2017; De Mooij & Liu, 2018; IMF & OECD, 2017). The *U.N. Practical Manual on Transfer Pricing for Developing Countries* (2013) referred to transfer mispricing between related parties of MNEs, indicating that the volume of trade between these parties could amount to 30% of global trade. Therefore, the potential revenue losses are significant since TP affects the tax base of countries where MNEs engage in cross-border transactions. International Monetary Fund, Organisation for Economic Cooperation and Development, United Nations, and the World Bank (2008) prepared a report to the G-20 development working group. In this report, the working group reported that MNEs use tax planning techniques such as TP to transfer part of their profits to low tax countries and so reduce their overall effective tax rates at the expense of revenue inflows to countries. OECD (2012) provided additional support from international agencies indicating significant revenue losses that are related to TP. These international agencies' reports reflected that TP cases are increasingly challenging for both MNEs and tax administrations. It is then necessary to become efficient with limited resources in complying with TP guidelines for reducing countries' revenue losses. Consequently, these international agencies have recognized the significant revenue losses associated with TP abuse by MNEs.

In addition to international agencies, independent researchers have supported that TP practiced by MNEs has resulted in a reduction in countries' tax revenues. Cooper, Randall, Loeprick, and Mohindra (2016) noted that transfer mispricing by MNEs,

through their aggressive tax practices, is the primary international tax issue and possibly the greatest challenge affecting countries' tax bases and consequent tax revenue inflows. Vicard (2014) supported this issue on revenue losses, noting that MNEs engaged in transfer price manipulation by French firms in shifting of profits from France in 2008 resulting in underreported taxable revenue of 8 billion USD. These values are significant; therefore, there is a need to assess the effectiveness of the existing TP legislation on profit reporting by MNEs, which was the subject of my research.

Associated with revenue losses is MNEs' strategy of shifting profit to low or no tax countries. MNE behavior in cross-border profit shifting increased in the last 20 years as they engage in shifting their worldwide profit from their high-tax home base to low or no-tax countries. (Klassen, Laplante, & Carnaghan, 2014; Markle & Shackelford, 2012). Further, De Simone, Klassen, and Seidman (2015) indicated that MNEs tend to shift profit from high-tax countries to low-tax countries as well as profit shifting to loss-making affiliates reflecting lower profit in the profitable affiliates and lower losses in the loss-making affiliate. Foreign corporate tax rates are influencing the global location of MNEs since the profit generated in these locations affect the MNEs behavior in deciding where the reporting of profit and consequently taxes takes place. Finally, Desai (2012) noted that reducing the corporate tax rate in the United States would convince MNEs to invest and locate in the United States. Therefore, there is a relationship between the profit-shifting behavior of MNEs, to global locations through TP, and relevant tax rates. Consequently, there is a need to assess the effectiveness of the existing TP legislation on

revenue reporting, which was the subject of my research in ensuring arm's length is reporting.

Another development within the TP area that has contributed to the significance of TP is tax base erosion and profit shifting (BEPS). OECD (2013) reported that globalization created opportunities in the international tax environment for BEPS, resulting in OECD developing action plans for addressing BEPS in a comprehensive and coordinated manner. Plowgian (2013) indicated that the OECD had taken an active role in BEPS through its 15 action plans, including four on TP, where governments and MNEs collaborate for their mutual benefit for reducing tax base erosion and profit shifting. Also, Plowgian and Seales (2015) reflected that these action plans on TP sought to assure that there was a link between TP outcomes and value creation and included aligning returns to value creation despite the allocation of risks assumed through contracts. Therefore, the BEPS project represents a transitory phase in cross-border cooperation on taxation to secure the individual tax bases of countries.

One of the action plans enhanced existing TP rules that emphasize value creation within MNEs by aligning profit allocation to the economic activity in producing the profit (OECD, 2013). OECD (2014) reflected another BEPS action plan with enhanced TP documentation and reporting of economic activity on a country-by-country basis in respect of MNEs. Nyiri (2015) supported this country-by-country reporting and noted that the reporting allows tax administrations to assess MNEs TP risk and includes preparing a master file and a local file on the MNE so creating greater visibility and transparency of MNEs. Also, Owens (2013) recognized that BEPS arise as governments

and MNEs balance tax base protection against FDI. Finally, Bell (2012) noted that tax authorities should be refocusing to BEPS associated with improving the existing TP system. MNEs decrease their overall tax liabilities through TP by underpricing exports to related parties and overpricing imports in the host country from related parties. These MNEs transfer profits from the branch in the high-tax country to the branch in the low-tax country resulting in a reduction in the overall MNEs tax rate.

Tax planning by MNEs. MNEs shift profit from high tax to low tax countries in minimizing their global effective tax rate, maximizing their shareholders value as they engage in organizational restructuring. International agencies support the relevance of TP in affecting tax bases as well as MNEs minimizing their global effective tax rates. The IMF (2013) asserted that MNEs pose a major tax risk in both developing and developed countries and that tax measures implemented by one country grossly affect the tax base of others. Also, Inter-American Center of Tax Administrations (CIAT) (2013) noted that arising from G20 meetings there is a mandate for improving tax systems dealing with the erosion of national tax bases, within Latin America and the Caribbean, through international TP. These MNEs are minimizing their global effective tax rates and eroding tax bases at the expense of revenue flows to the individual countries.

Further research by independent researchers on TP complemented and supported those by the institutional studies. There are several tax avoidance schemes used by MNEs, such as TP, in shifting their worldwide profit from their high-tax home base to low or no-tax countries so reducing their global effective tax rate (Duff & Phelps, 2013; Markle & Shackelford, 2012). MNEs use transfer prices that differ from market prices

and are therefore able to shift profits from high-tax to low-tax countries and consequently reduce their overall tax liability (Pendse, 2012). Finally, these MNEs attempt to maximize their global profits through TP, through prices charged for transactions between the related parties of the MNE, so reducing their global effective tax rate (Cristea & Nguyen, 2013; Vargas-Hernández, 2012). Therefore, by deviating from the arm's length invoice price MNEs can hide profit shifting, minimize global effective tax rates, and consequently maximize global profits. As a result, there is a need to assess the effectiveness of TP legislation on profit reporting, which was the subject of my research.

Associated with minimizing their global effective tax rates, these MNEs engage in different strategies in maximizing their shareholders' value. Grubert (2012) stated that the worldwide profit of U.S. MNEs that is shifted from the United States and now declared abroad had increased significantly resulting in increased value for shareholders. MNEs exist to increase their shareholders' value and therefore engage in aggressive tax planning for reducing costs and increasing profit. Further, Desai (2012) concluded that an abundance of tax avoidance schemes contributed to corporation tax being optional for several MNEs as management focus shifts from tax compliance to increasing shareholders' value. Although there is TP legislation, MNEs engage in tax planning by increasing the value of equity for their shareholders.

MNEs engage in TP manipulation through their organizational structure. Joint Committee on Taxation (2010) reported that international trade, as well as outbound and inbound FDI by US corporations, led to business restructuring resulting in TP arrangements between related parties that reduce tax liability in the United States. The TP

system facilitates decentralization within an MNE with the decisions on the transferred price between the units of the MNE deviating from performance management to taxation management. This restructuring comprise strategic decisions of the parent MNE and is causing concern for tax authorities as they examine the autonomy and substance of the affiliate's operations in determining where the expenses and revenue is recognized (Chiu & Barberi, 2012; Harrison, Stringer, & Singh, 2012; Shroff, Verdi & Yu, 2014). Therefore, MNEs are involved in TP manipulation by revising their organizational structure.

Global attention to TP. This issue of TP continues to be a focus for tax administrators and MNEs due to additional scrutiny of cross border transactions, media attention, and court cases. Several international consulting firms, as well as independent researchers, identified the relevance of TP and the effect on revenue reporting by MNEs. Simonidesová and Feranecová (2015) examined the data in the Slovak Republic and commented that almost 90% of MNEs indicated that TP is the major international tax issue that is engaging the attention of both MNEs and tax authorities. Further, Kasztelnik (2012) showed that measures of performance by branch managers affected tax liabilities and TP might be a vehicle to distort branch profitability. Therefore, this manipulation of international TP policies for reducing the overall income taxes of MNEs has focused the attention of tax authorities in their dealings with MNEs. The long-term growth in international trade coupled with the global economic challenges focused many governments on tax base protection including heightened attention to TP issues.

Therefore, TP remains a significant international tax issue facing both tax administrations and MNEs.

TP has evolved to the stage that tax authorities are examining these TP transactions. Ho (2014) indicated that China in enhancing its TP enforcement capability is developing a TP specialist group with dedicated TP audit teams. Also, Simonidesová and Feranecová (2015) reflected that almost 90% of MNEs, in the Slovak Republic, indicated that TP is the major international tax issue that is engaging the attention of tax authorities. Further, the researchers indicated that in the US over 70% of MNEs were examined for TP issues since 1999 as well as others anticipating an examination (Simonidesová & Feranecová, 2015). Therefore MNEs have a high degree of expectation that there will be an examination of TP issues in their international transactions and there will be increasing difficulty as tax authorities are preparing themselves through updated legislation and training of officers. Therefore, tax authorities started additional scrutiny of TP transactions between members of an MNE group.

Another development with TP has been the added attention on the issue by the media. Ohnuma and Kato (2015) argued that the Japanese government is aware of a significant amount of attention in the public domain to media reports about action by tax authorities involving TP, resulting in capital markets reacting negatively. Also, Klassen, Laplante, and Carnaghan (2014) indicated that MNEs behavior in cross-border profit shifting increased in the last 20 years and highlighted to the public through media coverage of well-known entities such as Starbucks, eBay, and Google. Also, Kaye (2014) noted a Bloomberg News report reflecting that U.S. MNEs accumulated $1.95 trillion

outside the United States since these MNEs are shifting profit to low-tax countries and tax havens. The U.S. MNEs reported that 43% of their foreign profits emanated from the Netherlands, Luxembourg, Ireland, and Bermuda; however only 4% of their employees and 7% of their overseas investment were located in these tax havens (Kaye, 2014). MNEs are engaged in strategies of reducing their tax liabilities and have received recent media coverage and consequent public outrage of this tax evasion (Harrison, Stringer, & Singh, 2012; Plowgian, 2013; Sala, 2014). Finally, Fuest, Spengel, Finke, Heckemeyer, and Nusser (2013) noted that media reports on Google and Apple reflected that these apparently profitable MNEs were paying minimal taxes on their host country profit with effective tax rates of 3% and 1% respectively. This ability by MNEs to reduce their tax liabilities by exploiting tax rules indicates that there is an urgent need to reform the taxation of MNEs; therefore in addressing this issue one of the recommendations is the reform of corporate taxation with emphasis on TP. Consequently, there is a need to assess the effectiveness of the existing TP legislation on profit reporting by MNEs, which was the subject of my research.

Several TP cases are being brought before the courts reflecting the disputes on the topic. In 2006 the case between the U.S. IRS and GlaxoSmithKline (GSK) resulted in a settlement of $3.4 billion that was the biggest in IRS history (Burnett & Pulliam, 2014). Burnett and Pulliam (2014) noted another TP tax case that was between IRS and Xilinx, finally decided in 2010, where the issue was sharing of costs between Xilinx and its Irish subsidiaries in respect of the ALS. Additionally, the TP case between Veritas and the U.S. IRS involved the value of buy-in payment of transferred intangibles between Veritas

and its Irish subsidiaries (Burnett & Pulliam, 2014). Also, Yoder (2014) examined several recent transfer pricing cases including Amazon.com Inc., Veritas Software Corp, Eaton Corp, and Caterpillar Inc. with the major dispute involved in identifying and pricing of transferred intangibles. Therefore both tax authorities and taxpayers are seeking the intervention of the judiciary in their application of TP legislation.

U.S. TP Legislative Framework

TP require specific legislation that provides a greater degree of certainty in respect of cross-border transactions between related parties of MNEs. However, some countries have adopted OECD guidelines as they evolve to a complete TP regime, others have not introduced any specific TP legislation, while some countries are updating their existing TP legislation. The purpose of my study was to compare the reporting of profit, before and after change in legislation, as well as to examine the cost of services mediation of the relationship between the status of the legislation and profit reported. As such, several aspects of TP legislation are presented.

U.S. TP legislation. TP legislation is tax law that is specific to the transactions' values between the related parties of MNEs. Tax law should achieve policy goals regarding raising revenue in an equitable, efficient, and simple manner as well as identifying the persons and items to be taxed specifically, and the taxpayers' rights and obligations (Thuronyi, 2012). The United States introduced TP legislation in 1934, contained in Internal Revenue Service Code (IRS) (n.d.) noting that Section 482 ensures the reflection of profit related to controlled transactions and deters the avoidance of taxes relating to those transactions. IRS (n.d.) reflected that Section 482 places the controlled

taxpayer on par with an uncontrolled taxpayer by determining the correct taxable profit of the controlled taxpayer. Section 1.482-1 establishes the rules under Section 482 that must be followed by both the tax authorities in making allocations as well as the taxpayers' use of the section (IRS, n.d.). IRS applies the ALS in determining the correct taxable profit of a controlled taxpayer by reference to the results of comparable transactions of uncontrolled taxpayers under comparable situations. The comparability factors include functions, contractual terms, risks, economic conditions, and property or services that produce a result within an acceptable arm's length range of results (IRS, n.d.). IRS use several methods in evaluating the ALS with the best method rule based on the facts and circumstances that will provide the most reliable arm's length result. Therefore, Section 482 of the U.S. tax code comprise tax law that is specific in determining the arm's length value of transactions between the controlled parties of MNEs.

Statistical methods refine this arm's length. The statistical analysis establishes the acceptable interquartile range of results between the 25th and 75th percentiles derived from the uncontrolled comparable data (IRS, n.d.). IRS added that they use multiple year averages in reducing the effects of short-term variations that are unrelated to TP. Section 1.482-2 determines taxable profit in specific situations including the performance of intergroup services, the subject of my research, where the charge for those services are not at arm's length (IRS, n.d.). Therefore, U.S. TP legislation is tax law that is specific in determining the arm's length transactions' values between the related parties of MNEs and the subsequent reporting of operating profit.

Updated U.S. transfer pricing legislation 2006. While there may be existing TP legislation, the United States is updating this legislation as they react to both internal and external forces. It was necessary to update the previous 1968 regulations due to substantial manipulation by taxpayers as well as the existence of extensive developments in the services sector since 1968 (Department of the Treasury, 2006). Hill (2006), supported this expansion of the services sector and noted that there had been a visible increase within the last 35 years in this sector relating to the global transactions of MNEs and resulting in the proposed services regulations in 2006. Department of the Treasury (2006) reflected that the 2006 regulations provided updated guidance in respect of transactions involving controlled services affecting controlled taxpayers through Section 482 of the Internal Revenue Code (IRC) and took effect January 1, 2007. Department of the Treasury added that Section 482 confers powers to the U.S. IRS for adjusting the profit of controlled parties in preventing tax evasion and affects, among others, a high volume of intragroup services. Section 482 is intended to determine the correct taxable of the controlled taxpayer by comparing with an uncontrolled taxpayer (Department of the Treasury, 2006). Therefore, this updated TP legislation was necessary due to significant changes in the services sector.

This updated U.S. TP legislation focuses on the services sector with the goal of deriving an arm's length value of services transactions between the related parties of MNEs. Several methods are available for determining the arm's length value with an arm's length range determined by reference to an interquartile range of results (Department of the Treasury, 2006). However, the comparable profits method for

services (CPM) is the best method for evaluating the arm's length nature of the controlled services transaction through referencing to objective profitability measures (Department of the Treasury, 2006). Through Section 1.482-9, the method applicable is the CPM for services where the entity rendering controlled services is the tested party (Department of the Treasury, 2006). This profitability measure includes profit level indicators (PLI) obtained from financial data of uncontrolled taxpayers engaging in similar transactions involving services. Finally, the Department of the Treasury noted that the suggested PLI is the mark-up on total costs or the ratio of operating profit to total services costs using a comparison of the cost base of the tested party to that of uncontrolled entities in similar business transactions. In my study I analyzed the services sector since the regulations exclude certain categories of transactions such as manufacturing, production, construction, and other sectors but do not restrict the services sector.

