The influence of industry affiliation on corporate tax avoidance in Malaysia

Zaimah Zainol Ariffin[*]

School of Accountancy, College of Business,
Universiti Utara Malaysia, Kedah, Malaysia

Abstract

Prior studies on tax avoidance have been emphasising on the individuals behaviour rather than corporations. In addition to this, the available studies on corporate tax avoidance, to date, have been focusing on the developed market while very little attention has been given to the developing countries. Thus, this study attempts to investigate the corporate tax avoidance behaviour in Malaysia, focusing on industry affiliations. Specifically, the objective of this study is to examine the importance of industry affiliations as possible contributions of corporate tax avoidance mechanism. This study documented the link between industry affiliations and corporate tax avoidance in an emerging market. This study tested the relationship by using a cross-sectional-time series valuation using panel data analyses, which is Tobit estimations. The results confirmed the importance of industry differences in explaining corporate tax avoidance activity. As more data become available in the future, one could include tax avoidance study in non-listed companies.

*Keywords***:** corporate tax avoidance, industry affiliation, tax incentives.

1.0   Introduction

Tax avoidance refers to the use of legal loopholes and tax allowances to legitimately reduce the size of ones tax liability. This activity, which is also known as an aggressive tax planning often requires an intelligent application of expert knowledge to avoid tax. In relation to this, Lymer and Oats (2006, p.350) defined tax planning as an activity that involves strategic use of available tax concessions in order to minimise tax liability. In Malaysia, income tax revenue is a major contributor to the Malaysian government revenues. Since the implementation of Self-Assessment System (SAS) in 2001, tax compliance is an important issue to ensure that taxpayers pay their appropriate share of taxes. A tax system is one tool that a government can use to promote overall economic stability and growth. However, the tax system may itself create opportunities for

---

[*] Corresponding author: Tel: +604-9287339
   E-mail address: zaimah@uum.edu.my

unintended behaviour. The behaviour exists as a consequence of tax loopholes in the tax system. One of the unintended behaviours is aggressively minimizing tax liabilities, which is a device of tax avoidance activity. Thus, there is a need to study this activity.

The principal objective of this study is to explore the industry effect towards corporate tax avoidance activities. In Malaysia, different industries receive different tax treatments or incentives, thus, industrial affiliation might be a potential explanation of the tax planning or tax avoidance activities. Corporate tax planning is associated with tax avoidance, as it is resulted in paying less tax than otherwise required. Tax planning is a process of tax minimization, where there is no conscious wrongdoing, however, the taxpayers have employed legal methods or schemes for reducing their tax liability and this is allied to tax avoidance. This study would provide new evidence of industry effects on corporate tax avoidance activity.

2.0 Malaysian corporate tax

Similar to other countries such as the UK and the US, Malaysia has also been reducing its corporate tax rate gradually over the years, from 40 per cent in 1988 to the current rate of 25 per cent. The rationale behind this reduction, among others, are to help ease the tax burden of the private sector, attract foreign investors and provide incentives for companies to expand their activities. In tandem with that, a number of tax incentives have been introduced by the Malaysian government to promote foreign investments and priority industries, particularly for projects with capital-intensive high value added content and new and emerging technologies. These tax incentives are clearly spelt out in the Promotion of Investment Act 1986 (PIA) and the Income Tax Act, 1967. For instance, the PIA offers tax incentives for investments in promoted products and activities in manufacturing, agriculture, tourism including hotels, research and development (R&D) and training. Likewise, companies with Multimedia Super Corridor (MSC) status would be able to enjoy special incentives, including tax holidays for a period of up to 10 years or Investment Tax Allowance (ITA) of 100 per cent and tax exemptions on the import of multimedia equipment. These incentives are intended to encourage the development of the MSCs and to ensure that there are sufficient knowledge-workers for the multimedia and information technology. This is important in order to accomplish a fully developed and industrialised country by the year 2020 as inspired by the Vision 2020.