TP legislation's effect on revenue reporting in the United States. TP requires specific legislation that provides a greater degree of certainty in respect of transactions between related parties of MNEs with several studies done on the effect of TP legislation on revenue reporting. The transfer prices of transactions between the related parties of the MNEs strategically deviate from market prices in reducing taxable profit (Cooper, Randall, Loeprick, & Mohindra, 2016; De Mooij & Liu, 2018). Cooper et al. reported that introducing and administering TP legislation, providing guidance in applying the arm's length principle, would result in increased tax revenue since it provides the tools for protecting the countries' tax bases. The U.S. Government Accountability Office (GAO, 1995) compiled a report in response to requests for data on the TP issues relating to tax

compliance of foreign-controlled corporations (FCCs) and the U.S.-controlled corporations (USCCs). GAO specified that the IRS, through Section 482 of the Internal Revenue Code (IRC), evaluates TP by considering the price charged between related parties and compares prices between unrelated parties or the arm's length price. The results of the study indicated that FCCs were less likely to pay U.S. income taxes through TP abuse (GAO, 1995). Therefore, there is a distinction in the reporting of profit between FCCs and the USCCs under the existing TP legislation.

This effect of TP legislation on revenue reporting is also reflected by the Department of the Treasury's (2007) report through studies on earnings stripping and TP, among other topics. The earnings stripping study included comparing the profitability of FCCs to USCCs resulting in FCCs reporting less profit than their comparable USCCs in the nonfinancial sector (Department of the Treasury, 2007). The second study done by the Department of the Treasury included reviewing Section 482 of the U.S. IRC. This review prompted the implementation of the 2006 TP regulations relating to services that determined the arm's length price. Furthermore, the U.S. GAO (2008) indicated that for the period 1989 to 2000 there was a greater likelihood that FCCs reported zero tax liability when compared to USCCs and this might be due to TP abuses. These researchers noted that there must be a monitoring of TP rules for preventing profit shifting through non-arm's length TP. Consequently, despite having TP legislation, MNEs engaged in tax planning by reducing their reported revenues and so there was a need to examine the effect of updated TP legislation on operating profit reporting by MNEs.

Additional studies indicated the effect of TP legislation on revenue reporting by MNEs. The Joint Committee on Taxation (2010) reported on business restructuring, legislation, and the manner in which the structure of these MNEs utilize the IRC in determining their U.S. tax liability. International trade, as well as outbound and inbound foreign direct investment by U.S. corporations, led to business restructuring resulting in TP arrangements between related parties that reduced tax liability in the United States (Joint Committee on Taxation, 2010). The Joint Committee on Taxation applied Section 482 of the IRC and concluded that there was shifting of profit and taxes from the United States. Furthermore, Taylor, Richardson, and Lanis (2015) reflected that U.S. MNEs use TP in reducing their corporate taxes to the extent that 24% of U.S. controlled MNEs reported zero tax liability. Taylor et al. concluded that there is a relationship between the existence of MNEs and non-compliance with the ALS in determining transfer prices as required by Section 482 of the IRC. Finally, Ogavu (2013) evaluated the effectiveness of the effort by the U.S. government in preventing tax revenue losses by MNEs in the United States and concluded that the 2006 TP regulations, in a specific services sector, were effective in ensuring compliance with the ALS. Accordingly, future research could examine compliance with the ALS before and after introducing substantial changes to the U.S. TP legislation, such as the 2006 updated TP regulations that was the subject of my research.

MNEs also engage in TP behavior due to differential tax rates. Klassen, Lang, and Wolfson (1993) studied profit shifting by U.S. MNEs in response to global changes in tax rates using samples of both U.S. and non-U.S. based operations. The study by Klassen et

al. indicated that U.S.-based MNEs shifted profit out of the United States when the tax rates of selected countries were lower compared to U.S. tax rates. Further, Grubert (2012) noted that since 1996 there had been a significant increase of U.S. MNEs' worldwide profit declared outside of the United States. Grubert concluded that U.S. foreign tax rate differentials affected the location of the portion of foreign global profits of U.S.-based MNEs. Therefore, U.S.-based MNEs reflected both lower U.S. reported profit margins and higher foreign profit margins when their effective foreign tax rates were lower compared to U.S. tax rates. These researchers examined the effect on profit reporting due to tax rate differentials, whereas my study involved examining the effect of updated TP legislation on operating profit reporting by MNEs.

Specific Aspects of TP Legislation

TP legislation has certain specific components including the ALS, documentation requirements, and the effect on services. In addition, there is a need for TP legislation and support is available to introduce and update legislation.

The ALS in TP legislation. There is a connection between TP and MNEs since TP involves cross-border trade between related parties of the MNE. OECD (2008) defines an MNE as comprising entities with different degrees of autonomy that are established in more than one country and linked by coordinating their operations. However, MNEs engage in tax planning that affect the revenue, expenses, and the consequent tax liability of the MNEs within the tax jurisdiction as they participate in transactions between their related parties (OECD, 2008). TP represents a major tax planning practice of MNEs since it involves the value of transactions between the related

parties of MNEs located in different tax jurisdictions. As such there are certain aspects of TP legislation affecting transaction values. McDonald (2008) indicated that valuing transfer prices in respect of taxation through the ALS use Section 482 and associated regulation of the U.S. ITC and determines the country's taxing jurisdiction in respect of related party transfers.

Further support exists for determining transaction values between related parties. Cooper, Randall, Loeprick, and Mohindra (2016) noted that introducing and administering TP legislation, providing guidance in applying the ALS, would result in increased tax revenue since it provides the tools for protecting the countries' tax bases. Davies, Martin, Parenti, and Toubal (2018) indicated that transactions between the associated parties of MNEs should be valued at market price complying with the ALS. Avi-Yonah (2007) supports the ALS noting that the United States should continue to apply the ALS in taxation since it is present in tax law, tax treaties, as well as being adopted by international bodies for addressing TP issues. This ALS uses comparable data for determining a transfer price range of values for transactions between related parties through several methods including the CPM (Avi-Yonah, 2007). Avi-Yonah indicated that the problem of international tax avoidance by MNEs was the primary reason for enacting TP legislation, with ALS provisions, in the United States. These MNEs can influence their controlled parties in the United States through TP by either or both overstating expenditure and understating revenues of the controlled parties so that taxable profit and tax liability is understated. Therefore, the purpose of the legislation was to place a controlled taxpayer on the same tax parity as an uncontrolled taxpayer for

determining the proper taxable profit of the controlled taxpayer (Avi-Yonah, 2007). Avi-Yonah concluded that there are concerns with using the ALS since it might not reflect economic reality because MNEs do not consider their related parties as separate entities. However, the alternatives to the ALS such as formulary apportionment also has concerns, and the ALS should apply on a case-by-case basis. Also, the ALS represents the present international norm adopted by all OECD countries and deviation from this standard can lead to double taxation and violation of treaty obligations. The transfer price for goods and services translates into revenue for the selling entity and cost for the buying entity, which determines relevant profit and taxes of the related parties of the MNE (Chiang & Del Gaudio, 2013). Finally, the global guiding principle in the management of TP is the ALS (Talab, Flayhh, & Yassir, 2017). Therefore, the ALS is inherent in TP law and used for determining transfer prices for controlled transactions involving affiliated entities and uncontrolled transactions between non-associated entities.

This ALS is instrumental in allocating the global profit of the related parties of MNEs based of how comparable non-related parties would allocate their profit in comparable scenarios. However, researchers criticize the ALS because there is no economic reality basis of a vertically integrated group strategy that defers profit until the final sale to an external party (Burke, 2011). Burke (2011) stated that the theoretical transfer price might not comply with the ALS inherent in the TP legislation; the transfer price may be inconsistent with the ALS when production capacity is under-utilized and when the market is imperfect. Where there is no arm’s length trading of assets between related parties of MNEs, free cash flows or economic measures of profit are more

relevant in TP than accounting measures of profit since TP methods rely on economic reasoning (Burke, 2011. Therefore, there are alternatives to the ALS for pricing the transactions between the related parties of MNEs.

One alternative to the ALS is formulary apportionment based on economic factors where applying a formula, that might be based on sales or another base, allocates revenue and expenditure. (Benshalom & Lahav, 2013; Blay, 2017; Chiang & Del Gaudio, 2013; Rectenwald, 2012). However, there are challenges in using this formula including the need for agreement between the various countries as well as the basis for the formula (Chiang & Del Gaudio, 2013). So, formulary apportionment is an alternative to the ALS for pricing the transactions between the related parties of MNEs. Another alternative to the arm's length standard is advanced pricing arrangement (APA) where there are predetermined criteria for determining transfer prices leading to a prediction of tax liability, better certainty for cross-border transactions, reduced compliance costs, and less risk of double taxation. Ulmer, Ethridge, and Marsh (2013) noted one agreement deviating from ALS is the cost sharing agreement (CSA) that allocates revenue, cost, and consequent operating profit. Negotiation of this CSA occurs before the transaction and is the precursor to the APA. The APA seems to be a safety mechanism in TP that is usually negotiated with only large MNEs since they are quite expensive and can take up to two years to conclude (Ulmer et al., 2013). Therefore CSAs and APAs are further alternatives to the ALS in determining the values associated with cross-border related party transactions.

There is further support for deviating from the ALS. Ulmer, Ethridge, and Marsh (2013) reported the involvement of international politics in TP resulting in agreements, different from ALS, negotiated at the diplomatic level. Also, Autrey and Bova (2012) indicated that MNEs occasionally operate in the gray market, as against the black market, as they exploit global price differences where MNEs use various transfer prices instead of ALS. Additionally, the Brazilian TP system is unique and different from the ALS, allowing the taxpayer to determine its price objectively without searching for comparable data (Falca˜o, 2012). This search for comparable data is a major concern for developing countries due to lack of data on comparable products, so in Brazil, there are fixed margins applied to the company's production cost or resale price (Falca˜o, 2013). Finally, Mazur (2016) indicated that in cloud computing there are challenges for both tax administrations and businesses in applying the ALS since cloud computing is a provision of services for which the best method rule applies in determining the arm's length value. However both TP rules and the ALS have not been successful in preventing base erosion and profit shifting due to the borderless nature and mobility of cloud computing, leading to the global adoption of formulary apportionment instead of ALS (Mazur, 2016). Therefore, there are alternatives to the recommended ALS for pricing transactions between related parties of MNEs, such as formulary apportionment, agreements between the parties, fixed margins, and the nature of the transaction. Consequently, there is a greater reliance on the ALS but applying this principle is not without difficulties and issues.

Documentation requirements. Another significant aspect of TP legislation is documentation since it ensures that MNEs consider the TP legal requirements regarding prices between related parties and consequent reporting of the profit as well as providing tax authorities with the data for assessing TP risk. World Transfer Pricing (2014) indicated that the OECD recently embarked on several TP projects including documentation that will directly affect the future of global transfer pricing. Additionally, Harrison, Stringer, and Singh (2012) examined business restructuring across international borders noting that the TP issues of restructuring cause tax administrations to respond by requesting taxpayers to document and analyze the restructuring with TP rules and the OECD guidelines. Also, OECD (2014) reflected on one of the BEPS action plans that enhance TP documentation and reporting of economic activity on a country-by-country basis in respect of MNEs. On introducing TP legislation, countries should adhere to the different stages of TP including the compliance stage, which includes documenting the arm's-length nature of the company's intercompany pricing policies (Duff and Phelps, 2013). Therefore, documentation is an important aspect of TP legislation since it requires MNEs to record the process by which they arrived at their transaction price between related parties.

This requirement for documentation, included within the TP legislation, has increased the compliance with the law. Lohse and Riedel (2012) indicated a reduction in the shifting of profit from high-tax to low-tax countries by MNEs by more than 50% when there is TP legislation, and accompanied by comprehensive documentation requirements. Also, Thimmesch (2015) noted that the IRS estimated a tax compliance

rate of 99% where there is significant reporting of information and withholding and 44% where these factors are non-existent. Finally, Beer and Loeprick, (2015) commented that there is a 52% reduction in profit shifting after two years of introducing mandatory documentation requirements. Therefore, documentation is an important aspect of TP legislation in facilitating compliance with the TP legislation.

Services. MNEs engage in the trade of both goods and services with recent substantial increases in the services sector. Curtis (2012) indicated that TP in respect of services, such as management and IT, represent a major compliance risk for MNEs since it is burdensome and complex. The Treasury regulations in Section 1.482-9 provided the U.S. TP rules for intercompany services with a core concept that the charge to the related party must provide a specific benefit to that related party (Curtis, 2012). Talab, H. R., Flayhh, H.H., and Yassir, N. M. (2017) surveyed 80 Australian service organizations and concluded that the relevant goals are congruence and comprehending TP easily. Also, Department of the Treasury (2006) noted that the 2006 regulations provided updated guidance in respect of transactions involving controlled services affecting controlled taxpayers through Section 482 of the Internal Revenue Code (IRC). It was necessary to update the previous 1968 regulations since taxpayers manipulated these regulations as well as the existence of extensive developments in the services sector since 1968 (Department of the Treasury, 2006). In my study I analysed the services sector since the 2006 updated regulations excludes certain categories of transactions such as manufacturing, production, construction, and other sectors but does not omit the services sector.

Need for TP legislation. There is an urgent need for TP legislation that would provide the framework for guiding the actions of both MNEs and tax authorities. Sriausadawutkul (2013) noted that there is no TP legislation in Thailand resulting in significant revenue outflows from the country since there are no penalties for non-compliance in countering MNEs tax planning practices. Consequently, through TP law Thailand can have a tool that can effectively protect its tax bases. Also, Tursonova (2015) reflected on this lack of legislation commenting that in Uzbekistan there is no TP legislation with contracts determining the transfer price. Tursonova indicated that TP was an efficient tax planning tool for minimizing taxation since, based on the contract, there was no valuation of the transferred product, and this is prevalent in all major MNEs. Therefore, this lack of domestic TP legislation facilitates prices other than market prices leading to losses in tax revenue, so there is an urgent need for TP legislation.

Some countries are recognizing the urgent need for TP legislation due to the increase in international transactions between the related parties of MNEs. Several countries are adopting specific TP legislation using the ALS as they develop TP rules for protecting their tax bases (OECD, 2011). Countries are at different stages of development in their TP legislation, and Lohse and Riedel (2012) indicated a significant reduction in the shifting of profit from high-tax to low-tax countries by MNEs when there is TP legislation. In addition, Valdes (2014) observed that TP is active in Panama through adjustments to the tax code including definitions of ALP, related parties, and the scope of applying TP in Panama. Also, Sagianni and Lena (2014) reported the existence of TP rules within the Albanian income tax law with TP regulations introduced in 2014,

transforming the income tax law into an action instrument. Furthermore, Wilson-Rogers and Pinto (2015) stated that companies such as Apple, Starbucks, Microsoft, Google, and Amazon utilized TP as a tax minimization tool. This issue resulted in Australia revisiting their domestic TP rules in ensuring that the taxes imposed in Australia reflect the economic contribution of the Australian operations, as defined by the ALS (Wilson-Rogers & Pinto, 2015). Hybka (2014) indicated that Poland introduced controlled foreign corporation (CFC) tax legislation in 2015 with the goal of reducing the outflow of taxes to foreign countries. Finally, Plesner Rossing and Rohde (2014) concluded that changes in TP regulations and its effect on tax systems, including TP behaviors, have not been thoroughly explored. Therefore, countries are now adopting specific TP legislation and amending their existing legislation as they seek to protect their tax bases.

Introducing TP legislation. As countries begin introducing TP legislation tax administrations are responding to the practice of TP by MNEs by examining the conditions, challenges, and guidance for having TP legislation. OECD Transfer pricing guidelines for multinational enterprises and tax administrations (2010) provided procedures for introducing TP and focused on applying the ALS for evaluating the transfer prices between associated enterprises. On introducing TP legislation, countries should adhere to the different stages of TP including planning, implementation and monitoring, compliance and documentation, and audit defense (Duff & Phelps, 2013). Therefore, there are rules for introducing TP legislation.