3.0   Prior research

3.1   Theoretical background

This study presents a principal-agent model, which is considered appropriate to analyse the corporate tax avoidance (Slemrod, 2004). The basic premise of this model is that

decisions about corporate tax avoidance are made by companies managers. The model also suggests that the managers (agent) decisions to get involved in corporate tax avoiding activity could be due to two motivations namely synergy and agency, or even hubris, the exaggerated pride.

In a synergy-motivated tax planning, the managers are assumed to act in the interests of their shareholders in order to increase the firm value. If the tax planning activity is driven by this motive, the likelihood for that activity to create wealth for the shareholders would be high.

Meanwhile, agency theory suggests that the interests of principals and agents may not necessarily coincide. The theory generally rests on the assumption that managers have an incentive to maximise their personal utility and may do so even to the detrimental of the shareholders. In this instance, managers may attempt to minimise tax to derive a private benefit, such as an increase in their prestige or career prospects. This is an indication of the opportunism and self-interest attributes of the managers, which have been addressed in the agency literature. In fact, Alchian and Demsetz (1972), Jensen and Meckling (1976) and Eisenhardt (1989) unanimously agreed that in the absence of either appropriate incentives or sufficient monitoring, agents will be able to exercise their discretion to the detrimental of principals. This is based on the argument that the owners may wish to maximise their profits, while their designated agents may have neither the interest nor the incentive to do so.

Hubris results from the mistakes by managers in estimating the value of tax planning. Hubris emphasizes the role of managers and their personality traits. Under the hubris theory, tax planning may be initially viewed as deriving from the motivation to raise firm value and maximise shareholders wealth. The study of hubris which is widely used in the takeover literature has attracted scholars to understand the role of the neurotic and psychological disorders of top executives. The concept of hubris from the personality theory (for example, see Kets de Vries 1990 and 1991), provides a description of hubristic leaders as narcissistic personalities who desires for the reassurance and the applause of others. Kets de Vries (1991) noted that, with previous successes and from consistent public acclaim for successful achievements, hubristic leaders ended up believing that their achievements exceed those of their counterparts. Kroll, Toombs and Wright (2000) emphasized that hubristic leaders tend to listen only to people whose opinions are compatible with their own. Consequently, being too independent, hubristic leaders tend to make mistakes.

This study proposes that in any tax avoidance activity, the elements of synergy, agency and hubris simultaneously exist and interact to determine the output of the activity. These theories are adopted to identify the economic motives that influence managers to make certain choices. Thus, this study attempts to provide additional evidence on the principal-agent model in the tax avoidance behavioural study.

3.2 Tax avoidance

The activities of tax avoidance are non-evasive but referred to aggressive tax planning. Armstrong et al. (2012) studied the evidence of aggressive tax planning from the incentives given to the executive. They provide the evidence that managerial incentives influence tax planning choices. One step of the measurement of tax planning in their study is effective tax rate. Dyreng et al. (2008) measured the ability of companies to avoid tax in the long-run (10 years). They found that companies are able to successfully avoid large portions of the corporate income tax over continuous periods of time. The Effective Tax Rates (ETR) has been widely used to measure the tax burden of a company (for example, see Armstrong et al, 2012; Dyreng et al., 2008; Derashid and Zhang, 2003; Gupta and Newberry, 1997; Callihan, 1994; Manzon and Smith, 1994; Porcano, 1986; Spooner, 1986 and Zimmerman, 1983). Rego (2003) interpreted ETR as a measure of the effectiveness of tax planning.