Although there is general guidance for introducing TP reform for any country, there is specific guidance for developing countries. The *United Nations Practical Manual*

on Transfer Pricing for Developing Countries (UN) (2013) indicated that introducing TP reform will prevent tax base erosion of countries especially developing countries; however, these developing countries are susceptible since they lack resources for effective TP administration. The report to the G-20 development working group by the IMF, OECD, UN and World Bank, (2011) provided further guidance for introducing TP reform in a developing country and indicate the challenges in effectively implementing TP rules including legislation, tax administration expertise and experience in TP, information needs, and databases for comparable transactions. Therefore, developing countries are requesting assistance in adopting TP regimes that will raise revenue, improve governance, and promote social justice. Despite the guidance by international agencies in assisting developing countries in their quest for introducing TP regimes, these countries face several challenges. OECD (2012) noted that TP rules are necessary for addressing a potential mismatch between the allocation of profit and the distribution of functions, assets, and risks. Also, the scarcity of knowledge and skills by tax administrations and the need for improvement through relevant training is a feature of developing states (OECD, 2012). CIAT (2013) examined the main administrative and legislative aspects within Latin America and the Caribbean (LAC) on the topic of TP and noted that countries needed to be aware that TP legislation must include certain practical issues. Therefore, TP management is complex especially for developing countries but with appropriate legislation and administration MNEs can reduce their TP manipulation.

Countries that do not have TP legislation are following OECD TP Guidelines for examining their international transactions between related parties of MNEs. Ielyzaveta

(2013) examined the OECD Guidelines on TP and focused on their integration, including arm's length prices, into the domestic laws of the relevant states. Therefore, international tax regimes such as OECD TP Guidelines are now influencing the development of domestic tax legislation. Also, Murthy and Rao (2014) examined the TP provisions in India and noted that India's foray into TP was patterned after OECD guidelines and established as law by the Finance Act, 2001. Additionally, Baistrocchi (2013) indicated that the BRICS converge to global standards in respect of international tax and are now influencing the contents of international tax soft law as they contribute extensively to the OECD model through their commentaries. Therefore the BRICS nations, although non-OECD countries are market leaders for quasi-legal rules, such as ALS, as the OECD documents become integrated into tax treaties that permeate into domestic law. Finally, Kraal and Marin (2013) noted that Australia's proposed changes to TP included the tax treaties being considered a separate taxing element. Therefore despite the absence of specific TP law, countries are adopting alternative measures for preventing TP abuse by MNEs.

Effect of TP Legislation Globally

Several countries have introduced TP legislation, with their unique approaches, for addressing the tax planning practices of MNEs. The categories of countries include developed, BRICS, other developing, and tax havens. This comparison reflects the variety of approaches followed by countries of the world as they address TP.

Developed countries. MNEs existed initially in developed countries coinciding with the establishment of TP reform with their unique styles. The regulatory style and

legislation of the developed countries included a variety of approaches to TP. These approaches included a litigious approach towards taxation, non-confrontational with informal agreements concluded based on negotiation and discussion, regular interactions between business and tax authorities, aggressive in addressing TP issues but they maintain both a litigious and consultative approach. Countries' unique cultures affect TP practices. There are ideological differences between Canada and China because of their cultural, political, and economic systems with the Canadian system focused on individualism favoring cost-based methods while the Chinese system focused on collectivism preferring negotiation and market-oriented methods (Pinto, 2012). Also, the legal system in Canada is well-developed and supports property rights in respect of intangibles; however, the Chinese legal system is developing, and there are differences from Western systems (Pinto, 2012). Therefore despite having similar TP legislation, countries' implementation of the law is based on their individual style and culture.

Also, countries are developing their strategies for dealing with TP including the amendment to existing TP legislation. Borkowski and Gaffney (2014) researched the TP strategies of the four countries of the Pacific Association of Tax Administrators (PATA) comprising Australia, Japan, U.S., and Canada. Developed countries have introduced TP law and are now amending this legislation in support of the demands of international agencies as they focus on a strategy of audit risk reduction (Borkowski & Gaffney, 2014). Also, Ortega Calle and García Fernández (2015) noted that Spain had amended its TP legislation aligning it with OECD's BEPS project. Further, Gouthière (2014) indicated that the OECD's BEPS project has started affecting the French tax department as they

earn additional power in obtaining information on TP audits including the provision of consolidated accounts, a description of their TP policy, and the inclusion of foreign rulings in their TP documentation. These developed countries recognize the significance of TP and are amending their existing TP legislation for dealing with the tax planning practices of MNEs.

BRICS countries. The BRICS countries are large developing countries distinguished by their economic and demographic potential that ranks them among the most influential in the 21st century. Raj, Herve, Lorenze, and Sabharwal (2013) examined the increasing relevance of developing countries such as Brazil, Russia, India, China, and South Africa (BRICS) in world trade and the consequent need for an aligned TP administration. Raj et al. (2013) indicated that the basis of the TP laws in these non-OECD countries is the globally accepted arm's length principle, but the TP issues are inconsistent with those from OECD countries leading to TP disputes and a gap between developed and developing countries. Consequently, there must be a uniform approach for protecting the tax base of developing countries given the criticism, reflected in publications from both OECD and UN, of fostering the interests of only developed countries (Wright, 2012). These BRICS nations have evolved to the extent that they now have similar TP issues that exist in developed countries and there is a need for alignment to the TP practices of developed countries.

The BRICS nations are not necessarily consistent among themselves in their TP approaches. Among the BRICS countries, the Brazilian TP system is unique and different from OECD guidelines in respect of the ALS, allowing the taxpayer to objectively

determine its price without searching for comparable data (Falca˜o, 2013). This quest for comparable data is a major concern for developing countries because of lack of data on comparable products, so in Brazil, there are fixed margins applied to the company's production cost or resale price (Falca˜o, 2013). Therefore, the Brazilian model of TP can be an alternative for other developing countries rather than the OECD's approach.

India's liberalized economy, as well as increased tax competition, resulted in a need to reexamine the Indian TP regime. Murthy and Rao (2014) examined the TP provisions in India and noted that India's foray into TP was patterned after OECD guidelines and established as law in 2001. Further, Gupta (2012) made some suggestions to the Indian government for improving their TP practices including reducing corporate tax rates that are comparable to other countries in minimizing the incentive for profit-shifting from India. Finally, Raghavan (2014) examined TP in India by comparing the relevant legislation with the UN and OECD models noting that there is an association between TP in both developed and developing economies litigation due to interpretation and pricing issues as well as the aggressive actions of both tax administrators and MNEs. Therefore, the Indian TP legislation is evolving as the country adapts to the MNEs actions and endorses the cooperative vision of the UN and OECD.

Another large developing country adopting and amending its TP legislation is China. Markham and Liao (2014) commented that China introduced TP rules in the 1980s as the country engaged in economic reforms including foreign investment. However, TP issues accompanied the foreign investment by MNEs resulting in the adoption of TP legislation in 1991 with the ALS (Markham & Liao, 2014). Then from the

1990s to 2007, China enhanced its TP legislation including regulations and rules and later introduced new anti-tax avoidance rules including cost sharing agreements (CSA), APAs, and thin capitalization (Markham & Liao, 2014). Markham and Liao concluded that China has a complete TP system but within an incomplete Chinese legal system since there was a transplantation of TP laws without the accompanying principles and values, resulting in a gap between law and practice. However, this gap is eroding as China recognizes the need for mature TP system in the global market and the need to update its TP legislation in securing its tax base.

Other developing countries. In addition to the BRICS nations, several other developing countries are in various stages of implementing TP reform. IMF and OECD (2017) reported on tax certainty in G20 and OECD countries, as well as developing countries, reflecting on the risks expressed by governments and MNCs with focus on international taxation. Discussions included initiatives relating to both tax transparency as well as surveillance by IMF on international taxation. Nash (2012) suggested ways that developing countries can improve their TP compliance including investment in a core group of experts, nurturing relationships with MNEs and their advisers, knowledge about customers, adequate documentation, analysis of trends, communicating with other agencies, and quick reaction to current events. However, Russell (2012) noted that the prescribed OECD model on TP, based on MNEs having reliable information in its financial reports, seems to be biased to developed countries since these conditions do not exist in developing countries. Further, a major issue involving developing countries is the lack of comparable data as noted by Hayes (2014) who recommended an expansion of the

access to data sources on comparable data as well as more effectively using those data sources. Finally, Grondona and Knobel (2017) commented that Argentine TP legislation has adopted the Sixth Method for commodity valuation involving international intermediaries where prices are based on the value of traded goods in a transparent market on the date of shipment of the goods. This Sixth Method is applicable when there is no demonstration of economic substance. Therefore, other developing nations are recognizing the need for TP reform in dealing with the tax planning practices of MNEs.

TP reforms are also developing in the Middle East. In this region TP reform is most developed in Egypt, Israel, and Turkey and are fully implemented with comprehensive guidelines; Egypt introduced TP legislation in 2005, Israel in 2006, and Turkey in 2007 (Zhang & Farag, 2014). Also, Zhang and Farag (2014) noted that in Africa TP rules are spreading rapidly, but there are enforcement concerns; South Africa introduced TP legislation in 1995, Kenya in 2006, and Nigeria in 2012. These countries are recognizing the need for TP reform in dealing with the tax planning practices of MNEs.

TP and tax havens. A tax haven is a country where there is a low rate of tax or a zero taxation. Low tax countries include tax havens that feature low or no taxes, non-transparent, ineffective information exchange, and lack of economic activity. Luxembourg had traditionally been a financial and holding location for U.S. MNEs due to Luxembourg's reputation of having no TP rules. However, Hoor (2015) stated that Luxembourg had recently introduced new TP legislation in 2015, including the

application of the ALS within Luxembourg's domestic tax law, consistent with Luxembourg's intention of complying with international tax standards.

Literature Related to the Method and Methodology

Prior research was done on the effect of TP legislation on profit reporting using similar method and methodology. U.S. GAO (1995) used quantitative analysis with tax data from the IRS's SOI database 1990 and 1991. Also, the Department of the Treasury (2007) compared the profitability of FCDCs to DCCs using data from income tax returns filed with the U.S. IRS. Further, the U.S. GAO (2008) accessed data for the period 1989 to 2000 from the IRS's Statistics of Income (SOI) database containing samples of tax returns for several years. My research involved accessing data from IRS's SOI database, which is consistent with these previous studies.

In addition to using tax returns data, researchers applied the existing U.S. TP legislation in deriving PLIs for comparing profit. McDonald (2008) studied U.S. tax return data in determining whether profit shifting occurs with controlled foreign corporations (CFCs) through TP and extended work done by Grubert (2003) in respect of using tax return data for determining profit shifting. Operating profit was the PLI, and this is consistent with Treasury Regulation 1.482-5 for dealing with comparable profit (McDonald, 2008). Avi-Yonah (2007) noted the use of the ALS in determining transaction values between related parties since this ALS uses comparable data for determining a transfer price range of values between related parties through several methods including comparable profits method. The arm's length range comprise the interquartile range of values between the 25th and 75th percentile of the operating profit

derived from the PLIs of the comparable data (Avi-Yonah, 2007). Also, Taylor, Richardson, and Lanis (2015) indicated that U.S. MNEs use TP for reducing their corporate taxes to the extent that 24% of U.S. controlled MNEs reported zero tax liability. Taylor et al. conclusion resulted from a sample comprising 286 publicly listed U.S. MNEs over the period 2006–2012, and it is related to non-compliance with the ALP in determining transfer prices as required by Section 482 of the ITC. Finally, Joint Committee on Taxation (2010) utilized Section 482 of the ITC in determining U.S. tax liability in respect of transactions between related parties in meeting the ALS where the transaction values must be consistent with comparable transactions between unrelated parties. My research involved applying the U.S. TP legislation on the data from IRS's SOI database, which is consistent with these previous studies.

In addition to TP legislation, profit reporting is also affected by countries' tax rate differences. Klassen, Lang, and Wolfson (1993) studied profit shifting by US MNEs in response to global changes in tax rates from samples of both US and non-US based operations using data from financial statements extracted from Compustat for the period 1984-1990. Also, Grubert (2012) noted that since 1996 there had been a significant increase in the worldwide profit of U.S. MNEs, declared outside of the United States. Grubert extracted data from a sample of income tax files relating to U.S. based MNEs including information contained in the tax return form 1120 and form 5470 and concluding that U.S. foreign tax rate differentials affected the location of the portion of the foreign global profits of U.S. based MNEs. Tax legislation includes tax rates;

however, my research focused on the US TP legislation and the data from IRS's SOI database, which is consistent with these previous studies.

Research also used a qualitative approach. Pinto (2012) examined the TP practices of China and Canada and collected data by comparing and contrasting the international TP practices of the respective two countries. Finally, CIAT (2013) examined the main administrative and legislative aspects within Latin America and the Caribbean (LAC) on the topic of TP and collected data using questionnaires sent to countries in LAC. Research on TP include both quantitative and qualitative; however, I focused on a quantitative approach.

Summary and Conclusions

In this literature review, I have exposed the readers to an extensive amount of research on the topic of TP and focused on examining differences in the reporting of profit by MNEs. I initiated the review with the theoretical foundations of TP including the economic theory of the firm and strategic management theory. Then, I reflected on the significance of TP in determining the revenue, expenses, the consequent taxable profits, and tax liabilities of associated enterprises in different tax jurisdictions. Afterward, I examined the TP legislative framework since issues of TP require specific TP legislation that provides a greater degree of certainty in respect of transactions between the related parties of MNEs. Next, I compared TP approaches globally because several countries have introduced TP legislation for addressing the tax planning practices of MNEs with their unique approaches. Finally, I surveyed prior research on the effect of TP legislation on profit reporting using similar method and methodology.

In the literature on the significance of TP, I engaged the readers on TP legislation's effect on revenue reporting in the United States as well as countries' tax base erosion and MNEs minimizing their global effective tax rates. Then, I educated the readers on the TP legislative framework including U.S. TP legislation, and certain significant aspects of TP legislation affecting transaction values. Next, I made a global comparison of TP approaches including developed and developing countries.

The literature attests to the relevance and necessity of TP legislation; however, each country or region needs to analyze the effectiveness of their respective existing systems for dealing with international transactions between related parties of MNEs. TP legislation may be introduced or updated on the determination of this effectiveness. This study is the first to measure differences before and after the change in TP legislation on MNEs reporting of operating profits to the U.S. Treasury. Another unique feature of the study is to examine the cost of services mediation of the relationship between the status of the TP legislation and MNEs reporting of operating profits to the U.S. Treasury. I will now proceed to Chapter three or the research method of my dissertation, where the review of the literature in Chapter 2 informed operational collections of data, testing of the hypothesis, and the conduct of the research.

Chapter 3: Research Method

The purpose of this causal-comparative study was to compare the reporting of profit, before and after change in legislation, as well as to examine the cost of services mediation of the relationship between the status of the legislation and profit reported. The independent variable, the status of the updated TP legislation, was defined as the status of the law that ensures the profit relating to multinational enterprises' (MNEs) transactions and deters the avoidance of taxes relating to those transactions. The dependent variable, the reporting of operating profit, was defined as the result of arm's length values associated with the transactions of MNEs.

In this chapter I explain the steps for carrying out my research, as well as showing the data and reason for choosing this approach, that will address my research questions. First, I describe quantitative research design using the causal-comparative approach and provide the reason for using this design and method for my study on TP. Next, I describe the population comprising of the FCCs within the services sector that filed tax returns with the U.S. IRS between 2000 and 2013. Further, I explain data collection and analysis. Finally, I detail the measures taken in reducing the threats to the validity of the study.

Research Design and Rationale

In my research I examined differences in reporting of operating profit to the U.S. Treasury, before the updated TP legislation compared to after the update. I examined how the cost of services mediates the relationship between the status of the TP legislation and the profit reported by MNEs to the U.S. Treasury. McCusker and Gunaydin (2015)

commented that the fundamental aspect of research is for explaining phenomena through a rigorous and systematic process of inquiry using qualitative, quantitative, or mixed methods approach. The goal of qualitative research is in understanding an aspect of social life and produces words as data for analysis as well as the personality of the researcher having greater relevance than in quantitative research (McCusker & Gunaydin, 2015). Alternatively, the goal of quantitative research is classifying, counting, and constructing statistical models in explaining the observation (McCusker & Gunaydin, 2015). Therefore, the significant factor separating qualitative observations from quantitative observations is that the latter involves a population that can be measured, counted, and therefore compared.

Quantitative Research Designs

The quantitative research designs include experimental and quasi-experimental or correlational. The experimental design's primary purpose is for testing the impact of treatment on an outcome while controlling other factors that affect that outcome, as well as random assignment of participants to the independent variable. In quasi-experiments, there are no random assignments, as well as the threat of confounding variables that tend to both co-vary with the independent variable and are plausible causes of the dependent variable. Lord (1973) noted that the correlational research design is quasi-experimental that reveals a degree, trend, or pattern between variables in determining whether there is a linear relationship and not necessarily a causal relationship revealed by the data. Another quasi-experimental research design, related to the correlational research design, is the causal comparative or ex-post facto design that begins with a specific effect and seeks the

experimental factors that gave rise to the effect (Lord, 1973). Consequently, quantitative research designs exist for testing the comparison and relationship between variables.

I examined differences in the reporting of operating profit before and after the updated TP legislation using numerical data that will be measured and counted, as well as tested the relationship between the variables; therefore, I used quantitative research design for my research.

Causal-Comparative Research Design

The approach that I used in my study is the ex-post facto or causal-comparative where I analyzed existing data for investigating differences pre- and post-intervention and how one variable mediates the relationship between two other variables. The purpose of this causal-comparative study was to compare the reporting of profit, before and after change in legislation, as well as to examine the cost of services mediation of the relationship between the status of the legislation and profit reported.

Lord (1973) noted that in the causal-comparative design, comparing observed effects that are associated with certain circumstances and identifying the factors that are present when both the effect occurs and does not occur, establishes the causal relationship. Lord indicated that causal-comparative research design deals only with current events and has no control of the variable elements since the independent variable has already occurred and now examined for possible effects on and relations to the dependent variable. However, since the naturally-occurring circumstance or treatment is selected and not controlled, then when the predicted relationship arises, it does not necessarily mean that a cause and effect relationship exists between the variables; a

relationship may exist but may not be the only or most significant one (Lord, 1973). Despite allowing for the examination of cause and effect relationship, this research design has both strengths and weaknesses.

Lord (1973) added that the ex-post facto design preference over the experimental method relate to the associated laboratory controls that may be ethically questionable, costly, and impractical. Other general strengths of the ex-post facto design are the resulting useful information on the nature of phenomena, as well as defending the study due to advances in statistical methods and techniques (Lord, 1973). This causal-comparative research has weaknesses including non-random selection, no manipulation of the independent variable, and lack of controls for extraneous variables that initially influenced the facts since firm conclusions should consider other possible reasons for the result (Lord, 1973). Finally, Salkkind (2010) commented that in causal-comparative research design it is necessary to gather as much demographic data as possible and used inferential statistics in demonstrating that a relationship exists between the dependent and independent variables. Therefore, there is an uncertainty of the inclusion of the causative element since the cause of the outcome may result from a combination and interaction of factors as against one single factor. However, despite the weaknesses, the causal-comparative design is important in comprehending the nature of phenomena.

Justification for the Research Design

Several previous researchers have used the quantitative approach applying the causal-comparative design. In addressing the TP issues relating to tax compliance of FCCs and the USCCs, researchers used tax data collected from the IRS's SOI database

(Department of the Treasury, 2007; GAO, 1995; GAO, 2008). In these studies, the researchers examined cause and effect relationship using the causal-comparative design. Further studies applied the causal-comparative research design in respect of using tax return data for determining profitshifting (Grubert, 2003; McDonald, 2008; Ogavu, 2013). Finally, Beer and Loeprick (2015) examined profit shifting behavior using the ORBIS database with a sample of 15000 MNE subsidiaries for the period 2003-2011 of firm-specific information. Therefore, my study was consistent with previous studies on the topic of TP that used the causal-comparative design.

Methodology

In this methodology section, I describe the rationale for applying the specific steps used to identify, select, and analyze information for understanding the research problem so, facilitating readers to evaluate the study's overall validity and reliability. The basis for estimates or generalizations in dealing with a research problem requires resolving issues concerning the definition of the population, the sample design, and the sample size. I also explain my use of archived data as well as statistical tests for measuring the results.

Population

Research requires identifying the population and then determining an appropriate sample so that the relationship between the variables is representative of this population. Furthermore, the population represents the setting for generalizing the findings of the study; therefore, the sample must be representative of the population in ensuring repeatability and generalization. This sampling is relevant to the validity, quality, and

credibility of the research study and should accurately represent the whole population under research in making predictions about this population. Therefore, the researcher must define the population and develop a sampling frame reflecting access to this setting.

In my study, the population comprises the FCCs, a category of MNEs, within the services sector that filed income tax returns with the U.S. IRS between 2000 and 2013. The U.S. IRS receives income tax returns resulting in a stratified probability sample used in compiling statistics for SOI research (SOI Tax Stats - Statistical Methodology). These statistics reflect data that are present in the income tax returns before any changes due to audit or through the filing of an amended return (SOI, n.d.). During the tax returns processing phase, the income tax returns are stratified based on the type of return, industry, economic size, and other criteria from which samples are collected using fixed sample selection rates (SOI, n.d.). Included in the category of income tax returns are FCCs. A taxpayer identification number (TIN), associated with a random number for sample selection and processing for the study, identifies the income tax returns. The IRS selected one year’s sample, with TINs that are consistently selected for later years, resulting in a longitudinal sample design that improves the estimates of change over the years. Sampling rates, applied to each stratum, are weighted based on the ratio of total income tax returns filed in that stratum to the population sample returns for that same stratum such that the higher the rate, the lower the weight (SOI Tax Stats - Statistical Methodology).

Sampling and Sampling Procedures

Sampling theory is concerned with making accurate estimates of unknown values of the parameters or attributes of the population requiring measurement, through statistical analysis of the sample. Sampling strategy involves choosing the sampling method that relates to the research question, hypotheses, or objective and can include random and stratified sampling. In my research, I used a proportionally stratified sample selected from the SOI division of the IRS that used stratified probability sampling in compiling its tax return database. SOI stratified by industries using tax returns filed reflecting financial data.

Statistics, including using a matched pairs *t*-test to compare the data of companies, before and after the updated TP regulations, as well as mediated hierarchical multiple regression analysis, derives the population's parameters in addressing the study's questions and hypotheses. Next, I defined the sampling units or unit of analysis in my study's population comprising FCCs within the services sector that filed tax returns with the U.S. IRS between 2000 and 2013. Analyzing this existing operational data, using statistics, will result in patterns or themes.

The level of accuracy expected of the estimates or the acceptable standard error influences the sample size and indicates the proximity of the sample results to the correct values of the population parameter. Researchers must ensure that the data sets are of sufficient quality and the study aligns with the sample and measures. The sample size in the data set must have sufficient power in answering the new research question, and this involves calculating alpha level, effect size, variability, and the number of participants. In

my study, I used samples comprising tax returns reflecting operating profit and cost of services for the tax years for FCCs.

In my study the unit of analysis of the population is the values, reflecting operating profit and cost of services, of a sample of FCCs within the services sector that filed tax returns with the U.S. IRS for each of the years between 2000 and 2013. The sample of tax returns, representing 32 industry sectors for each of the 14 years, for these values are reflected in Appendix B. I conducted an *a priori* test computing sample size through G Power software, for the dependent samples *t*-test using an effect size of 0.8, alpha of 0.05, and power of 0.8. The results indicated a required sample size of 15 that was less than the sample size of 32 industries, comprising the same group, measured for a number of years prior to and after the implementation of legislation, in the study (Cohen, 1988). I conducted an *a priori* test computing sample size using G Power software, for linear multiple regression using an effect size of 0.35, alpha of 0.05, and power of 0.8. The results indicated a required sample size of 31 that was less than the sample size of 32 in the study (Cohen, 1988). Therefore, the sample size for my study exceeded the required sample sizes so the sample size was adequate.

Archival Data

In my study, I collected archived data from the SOI division of the IRS that used stratified probability sampling in compiling its tax return database including tax returns filed reflecting financial data. SOI stratified data by industries using tax returns filed, reflecting financial data. This sample comprised the sectors reflected in Appendix B where the FCCs filed income tax returns with the U.S. IRS between 2000 and 2013. I

extracted the data from the U.S. corporation income tax return series focusing on Form 1120. The SOI's data reflected large foreign controlled corporations (FCCs). These FCCs are defined as those with either or both total assets at least of $250 million and business receipts at least of $50 million, as well as where a foreign entity owns at least 50% of the U.S. Corporation's voting stock.

The presence of existing data sets could answer research questions that the initial research was not designed to study. One distinct advantage of using extant data sets is the associated reduced time and costs incurred in answering the research questions; however, this information or previously collected dataset restricts researchers in working within the limits of the original study's design and measures (Doolan & Froelicher, 2009). Therefore, researchers must be familiar with the research literature in aligning the existing data to the new research questions by identifying variables as well as getting the data sets that possess these variables (Doolan & Froelicher, 2009). Consequently, the researcher must ensure that the data sets are of sufficient quality and the study aligns with the sample and measures (Doolan & Froelicher, 2009). Since the original study, there may be changes in regulations and ethical guidelines so institutional review boards must treat with sensitive information in ensuring the integrity of the new research (Doolan & Froelicher, 2009). Therefore, I used archived data in my research study, and this was consistent with studies done by other researchers.

Someone else created this data source and it is available to researchers for use other than for its original intention, as reflected by research on transfer pricing. Ogavu (2013) used existing data sources for his research on transfer pricing noting that existing

data are nonreactive, facilitates studying past events, allows for a large sample size, and possible replicating of the study. However, Ogavu indicated that existing data, created for one purpose, may pose difficulties when alternatively applied since it may be insufficient in answering the research question as well as inaccessibility and permission for its use. Using existing data sources is supported by Alhassan (2012) who reported that public and existing data including World Bank and OECD databases, facilitates the detection of transfer pricing behavior. Steiness (2012) provided further support for using existing data in answering the research question through an evaluating research design, gathering information from the OECD guidelines, for summarizing the effect that standards and guidelines have on TP transactions. Consequently, I used archived data in my study compiled by the SOI Division of the IRS.

In my research study, I collected archived data from the SOI division of the IRS. Therefore, my study included analyzing existing data to examine differences in reporting of operating profit to the U.S. Treasury, before the updated 2006 U.S. TP legislation compared to after the update. Also, I used existing data to examine how the cost of services mediates the relationship between the status of the U.S. TP legislation and the profit reported by MNEs to the U.S. Treasury. Furthermore, I analyzed the services sector since the regulations excludes certain categories of transactions such as manufacturing, production, construction, and others but does not exclude the services sector. There are similar studies; however, my study is unique since I compared the reporting of profit, before and after change in legislation, as well as examined the cost of services mediation of the relationship between the status of the legislation and profit reported.

Prior research that used U.S. TP legislation included the Department of the Treasury (2006) who collected data from the SOI Division of the IRS on FCCs and compared with USCCs in determining whether the transactions of the FCCs were done at arm's length. Department of the Treasury selected the comparable profits method for services (CPM) as the best method for evaluating the arm's length nature of the controlled services transaction through referencing to objective profitability measures. Through Section 1.482-9 the CPM for services is used where the entity rendering controlled services is the tested party, which in my research study is the FCC. Department of the Treasury added that this profitability measure includes profit level indicators (PLI) derived from financial data of uncontrolled taxpayers engaging in similar transactions involving services. The suggested PLI is the mark-up on total costs, or the ratio of operating profit to total services costs using a comparison of the cost base of the FCC to that of USCC in similar business transactions (Department of the Treasury, 2006). I analysed the services sector since the regulations excludes certain categories of transactions such as manufacturing, production, construction, and others but does not exclude the services sector. There are similar studies; however, my study is unique since I compared the reporting of profit, before and after change in legislation, as well as examined the cost of services mediation of the relationship between the status of the legislation and profit reported.

The Level of Measurement for the Variables

There are four types of data measurement scales including nominal, ordinal, interval and ratio (Frankfort-Nachmias & Nachmias, 2008). Frankfort-Nachmias and

Nachmias (2008) noted that the nominal scale is the lowest level of measurement that classifies and categorizes an object such as the gender of male and female. The next higher scale is the ordinal scale that in addition to the information captured in the nominal scale, also ranks data from lowest to highest but there is no information on the extent of the difference between each data item (Frankfort-Nachmias & Nachmias, 2008). The third measurement, according to Frankfort-Nachmias and Nachmias is higher than the nominal and ordinal, is the interval scale indicating the distance one object is from another. The final scale is the ratio scale that contains most information including that of the other three scales and an absolute zero point (Frankfort-Nachmias & Nachmias, 2008). Therefore, there can be a transformation of data from the higher to the lower scales but not the reverse. These measurement scales are necessary for classifying variables since it facilitates the choice of a statistical test used to analyze the data.

The level of measurement for the research study. In my research, I examined differences in reporting of profit by MNEs to the U.S. Treasury, before the updated 2006 U.S. TP legislation compared to after the update. Also, I examined how the cost of services mediates the relationship between the status of the U.S. TP legislation and the profit reported by MNEs to the U.S. Treasury. The level of measurement for the independent variable is nominal since the measurement consists of before and after the implementation of legislation. Alternatively, the level of measurement for the dependent variable as well as the mediating variable is the ratio scale because operating profit and cost of services were values derived from IRS data.

Appropriateness of the scale. Scales are synonymous with the four levels of measurement including nominal, ordinal, interval and ratio and these, in turn, determine the appropriateness of the statistical tests. The scale or level of measurement that is appropriate for my study are the nominal and ratio scales.

Population for the scale and test. Researchers use tests and scales in measuring data extracted from samples of the population. In my study, the population comprised the FCCs within the services sector as well as USCCs that filed tax returns with the U.S. IRS between 2000 and 2013.

Data Analysis Plan

In my research study, I collected data from the SOI division of the IRS that used stratified probability sampling in compiling its tax return database using tax returns filed reflecting financial data. I analyzed these data from SOI in answering the research questions and hypotheses. This analysis was done using SPSS software and apply certain statistical tests.

Research Questions and Hypotheses

The research questions and hypotheses guiding my research are as follows:

RQ 1: What is the difference in the reporting of operating profit before and after the updated TP legislation?

$H_0$1: There is no difference in the reporting of operating profit before the updated TP legislation when compared to after the update.

H_a1: There is a difference in the reporting of operating profit before the updated TP legislation when compared to after the update.

I used a matched pairs *t*-test to compare the data of one group of companies, before and after the updated TP legislation, for testing this first hypothesis.

$H_o : \mu_1 = \mu_2$

$H_{A} : \mu_1 \neq \mu_2$

Where:

μ_1 is defined as the mean operating profit reported before the updated TP regulations.

μ_2 is defined as the mean operating profit reported after the updated TP regulations.

RQ 2: How does the cost of services mediates the relationship between the status of the TP legislation and the reporting of operating profits?

$H_0 2$: The cost of services does not mediate the relationship between the status of the TP legislation and the reporting of operating profits.

$H_a 2$: The cost of services mediates the relationship between the status of the TP legislation and the reporting of operating profits.

In testing the second hypothesis I used mediated hierarchical multiple regression to test the extent to which cost of services mediates the relationship between the status of the TP legislation and the profit reported in the United States.

Testing for mediation is done using regression equations causing coefficients for each equation, as reflected in Figure 1, that should be estimated and tested including:

1) Simple regression analysis with regression of the IV on the DV.

Status of TP legislation (X) predicting Operating profit Reported (Y) to test for path c alone.

$$Y = B_0 + B_1 X + e$$

2) Simple regression analysis with regression of the IV on the mediator.

Status of TP legislation (X) predicting Cost of Services (M) to test for path *a*.

$M = B_0 + B_1X + e$

3) Simple regression analysis with regression of the mediator on the DV.

Cost of Services (M) predicting Operating profit Reported (Y) to test the significance of path *b* alone.

$Y = B_0 + B_1M + e$

4) Multiple regression analysis with status of TP legislation (X) and Cost of Services (M) predicting Operating profit Reported (Y) to test the significance of path *c*.