There is a range of alternative formulae which may be used to define and measure ETR. Callihan (1994) and Omer et al. (1991) raised the issue of different measures of the ETR. Several groups of ETR studies have measured ETR differently. For example, Zimmerman (1983) measured the effective tax rate as a ratio of income tax to operating income, where income tax represents the total income tax liability adjusted for changes in deferred taxes, and operating income is total sales minus costs of sales. Porcano (1986) measured effective tax rates as a ratio of current income tax to pre-tax book income adjusted by income or losses associated with minority interests and/or extraordinary items. Holland (1998), on the other hand, estimated effective tax rate by dividing a firm's current corporation tax provision by its related level of income.
Generally, ETR is calculated by using a simple formula of dividing tax liability by profit. However, the issues that have been the centre of attention are the determination of tax liability (as the numerator) and the profit (as the denominator). With regards to the numerator, that is, which taxes should be considered to represent the overall tax burden of a company, a few studies have used tax expenses and excluded deferred taxes (Omer et al., 1993; Kern and Morris, 1992), while others have chosen not to exclude deferred tax (Rego, 2003; Kim and Limpaphayom, 1998; Gupta and Newberry, 1997; and Porcano, 1986). These latter studies chose not to exclude deferred taxes because they believed that deferred taxes would control for earning management strategies. This argument is logical considering that income increases earnings management, increases both the numerator (deferred taxes) and the denominator (pre-tax income). Thus, the inclusion of deferred taxes in the numerator will not affect the overall results and the results will not be driven by earnings management. In addition, Clowery et al. (1986) argued that it is not easy to include the present value of deferred taxes as it cannot be accurately estimated.

With regard to the denominator of ETR, that is, which income should be considered to represent the company's profit, Zimmerman (1983), suggested the use of cash flow

(instead of operating income) to eliminate the effects of different accounting treatments of income. A number of studies (Phillips, 2003; Rego, 2003; Porcano, 1986) used pre-tax income as the denominator. They claimed that ETR reflects a company's effective tax planning. Hence this study uses pre-tax income as the denominator of ETR.

The selection of the different measures of ETR is commonly associated with the purpose of the studies themselves. For example, Buijink et al. (1999) investigated the difference between ETR and the statutory tax rate (STR) across companies; Holland (1998), Callihan (1994), and Manzon and Smith (1994) concentrated on the tax burden of companies; Buijink et al. (2001) focused on corporate tax competition; and Rego (2003) examined corporate tax avoidance. The present study utilises the corporate tax avoidance study by Rego (2003) and measures ETRs as a proxy for corporate tax avoidance. Rego (2003) claimed that since ETRs compare the current tax liability generated by taxable income (to the tax authorities) with pre-tax income based on generally accepted accounting principles (GAAP), ETRs actually measure the proficiency of a corporation to reduce its current tax liability relative to its pre-tax accounting income. Thus they should reflect the tax planning and at the same time measure the tax avoidance of companies.

According to Rego (2003), tax avoidance activities create book-tax differences, which are either temporary or permanent differences between a company's financial accounting and taxable income. Thus, the numerator is based on taxable income and the denominator is based on financial accounting income to accommodate book-tax differences.[1] In addition, Rego (2003) employed sensitivity analysis which excluded deferred taxes from the numerator of ETR and found that they did not affect the main results of his paper. Rego (2003) claimed that firms that avoided income taxes by reducing their income tax payable while maintaining their accounting income would have lower ETR, thus making ETR a reasonable measure of tax avoidance.

The analysis of this study utilises the concept of effective tax rates (ETR) since it is considered the most appropriate tool to measure the distribution of a company s tax burden. This measurement was in line with Rego s proxy for tax avoidance that is also consistent with the studies of Mills et al. (1998) and Phillips (2003). ETR is measured as the ratio of current income tax expense to income before income tax.

3.3   Profitability
Manzon and Plesko (2002) suggested that profitable firms can make more efficient use of tax deductions, credits, and exemptions, resulting in greater book-tax differences[2].

---

1 According to Mills (1998), whose study was conducted using U.S. data, firms with greater book-tax differences have larger Internal Revenue Service (IRS) audit adjustment that is consistent with greater tax avoidance activities.

2 Book-tax difference is the different between income reported to shareholders (annual report) and tax

Spooner (1986) contended that investment patterns and profitability affect ETR. Siegfried (1972) is one of the many ETR literature which argued that ETR can be used to measure effective tax planning, and hypothesized that firms which have greater resources would develop expertise in tax planning.

Rego (2003) investigated whether economies of scale exist for tax planning, that is whether larger and more profitable multinational corporations avoid more taxes than other firms. He found that, corporations with greater pre-tax income have lower ETRs. The negative association between the firm size and ETR suggested that firms with greater pre-tax income avoid more income taxes than other firms.