$Y = B_0 + B_1X + B_2M + e$

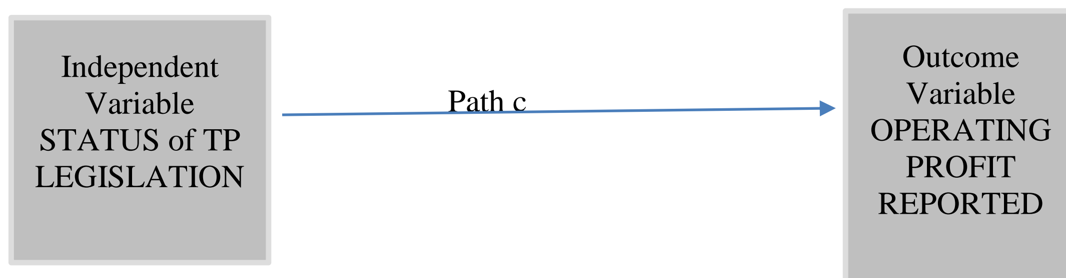
Where:

Y = Operating profit Reported

X = Status of TP legislation

M = Cost of Services

Mediator not in the model



Mediator in the model

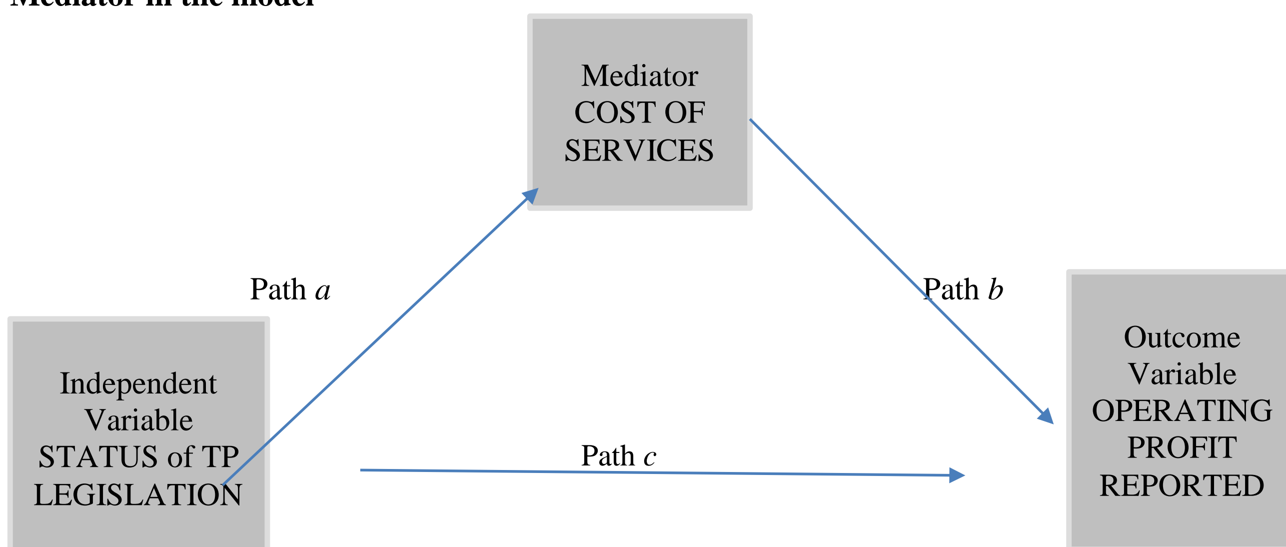


Figure 1. Theory through a set of path models (Baron & Kenny, 1986).

Recommended Statistical Tests

Inferential statistics connect the sample to the population. In this regard, I used a matched pairs *t*-test to compare the data of one group of companies, before and after the introduction of the updated TP regulations, for testing this first hypothesis.The matched pairs *t*-test is an inferential statistic that determines whether there is a significant difference between the means of one group or population. With inferential statistics there is the assumption that the dependent variable fits a normal distribution. This assumption

of normal distribution facilitates identifying the probability of a particular outcome. Therefore, a matched pairs *t*-test allows the researcher to state with some degree of confidence that the obtained difference between the means of the group is too great to be a chance event and that some difference also exists in the population from which the sample was drawn. Therefore, the researcher could conclude that it is unlikely the results occurred by chance and the difference in the sample probably exists in the population from which it was drawn. Salkkind (2010) used inferential statistics in causal comparative design in demonstrating a comparison between the dependent and independent variables. In my study I used a matched pairs *t*-test to compare the data of one group of companies, before and after the introduction of the updated TP regulations, for testing this first hypothesis.

In testing the second hypothesis I used mediated hierarchical multiple regression to test the extent to which cost of services mediates the relationship between the status of the U.S. TP legislation and the profit reported in the United States from 2000 through 2013. Baron and Kenny (1986) noted that a mediator functions as a third variable by representing the manner through which the central independent variable (IV) influences the dependent variable (DV). Mediator variables must satisfy conditions including where changes in the level of the independent variable significantly justify changes in the recognized mediator (Baron & Kenny, 1986). Another condition is where changes in the mediator significantly justify changes in the dependent variable (Baron & Kenny, 1986). The final condition occurs where the first two conditions are controlled, any prior significant relationship between the independent and the dependent variable is

significantly reduced (Baron & Kenny, 1986). This third condition suggests that the mediator is compelling for the occurrence of an effect. Testing for mediation is done through multiple regression using regression equations including regression of the mediator on the IV, regression of the DV on the IV, as well as regression of the DV on both the IV and mediator, causing coefficients for each equation that should be estimated and tested (Baron & Kenny, 1986). Therefore, the researcher must examine both the significance of the coefficients and their absolute size. In my study, the IV is the status of the updated 2006 U.S. TP legislation, the mediator is the cost of services, and the DV is the operating profit that FCCs reported in the United States from 2000 through 2013.

Faraway (2002) noted that statistical testing begins by clearly identifying the problem, then data collection, continues with data analysis, and ends with conclusions. Regression analysis models the relationship between the dependent, output, or response variable Y and the independent, input, or predictor variable X. This test has become quite useful and relevant due to the availability of high speed computing. In analyzing data through regression analysis, the following are necessary: numerical summaries, graphical summaries, histograms and boxplots for one variable, and scatterplots for two variables (Faraway, 2002). However, the researcher must be conscious of matters affecting the data distribution including unusual or skewed distributions, errors in data entry, and outliers. In addition, Campbell and Campbell (2008) indicated that regression is a statistical tool that determines the linear relationship between variables and is useful for predictions and causal inference. The relationship between the independent variable X and dependent variable Y is reflected in the formula:

$Y = B_0 + B_1X + u$

This relationship has both magnitude and direction shown by the slope parameter B_1 and in the absence of the independent variable, the status of the dependent variable is reflected in the intercept parameter B_o. U is the error term representing the quantity of variation that is not predicted by the slope and intercept. Regression does not show causation but reflects the relationship in the variation between two variables. Regression is different from correlation since regression provides a detailed description of the relationship between the variables while correlation determines the strength of the relationship between the variables. The Ordinary Least Squares (OLS) regression procedure will compute the values of the parameters B_o and B_1 (the intercept and slope) that best fit the observations (Campbell & Campbell, 2008).

In my research I used multiple regression to test the extent to which cost of services mediates the relationship between the status of the updated 2006 U.S. TP legislation, before and after the update, and the profit that FCCs reported in the United States from 2000 through 2013.

I used a matched pairs *t*-test to compare the data of one group of companies, before and after the updated TP legislation, as well as multiple regression analysis on existing data in addressing the study's questions and hypotheses. However, when the data are not normally distributed, a nonparametric statistical test that can substitute for the matched pairs *t*-test to test the first null hypothesis is the Wilcoxon signed-rank test. In the case of testing the second null hypothesis through multiple regression, the

nonparametric substitute can be a regression tree method, such as classification and regression trees (CART).

Descriptive Statistics

Descriptive statistics describe the basic elements of the data in a study, provide simple views about the sample and the measures, as well as form the basis of quantitative data analysis. I described the characteristics of the dependent variable including central tendency and dispersion. In my research study, I collected archived data from the SOI division of the IRS for evaluating the arm’s length nature of the controlled services transaction through referencing to objective profitability measures. This profitability measure, operating profit, is derived from financial data of controlled taxpayers. I compared one measure of central tendency, the mean of the operating profit of FCCs, before and after an implementation. Also, I described operating profit through measures of central tendency including variance and standard deviation.

Threats to Validity

The approach that I used in my study is the ex-post facto or causal-comparative where I analyzed existing data for investigating differences pre- and post-intervention and how one variable mediates the relationship between two other variables. There might be threats to external and internal validity that is related to the research design. These threats might be regarding the accuracy of the investigator’s conclusion, the causal relationship between the independent and dependent variable, and the possibility that changes in the dependent variable are attributable to causes other than the independent variable.

External Validity

In my research study, I collected archived data from the SOI division of the IRS. In reducing any threats to external validity that may exist, I analyzed the source of the archived data. The U.S. IRS receives income tax returns from which results a stratified probability sample used in compiling statistics for SOI research (SOI Tax Stats - Statistical Methodology). These statistics reflect data that are present in the income tax returns before any changes due to audit or through the filing of an amended return (SOI). In addition, during the tax returns processing phase the income tax returns are stratified based on the type of return, industry, economic size, and other criteria from which samples are collected using fixed sample selection rates (SOI). Included in the category of income tax returns are foreign-controlled domestic corporations (FCCs). Therefore, this government-sourced data are credible and there may be minimal threats to external validity that may exist.

Internal Validity

In my research study, I collected archived data from the SOI division of the IRS. In reducing any threats to internal validity that may exist, I analyzed this information or previously collected dataset that restricts researchers in working within the limits of the original study's design and measures (Doolan & Froelicher, 2009). Therefore, researchers must be familiar with the research literature in aligning the existing data to the new research questions by identifying variables as well as getting the data sets that possess these variables (Doolan & Froelicher, 2009). Consequently, the researcher must ensure that the data sets are of sufficient quality and the study aligns with the sample and

measures (Doolan & Froelicher, 2009). Since the original study, there may be changes in regulations and ethical guidelines so institutional review boards must treat with sensitive information in ensuring the integrity of the new research (Doolan & Froelicher, 2009).

This causal-comparative research has weaknesses including non-random selection, no manipulation of the independent variable, and lack of controls for extraneous variables that initially influenced the facts since firm conclusions should consider other possible reasons for the result (Lord, 1973). Therefore, there is uncertainty of the inclusion of the causative element since the cause of the outcome may result from a combination and interaction of factors as against one single factor. However, despite the weaknesses, the causal-comparative design is important in comprehending the nature of phenomena. Therefore, I used archived data in my research study, and this is consistent with other researchers.

Ethical Procedures

The data for my study is secondary and was sourced from archived data. I do not anticipate any ethical issues in my data collection, since I will not be interviewing or conducting surveys. The integrity of the data is not in doubt because this government-sourced data are aggregated and so losing the identity of individual entities. Finally, I only began data collection after obtaining approval from Institutional Review Board (IRB). This is one of the ethical requirements from Walden University on data collection.

Summary

In this Chapter 3, I explained the steps for carrying out my research as well as showing the data and reason for choosing the approach that will address my research

questions. Initially, I described quantitative research design using the causal-comparative approach as well as provided the reason for using this design and method for my study on transfer pricing. Next, I described the population comprising the foreign-controlled domestic corporations within the services sector that filed tax returns with the U.S. IRS between 2000 and 2013. Further, I explained data collection and analysis. Finally, I detailed the measures taken in reducing threats to the validity of the study, as well as protecting participants' rights.

The purpose of this study was to compare the reporting of profit, before and after change in legislation, as well as to examine the cost of services mediation of the relationship between the status of the legislation and profit reported. This Chapter 3 explained the steps for carrying out my research as well as showed the data and reason for choosing the approach that addressed my research questions. Chapter 3 leads into Chapter 4 where I collected and analyzed data.

Chapter 4: Results

The purpose of this causal-comparative study is to compare the reporting of profit, before and after change in legislation, as well as to examine the cost of services mediation of the relationship between the status of the legislation and profit reported. The research questions and hypotheses that guided my research were as follows:

RQ 1: What is the difference in the reporting of operating profit before and after the updated TP legislation?

$H_0$1: There is no difference in the reporting of operating profit before the updated TP legislation when compared to after the update.

H_a1: There is a difference in the reporting of operating profit before the updated TP legislation when compared to after the update.

RQ 2: How does the cost of services mediates the relationship between the status of the TP legislation and the reporting of operating profits?

$H_0$2: The cost of services does not mediate the relationship between the status of the TP legislation and the reporting of operating profits.

H_a2: The cost of services mediates the relationship between the status of the TP legislation and the reporting of operating profits.

In this chapter I discuss the results of the study. The chapter begins with a review of the purpose of the study, research questions, and hypotheses and continues with information on data collections, the study's results, and summary.

Data Collection

Prior to collecting data for the study, I obtained approval from Walden University‘s Institutional Review Board with approval number 07-18-18-0300253. The IRS’s statistics of income (SOI) income tax database was the source for the research data that I applied in addressing the research questions and hypotheses. In my study, the population comprised the FCCs within the services sector that filed income tax returns with the U.S. IRS between 2000 and 2013 since this is an annual requirement of the Internal Revenue Code (IRC). These income tax returns contain details of their revenue, expenses, and other financial data. The U.S. IRS receives these income tax returns resulting in a stratified probability sample used in compiling SOI research (SOI Tax Stats - Statistical Methodology). These statistics reflect data that are present in the income tax returns before any changes due to audit or through the filing of an amended return (SOI, n.d.).

During the tax returns processing phase the income tax returns are stratified based on the type of return, industry, economic size, and other criteria from which samples are collected using fixed sample selection rates (SOI, n.d.). Included in the category of income tax returns are FCCs. A taxpayer identification number (TIN), associated with a random number for sample selection and processing for the study, identifies the income tax returns. The IRS selects one year’s sample with TINs that are consistently selected for later years, resulting in a longitudinal sample design that improves the estimates of change over the years. Sampling rates, applied to each stratum, are weighted based on the ratio of total income tax returns filed in that stratum to the population sample returns for

that same stratum such that the higher the rate, the lower the weight (SOI Tax Stats - Statistical Methodology).

The original sample comprised the management of companies' services sector but on examining SOI's data, I noted that some years' financial information was missing. I changed the sample to the sectors, as reflected in Appendix B, where there was complete financial information as well as to comply with sample size requirements. The sectors comprised FCCs that filed income tax returns with the U.S. IRS between 2000 and 2013. I collected the archived data from the SOI division of the IRS. One distinct advantage of using existing data sets is the associated reduced time and costs incurred in answering the research questions so there was a brief actual timeframe for collecting the data. I extracted the data from the U.S. corporation income tax return series focusing on Form 1120. The SOI's data reflected large corporations that are defined as those with either or both total assets at least of $250 million and business receipts at least of $50 million as well as controlled meaning where a foreign entity owns at least 50% of the U.S. Corporation's voting stock.

I analyzed the services sector since the 2006 updated regulations exclude certain categories of transactions such as manufacturing, production, construction, and others but does not exclude the services sector. My study is unique since I am using a dependent samples *t*-test to examine difference in the operating profit reported as well as using mediated hierarchical multiple regression to examine the cost of services mediation on the relationship between the status of the legislation and profit reported.

Study Results

Faraway (2002) noted that statistical testing begins by clearly identifying the problem, then data collection, continues with data analysis, and ends with conclusions. Both descriptive and inferential statistics connect the sample to the population. Financial data extracted from the IRS's SOI income tax database relating to FCCs was used to perform the statistical tests.

Descriptive Statistics

I used descriptive statistics to describe the basic elements of the data in the study, provide simple views about the sample and the measures, as well as form the basis of quantitative data analysis. In my research, I collected archived data from the SOI division of the IRS to compare the reporting of profit, before and after change in legislation, as well as to examine the cost of services mediation of the relationship between the status of the legislation and profit reported. I described the characteristics of the independent variable of status of legislation, dependent variable of operating profit, and the mediating variable of cost of services.

The independent variable is categorical comprising before the legislation and after the legislation. The frequency distribution of the independent variable showed $n = 32$ (50.0%) representing the sample before the legislation and $n = 32$ (50.0%) representing the same sample after the legislation. The profitability measure, operating profit, was derived from financial data of controlled taxpayers that I used for describing operating profit through measures of central tendency including mean and standard deviation. Table 1 reflects the descriptive statistics of operating profit including a comparison of the mean

and standard deviation before and after the updated 2006 legislation. The mediating variable, cost of services, had a mean cost of services of 4.81 and a range of cost of services from .04 to 23.33.

Table 1

Descriptive Statistics, with N=32, Reflecting Operating Profit Before and After TP Legislation

Status of legislation	Mean	Standard deviation
Before legislation	2.92	2.80
After legislation	3.58	3.22

In my study, the population comprises the FCCs, a category of MNEs, within the services sector that filed income tax returns with the U.S. IRS between 2000 and 2013. The U.S. IRS receives income tax returns resulting in a stratified probability sample used in compiling statistics for SOI research (SOI Tax Stats - Statistical Methodology). During the tax returns processing phase the income tax returns are stratified based on the type of return, industry, economic size, and other criteria from which samples are collected using fixed sample selection rates (SOI, n.d.). A taxpayer identification number (TIN), associated with a random number for sample selection and processing for the study, identifies the income tax returns. The IRS selected one year’s sample with TINs that are consistently selected for later years, resulting in a longitudinal sample design that improves the estimates of change over the years.

I defined the sampling units or unit of analysis in my study’s population comprising FCCs within the services sector that filed tax returns with the U.S. IRS

between 2000 and 2013. The SOI's data reflected large corporations that are defined as those with either or both total assets at least of $250 million and business receipts at least of $50 million as well as controlled meaning where a foreign entity owns at least 50% of the U.S. corporations' voting stock. The SOI extracted the data from the U.S. corporation income tax return series focusing on Form 1120. The components of the data for my study included business receipts, cost of services, and operating profit. The cost of services component comprises cost of goods sold, compensation of officers, and salaries and wages. In my study, I used samples comprising tax returns reflecting operating profit for the tax years for FCCs. The sample size in the data set, as reflected in Appendix B, had sufficient power for my study since this sample size exceeded the minimum required sample sizes; therefore, the sample size was adequate. I conducted a post hoc power analysis using G Power software, for the dependent samples *t*-test with an effect size of 0.8, alpha of 0.05, and sample size of 32. The results indicated a power of 0.99 that was adequate at the large effect size level (Cohen, 1988). I conducted a post hoc power analysis using G Power software, for linear multiple regression with an effect size of 0.35, alpha of 0.05, and sample size of 32. The results indicated a power of 0.82 that was adequate at the large effect size level (Cohen, 1988).

Dependent Samples *t*-Test

The dependent samples or matched pairs *t*-test is an inferential statistic that determines whether there is a significant difference between the means of one group or population. This test allows the researcher to state with some degree of confidence that the obtained difference between the means of the group is too great to be a chance event

and that some difference also exists in the population from which the sample was drawn. In my study I used a matched pairs *t*-test to compare the data of one group of companies, before and after the introduction of the updated TP legislation, for testing the first hypothesis.

$H_o: \mu_1 = \mu_2$

$H_A: \mu_1 \neq \mu_2$

Where:

μ_1 is defined as the mean operating profit reported before the introduction of the updated TP legislation.

μ_2 is defined as the mean operating profit reported after the introduction of the updated TP legislation.

Assumptions. There are four general assumptions that are associated with the paired samples *t*-test. The first assumption is that the dependent variable should be continuous, which in my study was represented by operating profit reported that was at the ratio level. Assumption two is that the independent variable should comprise two categorical groups that are related since the same subjects must be present in both groups. In my study the two categorical variables comprised before the 2006 legislation and after the 2006 legislation, measuring operating profit reported of the same participants. The third assumption is that there should be no significant outliers in the differences between the two related groups since this would distort these differences and so reduce the accuracy of the results. In detecting outliers, a box plot graphically reflected groups of numerical data through their quartiles and may have vertical lines or whiskers extending

from the boxes indicating variability outside the lower and upper quartiles. The results of the box plot showed that there were no points above or below the whiskers so there were no outliers in this distribution as reflected in Figure 2.

The final assumption is that the distribution of the differences in the dependent variable between the two related groups should be approximately normally distributed. Testing for normality requires that the absolute value of skewness does not exceed .8 and the absolute value of kurtosis does not exceed 2. The skewness and kurtosis reflected in my results do not exceed these values so there was approximate normal distribution. The Kolmogorov-Smirnov (K-S) test provides an additional view of whether the distribution of scores deviates from a comparable normal distribution. Where the test is non-significant ($p > .05$), it reveals that the distribution of the sample is not significantly different from a normal distribution (Field, 2013). The test statistic for the K-S test is reflected by D. The operating profit score, $D(32) = .098$, $p = .200$, did not deviate significantly from normal. Thus, the assumption of normality was met for this variable. The histogram, as reflected in Figure 3, was not showing a perfect bell curve but it was approximately bell-shaped and symmetrical. The normal Q-Q plots showed that the points are close to the line. These tests reflected that the assumption of normality is satisfied.

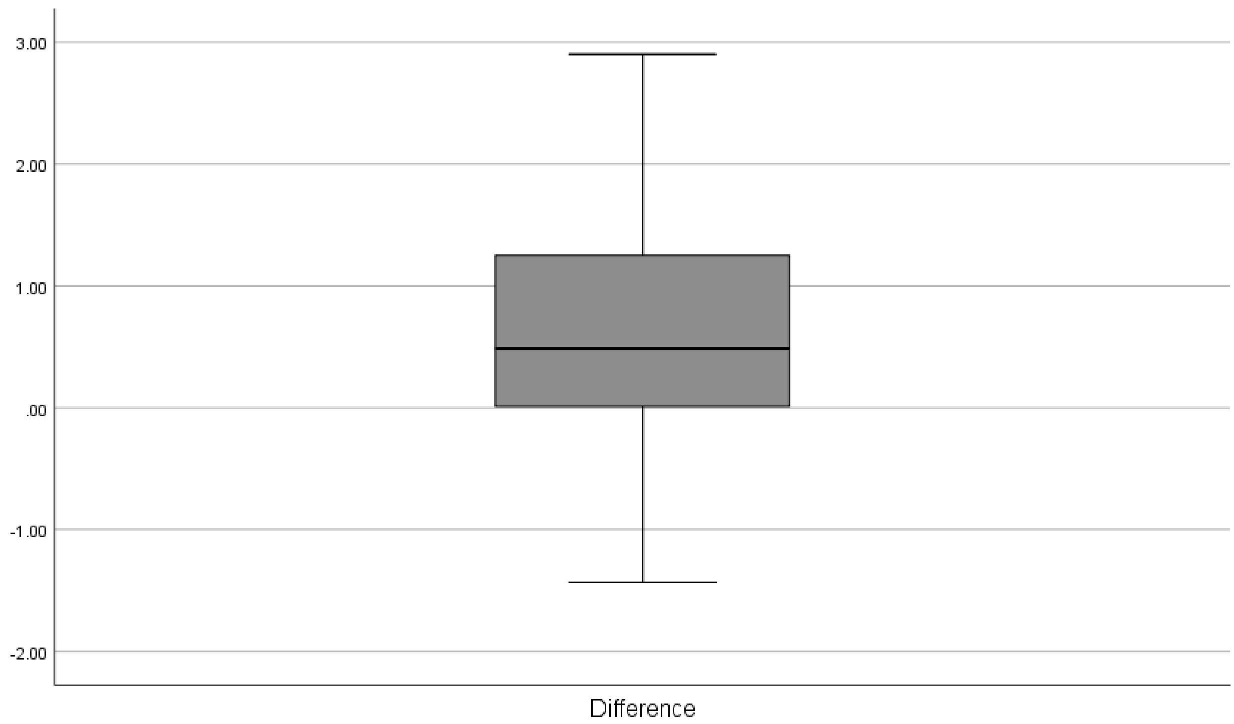


Figure 2. Checking for outliers.

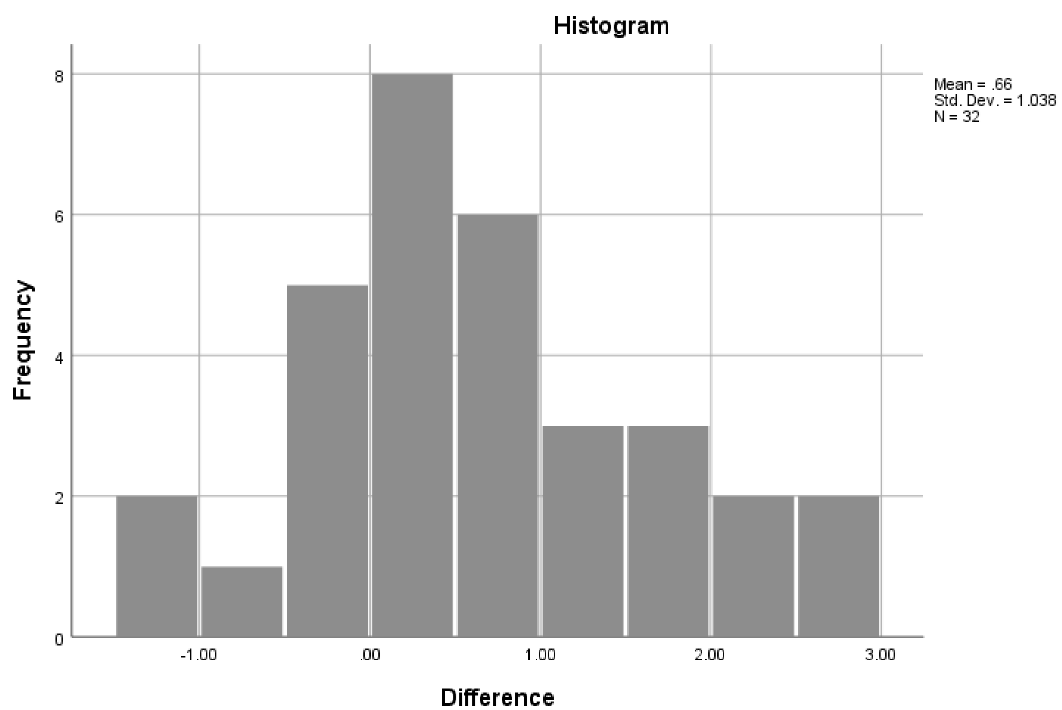


Figure 3. Checking for normal distribution.

Results. A dependent or paired samples *t*-test was conducted to examine difference in the operating profit reported, as a result of the 2006 updated TP legislation, in the services sector. This paired-samples *t*-test was done to compare operating profit reported before the updated legislation and after the updated legislation. There was a significant difference in the scores for before legislation ($M = 2.92$, $SD = 2.80$) and after legislation ($M = 3.58$, $SD = 3.22$) conditions; $t(31) = 3.59$, $p = .001$. The result of the matched pairs *t*-test, for testing the first hypothesis, showed that there was a significant difference in the scores for before legislation and after legislation conditions; the status of the legislation may have contributed to differences in the operating profit. Specifically, my results suggest that after the updated legislation, the operating profit reported increases. Therefore, the null hypothesis which suggested that there was no significant difference in the mean operating profit reported, is rejected.

Multiple Linear Regression

In testing the second hypothesis I used mediated hierarchical multiple regression to test the extent to which cost of services mediates the relationship between the status of the U.S. TP legislation and the operating profit that FCCs reported in the United States from 2000 through 2013. The independent variable and the mediating variable were entered into the analysis cumulatively and in accordance to a specific hierarchy that was determined in advance by the logic and purpose of the research. A hierarchical regression analysis was used to determine if the independent variable of legislation and the mediating variable of cost of services explained a significant proportion of the variance in the operating profit reported. Mediated regression was selected because it was determined

by review of previous research that perception of cost of services may account for all or some of the relationship between the independent and dependent variables.

Mediation analysis. Mediated regression procedure allowed full and partial mediation to be tested for this model. Baron and Kenny (1986) noted that a mediator functions as a third variable by representing the manner through which the central independent variable (IV) influences the dependent variable (DV). Mediator variables must satisfy conditions including where changes in the level of the independent variable significantly justify changes in the recognised mediator (Baron & Kenny, 1986). Another condition is where changes in the mediator significantly justify changes in the dependent variable (Baron & Kenny, 1986). The final condition occurs where the first two conditions are controlled, any prior significant relationship between the independent and the dependent variable is significantly reduced (Baron & Kenny, 1986). This third condition suggests that the mediator is compelling for the occurrence of an effect.

Testing for mediation was done through regression analysis including regression of the IV on the mediator, regression of the IV on the DV, as well as regression of both the IV and mediator on the DV, causing coefficients for each equation (Baron & Kenny, 1986). The IV is assumed to cause the mediator so both should be correlated resulting in multicollinearity and consequent lower power in the test of the last equation's coefficient (Baron & Kenny, 1986). Therefore, the researcher must examine both the significance of the coefficients and their absolute size.

Types of mediation. There are three types of mediation with the first reflecting the indirect effect that predicts no direct effect from X to Y while leaving the mediator

out of the model. However, X has a direct effect on the mediator and the mediator has a direct effect on Y so X has an indirect effect on Y. The second type of mediation is partial mediation that predicts significant direct and indirect effect between X and Y. Therefore, the unmediated relationship is significant as well as the X to M and M to Y relationships. The third type of mediation is full mediation that predicts that the direct effect of X on Y will be significant only if the mediator is absent. When the mediator is present, the direct effect of X on Y becomes insignificant while the indirect effect is significant. Finally, where the X to M and or the M to Y effect is insignificant, no mediation is taking place.

In my study, the IV is the status of the TP legislation, the DV is the operating profit that FCCs reported in the United States from 2000 through 2013, and the mediator is the cost of services. In testing the second hypothesis I used mediated hierarchical multiple regression to test the extent to which cost of services mediates the relationship between the status of the TP legislation and the profit reported in the United States.

Research Question 2: How does the cost of services mediates the relationship between the status of the TP legislation and the reporting of operating profits?

$H_0 2$: The cost of services does not mediate the relationship between the status of the TP legislation and the reporting of operating profits.

$H_A 2$: The cost of services mediates the relationship between the status of the TP legislation and the reporting of operating profits.

Assumptions in multiple regression. There are five assumptions in mediation analysis through multiple regression, which relate directly to the validity of the research

findings. The first assumption is multivariate normality of the regression model that is reflected in the Mahalanobis Distance test. The result of this test for normality did not exceed the critical value of chi-square at the desired alpha level so the data are normally distributed (Field, 2013). The second assumption is the independence of sampling or auto correlation that is reflected by the Durbin-Watson test for independence. The result of the Durbin-Watson statistic should be between 1 and 3 to be considered non-autocorrelated and in my study there is non-violation of this assumption (Field, 2013). Assumption three is linearity of the data that is reflected by scatterplots and in my study, the correlations are not zeros so there is a linear relationship and no violation of this assumption. The correlation values for the IV of status of the legislation and mediator of cost of services are .100 and .761 respectively so there is a linear relationship between both the IV and mediator with the DV. The residual plot shows a fairly random pattern indicating that a linear model is appropriate to the data.

The fourth assumption is homoscedasticity, which means that the variance around the regression line is the same for all values of the predictor variable. This variance is tested by the residual plot with *zpred* on the x axis versus *zresid* on the y axis and in my study the points are all scattered so there is no violation of this assumption. The variance of the residuals is constant. The final assumption is multicollinearity that exists when two or more of the predictors in a regression model are moderately or highly correlated, which is expected in the mediation analysis. The correlation between the predictors of legislation and cost of services reflects a value of .150 so there is a low level of

multicollinearity, as expected, between the variables. In addition, the Tolerance and VIF scores are within acceptable values (Field, 2013).

I used mediated hierarchical multiple regression analysis on existing data in addressing the study's questions and hypotheses. When the data are not normally distributed, a nonparametric statistical test that can substitute for testing the second null hypothesis through multiple regression can be a regression tree method, such as classification and regression trees (CART); however, this was not needed since the data were normally distributed.

Results of mediation analysis using SPSS with Process plug-in. The four steps to determine if mediation existed and if mediation was partial or full were based on the hierarchal regression procedures reported by Baron and Kenny (1986) and using SPSS with Process (Hayes, 2012) where:

X = TP legislation

Y = Operating profit reported

M = Cost of services

The results are reflected in Table 2 and Figure 4.

1) Regression analysis with regression of the IV on the DV. This is the total effect of TP legislation on operating profit reported when cost of services is not present in the model. TP legislation (X) predicting operating profit reported (Y) to test for path c alone.

$Y = B_0 + B_1X + e$

(a) $F(1,62) = .624$, $p > .05$, $R^2 = .010$

(b) $b = .685$, $t(62) = .790$, $p > .05$

The R^2 shows that about 1% of the variability in operating profit reported is explained by TP legislation. The p-value of the F statistic is more than 0.05; therefore, I fail to reject the null hypothesis and state that the regression coefficient is not statistically significantly different from zero. In this case the standardized coefficient of legislation =.100. This suggests that legislation is associated with an average 0.100 increase in operating profit reported comparing to non-legislation. The unstandardized coefficient of TP legislation = .685. This suggests that TP legislation is associated with an average $.685 billion increase in operating profit reported comparing to non-legislation.