Profitability is measured by income before income tax and is predicted to have negative association with ETR. Rego (2003) documents that corporations with greater pretax income have lower ETR, as companies with greater pre-tax income have greater resources to engage in tax planning. Companies with high profits are likely to employ extensive tax planning to gain tax benefits. Thus a negative relationship between income before income tax and ETR is predicted.

3.4   Industry effects

Industry affiliation is a potential explanatory variable for tax avoidance as the avoidance activity may depend on the sensitivity of certain industries. In other words, different industries may receive different tax treatments/incentives and therefore their engagement in tax planning may differ too. For example, studies on U.S. firms by Rosenberg (1969) and Harberger (1959) indicated that the farming, textiles, petroleum, coal products and real estate sectors paid significantly lower income taxes than other sectors. Omer et al. (1993) found evidence of empirical differences in ETR in the pharmaceutical industry and the petroleum refining industry. Another U.S. study by McIntyre and Nguyen (2000) indicated that ETRs vary widely by industry, with oil companies enjoying the lowest ETR.

Kim and Limpaphayom (1998) suggested that industrial effects might be a potential explanation for differences in ETR, and acknowledged the importance of sector effects in their article, but did not include them as explanatory variables. Derashid and Zhang (2003) examined the issues of industry effects on ETR in Malaysia. They found evidence that, manufacturing firms and hotels had significantly lower ETRs than any other public listed companies in Malaysia between 1990 and 1999. Derashid and Zhang (2003) classified industries into consumer, manufacturing, mining, finance, construction, trading, hotel and plantations, whereas this present study uses seven categories which are: basic material, industrial, consumer goods, health care, consumer services, utilities and technology in 2001 to 2005. The classification of these categories was based on industry sectors classified in the Thomson Analytic Database. This

authorities (taxable income).

industry classification is different from Derashid and Zhang's (2003) study which was based on the Bursa Malaysia classification.

4.0   Methodology

4.1   *Sample and data collection method*

The full population of companies listed on the Bursa Malaysia (formerly known as the Kuala Lumpur Stock Exchange, KLSE[3]) from 2001 to 2005 was first reviewed for sample selection. The year 2001 was selected as the starting point as it coincides with the implementation of the self-assessment system for companies in Malaysia. The data were in the form of panel data. Selected companies were drawn from seven industries which are basic materials, industrial, consumer goods, health care, consumer services, utilities and technology.

The data were collected from the annual report in the Thomson Analytic Database for 2001 2005, resulting in 5,000 observations. Table 1 summarises the sample selection procedures. Banking and insurance companies were excluded because they are subject to different legislation from the other companies and the regulatory constraints faced by these companies are likely to affect their ETR differently from other companies (740 firm-years). These companies tend to be highly regulated and relatively 'safe' companies in Malaysia. Previous ETR studies (for example, see Rego, 2003; Gupta and Newberry, 1997; Manzon and Smith, 1994; Wilkie and Limberg, 1993; Shevlin and Porter, 1992; Zimmerman, 1983; Wilkie, 1988 and Stickney and McGee, 1982) omitted companies with losses or zero income. These companies would create negative values for ETR which was not susceptible of economic interpretation in this context. In addition, most of the loss-making companies in the data set were loss-making for the entire period of the study. Thus, to be consistent with prior studies, this study also omitted company-year observations with losses or zero income which resulted in 1,970 firm-years. Firm-years with incomplete ETR data were also excluded (645 firm-years). One of the reasons for the incomplete data is the change of companies' fiscal year-ends during the sampling period. The change of fiscal year-ends would create financial reporting gaps or reduced accounting periods. Thus, the exclusion of these companies was to ensure that the ETR calculation was not misleading. The final sample comprised 1,645 firm-year observations as shown in Table 1.

---

3 Kuala Lumpur Stock Exchange (KLSE) has changed its name to Bursa Malaysia on 26th April 2004. Even though the period of study covers from 2001 to 2005, the name Bursa Malaysia will be used throughout the study.