2) Regression of the IV on the mediator. TP legislation (X) predicting cost of services (M) to test for path a.

$M = B_0 + B_1X + e$

(a) $F(1,62) = 1.421$, $p > .05$, $R^2 = .022$

(b) $b = 1.64$, $t(62) = 1.192$, $p > .05$

The R^2 shows that about 2% of the variability in cost of services is explained by TP legislation. The p-value of the F statistic is more than 0.05; therefore, I fail to reject the null hypothesis and state that the regression coefficient is not statistically significantly different from zero; TP legislation does not significantly predict cost of services. In this case the standardized coefficient of legislation =.150. This suggests that legislation is associated with an average 0.150 increase in cost of services comparing to non-legislation. The unstandardized coefficient of TP legislation = 1.64. This suggests that TP

legislation is associated with an average $ 1.64 billion increase in cost of services comparing to non-legislation.

3) Simple regression analysis with regression of the mediator of cost of services (M) on the DV, predicting operating profit reported (Y) to test the significance of path b alone.

$Y = B_0 + B_1M + e$

(a) $F(1,62) = 85.274$, $p < .05$, $R^2 = .579$

(b) $b = .477$, $t(62) = 9.234$, $p < .05$

The R^2 in this case shows that about 58% of the variability in operating profit reported is explained by cost of services. The p-value of the F statistic is less than 0.05. Hence I reject the null hypothesis and state that the regression coefficient is statistically significantly different from zero. In this case the standardized coefficient of cost of services =.761. This result suggests that cost of services is associated with an average .761 increase in operating profit reported. The unstandardized coefficient of cost of services = .477. This suggests that cost of services is associated with an average $ .477 billion increase in operating profit reported.

4) Regression analysis with TP legislation (X) and cost of services (M) predicting operating profit reported (Y) to test the significance of path c'. The indirect effect of TP legislation on operating profit reported through cost of services.

$Y = B_0 + B_1X + B_2M + e$

(a) $F(2,63) = 41.984$, $p < .05$, $R^2 = .579$

(b) M variable predicts Y

(i) $b = .4786$, $t(63) = 9.08$, $p < .05$

(c) X variable no longer predicts Y or is lessened predicting Y—Path *c*'

(i) $b = -.0988$, $t(63) = -.1714$, $p > .05$

The R^2 shows that about 58 % of the variability in profit is explained by TP legislation and cost of services. The *p*-value of the *F* statistic is less than 0.05; therefore, I reject the null hypothesis and state that the regression coefficient is statistically significantly different from zero. In this case the standardized coefficient of cost of services =.761. This suggests that cost of services is associated with an average 0.761 increase in operating profit reported. The unstandardized coefficient of cost of services = .479. This suggests that cost of services is associated with an average $ 0.479 billion increase in operating profit reported. The standardized coefficient of legislation = -.014. This indicates that legislation is associated with a .014 decrease in operating profit reported comparing to non-legislation. The unstandardized coefficient of TP legislation = -.099. This indicates that TP legislation is associated with a $.099 billion decrease in operating profit reported comparing to non-legislation.

I used TP legislation to predict operating profit reported and cost of services was expected to mediate this relationship. Assumptions were assessed and generally there were no violations. Using steps described by Baron and Kenny (1986), TP legislation was not a significant predictor of operating profit reported (*c* pathway), $b = .685$, $t(62) = .790$, $p > .05$ where TP legislation increased operating profit reported. TP legislation was positively related to cost of services, but not significantly, as TP legislation leads to more

cost of services (a pathway), $b = 1.64$, $t(62) = 1.19$, $p > .05$. Cost of services was also positively related to operating profit reported, significantly, as increased cost of services leads to increased operating profit reported (b pathway), $b = .48$, $t(62) = 9.23$, $p < .05$. The relationship between TP legislation and operating profit reported decreased with cost of services as a mediator (c' pathway), $b = -.099$, $t(63) = -.17$, $p > .05$.

A partially mediated model exists due to the significant result ($p < .05$) of Step 4, and the R^2 value demonstrates a large effect size reflecting the strength and practical significance of the model. The indirect effect of TP legislation on operating profit reported through cost of services is estimated at .7838. The indirect effect of cost of services has changed TP legislation on operating profit reported by .7838. The indirect effect was .7838, 95% *CI* (-.51, 2.01). Since the confidence interval includes zero, I conclude that cost of services does not mediate the effect of TP legislation on operating profit reported. Therefore, cost of services is not a mediator of the relationship between TP legislation and operating profit reported so the null hypothesis, stating that the cost of services does not mediate the relationship between the status of the TP legislation and the reporting of operating profits, is not rejected.

The indirect effect indicated that no mediation occurred, indirect = .7838, 95% *CI* (-.51, 2.01). The Sobel test provides another method to determine whether the reduction in the effect of the independent variable, after including the mediator in the model, is a significant reduction and therefore whether the mediation effect is statistically significant. The Sobel mediator test was not significant. It means that the mediator of cost of services did not significantly explain that the operating profit was determined by the predictor of

legislation with the help of the mediator. The independent variable of legislation and mediating variable of cost of services are not significant predictors of the dependent variable of operating profit reported suggesting the non-existence of a partially mediated relationship. These results indicated that, after controlling for cost of services, the relationship between the independent variable of legislation and dependent variable of operating profit was reduced.

Zhao, Lynch, and Chen (2010) recommended that to establish mediation the tests plus Sobel steps, noted by Baron and Kenny, be replaced with only one test. This single bootstrap test of the indirect effect a x b should be significant to establish mediation. MacKinnon, Fairchild, and Fritz (2007) noted that if c' were opposite in sign to a x b there is inconsistent mediation, then Step 1 of the Baron and Kenny model would not be met, but there is still mediation; here, the mediator acts like a suppressor variable. The results of my study reflects that the indirect effect of TP legislation on operating profit reported was not significant. However, the indirect effect or c' is negative but the product of operating profit on cost of services and cost of services on operating profit or a x b is positive, indicating that there may be inconsistent mediation; therefore, there may exist two or more mediators with opposing mediated effects.

The regression model summary of the analysis using SPSS with Process plug-in are presented in Table 2.

Table 2

Mediated Hierarchical Regression Analysis Predicting Operating Profit from TP Legislation through Cost of Services

Path	Beta *(U.)*	*SE*	95% *CI*	Beta *(S.)*
c	.68	.87	(-1.05, 2.42)	.100
$F(1,62) = .624, p > .05, R^2 = .01$				
a	1.64	1.37	(-1.11, 4.38)	.150
$F(1,62) = 1.42, p > .05, R^2 = .02$				
b	.48	.05	(.37, .58)	.761
c'	-.10	.58	(-1.05, 1.25)	-.014
$F(2,63) = 41.98, p = < .05, R^2 = .58$				
Total a x b				.114

Note. *U*. means unstandardized; *S*. means standardized; *SE* means standard error for the unstandardized beta; *CI* means confidence interval.

Figure 4 reflects the direct effect as well as the indirect or mediated pathway with standardized beta coefficients.

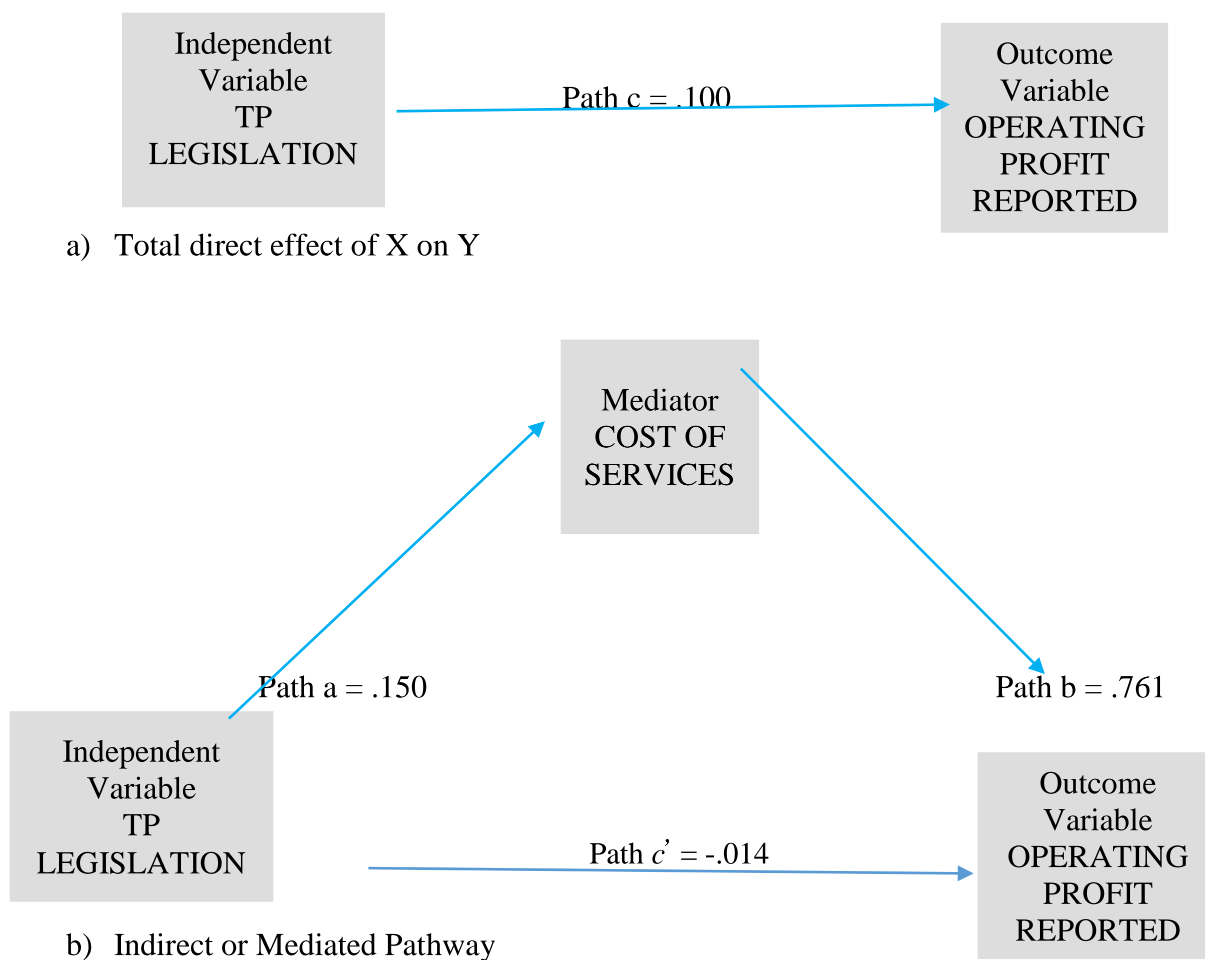


Figure 4. Theory through a set of path models reflecting coefficients (Baron & Kenny, 1986).

Summary

In this Chapter 4, I included information on data collection and the results of my study. The first research question was finding the difference in the reporting of operating profit before and after the updated TP legislation. A dependent samples *t*-test was conducted to examine difference in the operating profit reported as a result of the 2006 updated TP regulations in the services sector. There was a significant difference in the

scores for before legislation and after legislation conditions; the status of the legislation may have contributed to differences in the operating profit. Specifically, my results suggest that after the updated legislation, the operating profit reported increases.

The second research question was how the cost of services mediates the relationship between the status of the TP legislation and the reporting of operating profits. In testing the second hypothesis I used mediated hierarchical multiple regression to test the extent to which cost of services mediates the relationship between the status of the U.S. TP legislation and the operating profit. There was insignificant direct and indirect statistical effect between legislation and operating profit. The proposed mediator of cost of services did not significantly explain that the operating profit was determined by the predictor of TP legislation with the help of the proposed mediator. However, the indirect effect is negative but the product of the effects of operating profit on cost of services and cost of services on operating profit is positive, indicating that there may be inconsistent mediation; therefore, there may exist two or more mediators with opposing mediated effects. I will now proceed to Chapter 5 where the results of the study in Chapter 4 informed discussion, conclusion, and recommendations.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this causal-comparative study was to compare the reporting of operating profit, before and after change in legislation, as well as to examine the cost of services mediation of the relationship between the status of the legislation and operating profit reported. This study involved examining differences in reporting of profit before and after the change in legislation. As such, I adopted a quantitative approach with the ex-post facto or causal-comparative research design for investigating differences pre- and post-implementation and how one variable mediates the relationship between two other variables.

The result of the matched pairs *t*-test, for testing the first hypothesis, showed that there was a significant difference in the scores for before legislation and after legislation conditions; the status of the legislation may have contributed to differences in the operating profit. Specifically, my results suggest that after the updated legislation, the operating profit reported increases. In testing the second hypothesis, I used mediated hierarchical multiple regression to test the extent to which cost of services mediates the relationship between the status of the U.S. TP legislation and the operating profit reported in the United States. The test for mediation with the proposed mediator of cost of services may result in inconsistent mediation where the mediator acts like a suppressor variable since there may exist additional mediators with opposing mediated effects. The TP legislation may have affected the cost of services as well as an additional mediator such as the sale price of these services. These two combined may have opposing mediated effect on operating profit.

The results of this study will provide information for making informed decisions on the effect of updated TP legislation on the reporting of profit in the United States as well as the proposed cost of services mediation of the relationship between the status of the legislation and profit reported. This study is significant for contributing to both strategic management and economic theories, advancing management practice, and fostering positive social change. In this chapter, I review the results of the analyses conducted in the preceding chapters, interpret those findings, describe the limitations of the study, recommend areas for further research, and discuss the implications of the analyses for social change.

Interpretation of Findings

The information presented in this section is the interpretation of the findings in comparison to the literature review in Chapter 2, as well as in the context of the theoretical framework.

The Significance of TP

TP is a major international tax issue for both tax administrations and MNEs, with support from research done by international consulting firms, government agencies, and independent researchers. Their research reflected the effect on countries' tax revenue collection, tax planning by MNEs, and global attention to TP. These transfer prices are relevant for both tax administrations and MNEs since they determine the revenue, expenses, consequent taxable profits, and tax liabilities of associated enterprises in different tax jurisdictions. Cooper, Randall, Loeprick, and Mohindra (2016) noted that transfer mispricing by MNEs, through their aggressive tax practices, is the primary

international tax issue and possibly the greatest challenge affecting countries' tax bases and consequent tax revenue inflows. Transfer pricing issues comprised a significant part of the reports approved and issued by the G20 and OECD on base erosion and profit shifting (Andrus & Oosterhuis, 2017; De Mooij & Liu, 2018; IMF & OECD, 2017). These values are significant; therefore, there is a need to assess the effectiveness of TP legislation on profit reporting by MNEs, which was the subject of my research. This issue of TP continues to be a focus for tax administrators and MNEs due to additional scrutiny of cross border transactions, media attention, and court cases.

The result of the matched pairs *t*-test confirmed that TP is a significant international tax issue and having TP legislation increases operating profit reported and consequent tax revenue collection as well as global attention to TP. The results affect tax planning by MNEs but disconfirms shifting profit out of the United States.

The result of the multiple regression confirmed that TP is a significant international tax issue and extends knowledge that the legislation affected operating profit reported by FCCs in the United States, through the cost of service as well as additional mediators that have opposing mediated effect, in respect of transactions with controlled related parties.

U.S. TP Legislative Framework

TP requires specific legislation that provides a greater degree of certainty in respect of transactions between related parties of MNEs with several studies done on the effect of TP legislation on revenue reporting. Some countries have adopted OECD guidelines as they evolve to a complete TP regime, others have not introduced any

specific TP legislation, while some countries are updating their existing TP legislation. U.S. TP legislation is tax law that is specific in determining the arm's length transactions' values between the related parties of MNEs and the subsequent reporting of operating profit. Researchers noted that there must be a monitoring of TP rules for preventing profit shifting through non-arm's length TP. Despite having TP legislation, MNEs engaged in tax planning by reducing their reported revenues and so there is a need to examine the effect of updated TP legislation on operating profit reporting by MNEs. The transfer prices of transactions between the related parties of the MNEs strategically deviate from market prices in reducing taxable profit (Cooper, Randall, Loeprick, & Mohindra, 2016; De Mooij & Liu, 2018). Cooper et al. reported that introducing and administering TP legislation, providing guidance in applying the arm's length principle, would result in increased tax revenue since it provides the tools for protecting the countries' tax bases. The Department of the Treasury (2006) noted that the TP legislation suggested that the profit level indicator is the mark-up on total costs or the ratio of operating profit to total services costs. The updated U.S. TP legislation in 2006 focused on the services sector with the goal of deriving an arm's length value of services transactions between the related parties of MNEs.

The result of the matched pairs *t*-test confirmed that there must be a monitoring of TP legislation for preventing profit shifting through non-arm's length TP. The results of the multiple regression indicating that FCCs' reporting of total cost of services with its effect on operating profit confirmed and extended findings in the literature that there was

a relationship between the cost of providing services and operating profit as well as the existence of additional mediators that have opposing mediated effect.

Specific Aspects of TP Legislation

TP legislation has certain specific components including the ALS, documentation requirements, and the effect on services. Cooper et al. (2016) noted that introducing and administering TP legislation, providing guidance in applying the ALS, would result in increased tax revenue since it provides the tools for protecting the countries' tax bases. Davies, Martin, Parenti, and Toubal (2018) indicated that transactions between the associated parties of MNEs should be valued at market price complying with the ALS. MNEs can influence their controlled parties in the United States through TP by either or both overstating expenditure and understating revenues of the controlled parties so that taxable profit and tax liability is understated. The updated U.S. TP legislation focuses on the services sector with the goal of deriving an arm's length value of services transactions between the related parties of MNEs. Documentation is another important aspect of TP legislation in facilitating compliance with the TP legislation (Beer & Loeprick, 2015). The Department of the Treasury (2006) noted that the 2006 regulations provided updated guidance in respect of transactions involving controlled services affecting controlled taxpayers through Section 482 of the Internal Revenue Code (IRC). There is an urgent need for TP legislation that would provide the framework for guiding the actions of both MNEs and tax authorities.

The result of the matched pairs *t*-test confirmed knowledge in the discipline that the legislation with the specific component of ALS protected tax bases and prevented

profit shifting through non-arm's length transfer pricing. Documentation in facilitating compliance with the TP legislation was confirmed in the results of my study through the increased operating profit reported. My study's result contributes to knowledge in the discipline that, in the services sector, after the updated legislation the operating profit reported and consequent tax revenue collection increased. The results of the multiple regression indicating that FCCs' reporting of total cost of services with its effect on operating profit extends findings in the literature of the existence of additional mediators that have opposing mediated effect on the relationship between TP legislation and operating profit and disconfirms that FCCs provided services to their controlled related entities in the United States at arm's length.

Effect of TP Legislation Globally

Several countries have introduced and amended TP legislation, with their unique approaches for addressing the tax planning practices of MNEs. The result of the matched pairs *t*-test confirmed knowledge in the discipline, as reflected in the literature review, that globally countries are introducing TP law as well as updating TP legislation for protecting tax bases and dealing with the tax planning practices of MNEs. The test for mediation extended findings in the literature of the existence of additional mediators that have opposing mediated effect on the relationship between TP legislation and operating profit. Therefore, countries that have introduced, introducing, and amending TP legislation for addressing the tax planning practices of MNEs must be aware of this possible inconsistent mediation.

Theoretical Framework

TP is a method for the pricing of goods and services between a company's related parties or its divisions. The theories that I tested for my study are economic theory and strategic management theory. Economic theory proposes interdivisional market or arm's length prices that are relevant in determining the overall profit of the firm. The other theory that I used as part of my theoretical framework is the strategic management theory. Strategic management theory indicates that management strategy is relevant in determining the overall profit of the multinational enterprise as they engage in strategies for allocating their global tax liabilities.

The result of the study as reflected by the matched pairs *t*-test confirmed FCCs adherence to the arm's length pricing as proposed by economic theory. This result supports the management strategy of FCCs in determining the overall profit of the multinational enterprise as they engage in strategies for allocating their global tax liabilities, as proposed by strategic management theory.

The test for mediation with the proposed mediator of cost of services possibly resulted in inconsistent mediation where the mediator acts like a suppressor variable since there may exist additional mediators with opposing mediated effects. The TP legislation may have affected the cost of services as well as additional mediators that combined may have opposing mediated effect on operating profit. Mediation suggest a relationship chain where a predictor variable affects mediating variables, which then affects an outcome variable although there may be alternative explanations of observed relations other than mediation. The cost of services possible inconsistent mediating variable is a behavioral construct that transmits the effect of the independent variable of legislation to the

dependent variable of profit. However, the presence of additional mediating variables with opposing mediated effects may neutralize the effect of the independent variable on the dependent variable. Mediating variables expand the understanding of a relationship since it is part of the causal sequence of $X \rightarrow M \rightarrow Y$. The mediator of cost of services did not significantly explain that the operating profit reported was determined by the predictor of legislation with the help of the mediator due to the presence of additional mediating variables with opposing mediated effects. The results of my study indicating that FCCs' reporting of total cost of services and not contributing to increased operating profits disconfirmed findings in the literature that economic theory proposed interdivisional market or arm's length prices. Therefore, profit reporting showed management's non-adherence to the arm's length price as proposed by economic theory. The results of my study indicating that FCCs' reporting of total cost of services and not contributing to increased operating profits confirmed strategic management theory that proposes management engage in strategies to allocate their global tax liabilities; therefore, profit reporting supports strategic tax management.

Methodology

This study has contributed to knowledge through its methodology using matched pairs *t*-tests as well as its hierarchical mediated multiple regression. The methodological contribution is not unique but has contributed to the transfer pricing literature in conjunction with strategic management and economic theoretical frameworks. This study contributed to knowledge in the management field by expanding the application of economic and strategic management theories to empirically examine TP legislation in the

United States with specific focus on the services sector. The results of this study are likely to be of interest to several countries particularly those with foreign direct investment.

Limitations of the Study

There are some limitations in using existing data for recent studies. A primary weakness of the ex-post facto design is the lack of controls or inability to manipulate all the independent variables that influence the facts, because firm conclusions should consider other possible reasons for the result (Lord, 1973). Lord (1973) commented on the uncertainty as to whether the causative element is among the factors studied, as well as the outcome may result from a combination and interaction of factors as against one single factor. Lord noted further limitations of this design in that two factors may be related to other factors not observed or recognized. Therefore, this study using existing data may have some specific restrictions.

Specifically, my results suggested that after the updated legislation, the operating profit reported increases. However, the accuracy of this conclusion depends on the causal relationship between the independent and dependent variable where there is the possibility that changes in the operating profit reported or dependent variable are attributable to causes other than the status of TP legislation or independent variable. These other factors include strategies employed by US IRS for ensuring compliance with legislation. Also, there is a high probability that sales or revenue values may be another mediator with opposing mediated effects.

The legislation was expected to affect operating profit reported by FCCs in the United States through the cost of services in respect of transactions with related parties. The mediator of cost of services did not significantly explain that the operating profit was determined by the predictor of legislation with the help of the mediator. Through this mediation analysis the proposed cost of services mediating variable did not transmit the effect of the independent variable of legislation to the dependent variable of operating profit. Since mediation analysis may have a strategic management behavioral element there may be additional mediators explaining the relationship between the independent and dependent variable. In my study I used a single mediator but there may be several mediators that can affect one another as well as the presence of interaction effects of the mediators on the outcome. Using a mediated multiple regression analysis can be used in addressing the issue where the mediators might affect one another.

Recommendations

The accuracy of the conclusion depends on the causal relationship between the independent and dependent variable where there is the possibility that changes in operating profit reported are attributable to causes other than the status of TP legislation. Another factor includes strategies employed by US IRS for ensuring compliance with legislation. De Mooij and Liu (2018) in their IMF working paper reported that TP regulations prescribe that pricing of transactions between MNCs' related parties should be at arm's length or market prices, so protecting the domestic revenue; however, an unintended consequence of introducing TP regulations is the negative investment impact. Since in my study TP legislation contributed to operating profit reported, there may be

other areas that are affected such as foreign direct investment (FDI). The results of this paper can contribute to the current concerns on international taxation, including FDI, and are recommended for further research.

Through the mediation analysis the proposed cost of services mediating variable did not transmit the effect of the independent variable of status of legislation to the dependent variable of operating profit reported. Since mediation analysis may have a strategic management behavioral element there may be additional mediators, explaining the relationship between the independent and dependent variable, such as sales or revenue values with opposing mediated effects. In my study I used a single mediator but there may be several mediators that can affect one another as well as the presence of interaction effects of the mediators on the outcome. These areas are recommended for further research.

Introducing or updating TP legislation and desiring to increase operating profit reported by FCCs, should recognize and communicate the proposed mediator of cost of services as well as other mediators as primary criteria. Legislation's relationship to operating profit reported should not be examined in isolation but rather the contribution of the legislation on the cost of services as well as other mediators that consecutively contributes to operating profit reported. For example, documentation on the attributes of cost of services including cost of goods sold, compensation, and salaries should be evaluated in determining the values. Areas recommended for further research should focus on the components of cost of services since these values should be analyzed for compliance with the arm's length principle contained in the legislation. This study

contributes to new knowledge in TP through the presentation of and evaluation of this mediation analysis. Also, this mediation model serves as a platform for future TP research to consider significant factors affecting operating profit reported by MNEs.

This study provides preliminary guidelines for countries to use when introducing and updating TP legislation so as to increase the reporting of profit and consequent taxes. Recommendation for further research can focus on the compliance activities to the legislation, done by tax administrations, since this compliance determines the effect of the legislation.

The findings of this study have significant economic consequences for all categories of countries to successfully protect their tax bases and adequately addressed the relevant research questions. Globally, countries lose substantial revenue through TP; therefore, adopting and updating TP legislation will prevent erosion of their tax base. IMF and OECD (2017) reported on tax certainty in G20 and OECD countries, as well as developing countries, reflecting on the risks expressed by governments and MNCs with focus on international taxation. Discussions included initiatives relating to both tax transparency as well as surveillance by IMF on international taxation. Recommendation for further research can focus on the effect of initiatives implemented by global organizations focusing on developing countries.

Implications

The results of this study will provide information for making informed decisions on the effect of updated TP legislation on the reporting of operating profit in the United States as well as the possibility of the cost of services possible inconsistent mediation of

the relationship between the status of the legislation and profit reported. This study is significant for fostering positive social change, contributing to both strategic management and economic theories, and advancing management practice.

Positive Social Change

Positive contribution to society is a relevant goal to pursue. Walden University (2013) noted that individuals could have positive social change in their environment when they believe that they can change the status quo and then they proceed to take action leading to positive outcomes. In addition to individuals having the will to effect positive social change, a vital component is the financing of the various programs, facilitated through additional tax revenues at the disposal of countries. Docksai (2013) attributed tax revenues to economic growth and job creation as well as facilitating health care, education, infrastructure projects, and social welfare programs. Benshalom (2014) noted that there needs to be a system for wealth redistribution in an international context, with international taxation policies such as TP, facilitating this indirect redistribution of wealth. Oshionebo (2013) showed that the OECD guidelines mandate responsible behavior by MNEs in respecting human and workers' rights as well as environmental and developmental sustainability but are yet to effect significant positive changes in behavior. Tax revenue is needed to deliver public services, alleviate poverty, and provide sustainable development.

This study on changes in TP legislation and its contribution to operating profit reporting has significant implications for tax revenue collection by the United States government and the consequent social and economic programs that will improve social

and human conditions. There was a positive social change by FCCs as they responded to the updated TP legislation by significantly increasing their operating profit reported with the consequent increase in tax liability. The results of my study reflected positive social change by FCCs as they responded to the updated TP legislation by significantly increasing their operating profit reported by providing services to their controlled related entities in the United States at arm's length.

Strategic Management Theory

TP is a method for the pricing of goods and services between a company's related parties or its divisions. Strategic management theory provides insight into a comprehension of TP practiced by MNEs. Bao (2015) noted that the strategic management theory should expose phenomena affecting the survival and growth of organizations and so provide the basis for strategic management practice. This strategic management theory indicates that management strategy is relevant in determining the overall profit of the MNEs as they engage in strategies for reducing their global tax liabilities. MNEs consist of branches, subsidiaries, and affiliates having specific knowledge and activities and are located in different countries. These related parties transact business between themselves at transfer prices that focus on strategic tax management of the MNEs.

The result of the study, as reflected by the matched pairs *t*-test, supports the management strategy of FCCs in determining the overall profit of the multinational enterprise as they engage in strategies for allocating their global tax liabilities, as proposed by strategic management theory. The results of my study indicating that FCCs'

reporting of total cost of services with its effect on operating profits confirmed strategic management theory that proposes management engage in strategies to allocate their global tax liabilities; therefore, profit reporting supports strategic tax management.

Economic Theory

TP is a method for the pricing of goods and services between a company's related parties or its divisions. TP is based on economic theory with market values or the ALS determining transaction figures, as well as behavioral economics, which can explain management's decision-making in respect of tax compliance. This study investigating differences in reporting of profit, before and after the updated 2006 U.S. TP legislation, contributes to solving the problem of MNEs' shifting of profit and taxes as they engage in interdivisional pricing for determining the overall profit of the firm. As applied to my study, this theory holds and confirms that my independent variable of status of legislation influences the dependent variable of the reporting of operating profit because the independent variable establishes specific interdivisional pricing.

The result of the study as reflected by the matched pairs *t*-test confirms FCCs adherence to the arm's length pricing as proposed by economic theory. The results of my study indicating that FCCs' reporting of total cost of services with its effect on operating profits disconfirmed findings in the literature that economic theory proposed interdivisional market or arm's length prices; therefore, profit reporting showed management's non-adherence to the arm's length price as proposed by economic theory.

Practice

This study is relevant to tax administrations, MNEs, tax consultants, academics, and politicians since it affects tax revenue collection and the consequent social and economic programs. Therefore, there is information for making informed decisions, on the effect of the updated TP legislation, by tax administrations and MNEs. Specifically, the study reveals additional information about differences in reporting of operating profit to the U.S. Treasury, before the updated 2006 U.S. TP legislation compared to after the update. Also, the study shows the cost of services possible inconsistent mediation of the relationship between the status of the U.S. TP legislation and the operating profit reported to the U.S. Treasury. Knowledge of the status of legislation shows MNEs adherence to the arm's length price as well as engagement in strategic tax management.

The result of the study as reflected by the matched pairs *t*-test confirms FCCs adherence to the arm's length pricing so there is information for making informed decisions, on the effect of the updated TP legislation, by tax administrations and MNEs. The results of my study indicating that FCCs' reporting of total cost of services with its effect on operating profits implies that there is information for making informed decisions, on the effect of the updated TP legislation, by tax administrations and MNEs.

Conclusions

The findings of this study indicated that federal legislation on TP was associated with increased tax revenues. TP is a significant international tax issue that requires having TP legislation that provides a greater degree of certainty in respect of transactions between related parties of MNEs; consequently, there was an urgent need for TP

legislation that would provide the framework for guiding the actions of both MNEs and tax authorities.

The nature of my study was quantitative research using the ex-post facto design to answer my research questions. In this study, I evaluated the impact of the United States 2006 updated TP regulations on MNEs operating profit reported to the U.S. Treasury as well as examined the cost of services mediation of the relationship between the status of the TP legislation and profit reported for the period 2000 to 2013. The results showed that after the updated legislation, the operating profit reported increases as well as possibly inconsistent mediation.

This study is relevant to tax administrations, MNEs, tax consultants, academics, and politicians with significant implications for tax revenue collection and, consequently, social and economic programs. TP legislation has been introduced and is evolving as it is adapted for the interactions between MNEs and tax administrations. Countries are now recognizing the need for having similar TP legislation because information is now available for making informed decisions for adopting a transfer pricing regime, which would contribute to achieving sustainable development.

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Appendix: List of sample of FCCs

- Accommodation and other services
- Real estate and rental and leasing
- Publishing
- Real estate
- Broadcasting
- Health care and social assistance
- Arts, entertainment, and recreation
- Waste
- Educational
- Offices of health practitioners
- Miscellaneous health care
- Hospitals
- Other arts
- Amusement
- Accommodation
- Food services and drinking places
- Repair and maintenance
- Personal and laundry
- Air, rail, and water transportation
- Internet service providers
- Truck transportation
- Food services and accommodation
- Gasoline stations

- Transit and ground transportation
- Warehousing
- Other information
- Rental and leasing
- Pipeline
- Other services
- Lessors of nonfinancial intangible assets
- Health and personal care
- Health Care