Table 1

Sample selection procedure

Number of firm-years 2001 – 2005	5,000
Less:	
Banking and insurance companies	(740)
Companies-years with loss or zero income	(1,970)
Companies-years with missing ETR data	(645)
Number of firm-years available for ETR analysis	1,645

Table 2 shows industry classifications, as per the Thomson Analytic Database classification. However, the industrial classifications of fewer than 10 companies were omitted owing to the loss of degrees of freedom. Thus, the regression for industrial effects dropped two industries, namely oil and gas, and telecommunication.

Table 2

Industry classifications

Industry	**Frequency**	**Percent**
Oil and Gas	10	.6
Basic Material	165	10
Industrial	600	36.5
Consumer Goods	555	33.7
Health Care	45	2.7
Consumer Services	130	7.9
Telecommunication	10	.6
Utilities	35	2.1
Technology	95	5.8
Total	1,645	100

The test used Tobit estimation, which censored the dependent variable values of ETR by means of truncation at both sides of ETRs to remove the most extreme negative and positive observations and restrict the effect of potential bias. As ETRs could be explained as ratios, they are easily affected by outliers. To correct for such outliers, the truncated regression model was employed. As suggested by Buinjink et al. (2000), this filter was used to ensure that the most extreme observations were excluded from the analysis, without unnecessary loss of useful data. This estimation tended to reduce the influence of outlying observations, thus observations with either an ETR greater than double the statutory tax rate (56 per cent), or a negative/zero ETR were deleted. Therefore, only those companies with an ETR in the range between 0 per cent and 56 per

cent were considered. This would censor the data set to include a more representative and reliable range of corporate ETRs. This model censored at double value of STR was consistent with the model used by Buinjink et al. (2000). The filter only removed a small part of the sample and did not bias the mean upward and downward.

The estimation of tax avoidance behaviour was for public listed companies in the Bursa Malaysia and these differed across industrial sectors. It examined the influence of industry effects on tax avoiding behaviour across companies. Different industries which received different tax treatments would lead to the different effective tax burdens. This test helped to assess whether the industry differences had an effect on tax avoiding behaviour.

5.0   Findings and discussion

5.1   Profitability

Table 3 shows the whole result for tax avoidance model. However, the discussion only focuses on the profitability variable.

Table 3

Regression result for profitability

Explanatory Variables	Expected Sign	Coefficient (Std Error)
Constant		-3.0239* (.3880)
PC	+	.3215* (.0939)
Profitability	-	- .1695** (.083 8)
STDB	-	-
LTDB	-	-.0011 (.0011)
TDB	-	.0004 (.0003)
STDM	-	-
LTDM	-	-
TDM	-	.0004 (.0009)
DFA	-	.2011*** (.1160)

Explanatory Variables	Expected Sign	Coefficient (Std Error)
FA	-	-.0040*** (.0025)
CAPINT	-	-.3193* (.0720)
DPR	+	-.0064* (.0022)
MO	-	-.0194*** (.0116)
LR chi2(13)		65.54
Prob > chi2		0.0000
Pseudo R2		0.0188
Number of observations		1012
Left-Censored Observations		187
Right-Censored Observations		19
Uncensored Observations		806
Note: *indicates statistical significance at the 1% level **indicates statistical significance at the 5% level ***indicates statistical significance at the 10% level		

The estimated coefficient of profitability showed a significant negative sign for the regression. The negative relation between profitability and ETR indicated that companies with greater resources had more incentives and ability to engage in tax planning. This finding was consistent with those reported by Rego (2003) and Manzon and Plesko (2002). Rego (2003) documented that corporations with greater pre-tax income had a lower ETR and claimed that firms with greater pre-tax income avoided more income tax than companies with lower pre-tax income. Manzon and Plesko (2002) stated that profitable companies had a lower ETR as they were able to use tax deduction, credits, and exemptions with greater efficiency than less profitable companies.

5.2   Industry effect

Table 4 shows whether statistically significant relationships exist between tax avoiding activity and the profitability variable in each industry. The profitability variable had the expected negative sign and was significant in basic material, industrial and consumer services. However, the variable was significant with different direction than expected in the technology regression.

Table 4

Regression results of tax avoidance activity on industry differences

Industry Category	Profitability	No of Observation
Basic Material	-1.4954*	82
	(.3908)	
Industrial	-.8292*	369
	(.1869)	
Consumer Goods	-.0404	266
	(.2512)	
Health Care	.2513	19
	(3.8894)	
Consumer Services	-.7487***	80
	(.43 76)	
Utilities	.5280	33
	(.3619)	
Technology	4.6213*	27
	(1.0859)	
Note:		
*indicates statistical significance at the 1% level		
**indicates statistical significance at the 5% level		
***indicates statistical significance at the 10% level		

In general, the four industries showing the strongest correlation between profitability and tax avoidance activity were basic materials, industrial, consumer services and technology, whereas the other industries, consumer goods, health care and utilities showed weaker correlation. The results confirmed the importance of the industry effect in the relationship between profitability and tax avoiding activity.

Table 4 shows that basic material, industrial and consumer services sectors showed the significant level of lower ETRs compared with other sectors. Particularly, companies with higher profitability in basic material, industrial and consumer services sector, paid significantly less tax than any other industries. It is not surprising as the industrial sector[4] was offered various tax benefits in order to promote both economic and social goals, including enhancing efficiency or competitiveness, fostering high-technology, protecting domestic products, increasing exports and widening job opportunities. Alavi (1996) indicated that Malaysia has a long standing industrial policy to promote companies in the manufacturing sectors. The Malaysian government provides various tax incentives to stimulate and support such companies. Several incentives have been provided, including incentives to strategic industries, incentives to strengthen industrial

---

4 Both basic material sector and industrial sector are considered as manufacturing or industrial sector. Basic material mainly focus on manufacturing local resources such as quarrying and mining, while the industrial sector engages in manufacturing activities other than basic material sector.

links, incentives for industrialized building systems and incentives for outsourcing manufacturing activities. The incentives given include pioneer status, investment tax allowance, reinvestment allowance and accelerated capital allowances.

The regression analysis confirmed that higher profitable companies in both basic material and industrial sectors, paid less tax. This result supported the hypothesis that the more profitable companies would have more resources to engage in effective tax planning. These findings were consistent with those reported by Rego (2003) and Manzon and Plesko (2002). This result suggests that the tax incentives for the industrial sector in Malaysia (which provides higher capital intensity companies with an advantage from accelerated capital allowances under the Promotion of Investment Act (1986)), have resulted in lower ETRs.

As for basic material, industrial sectors and consumer services sector also recorded similar findings, with regard to higher profitable companies. Regression results relating to the consumer goods sector revealed that profitability had negative relationship with ETR. This finding could probably be due to the basic principle of business activities for consumer goods that is to meet the basic needs of the nation. The results confirmed that this sector undertook tax avoidance activities but not aggressive or significant.

Results from the technology sector had a significant influence on tax avoiding activity but with a different direction than expected. The technology sector showed that more profitable companies had a positive influence on ETR. In other words, in the technology sectors, more profitable companies paid more effective tax than less profitable companies. The technology sector is mainly based on developing and providing technology and technical support to the nation. This sector is important as it carries out the challenges to fulfill Vision 2020. The development of technology plays a crucial role in the governments plans. The Malaysian government focuses on national science and technology to sustain economic development and to improve quality of life and national security in the 21st century. One of the policy goals of Vision 2020 is that science and technology are central in building a more innovative and vibrant economy. Thus, one explanation of the significant positive relation between profitability and ETR in this sector may be that this sector is important and under the supervision of the government and thus unable to engage in more aggressive tax planning. The results in the health care and utilities category indicated that profitable companies have a positive influence on ETR. Even though the result showed contradictory direction, but it was not a surprise considering both sectors were important to the nation. The utilities sector supplies basic needs to the nation (water supply, waste management, gas power generation, construction, environmental services and trading) while pharmaceutical sector is responsible to sustain nations health. As for consumer goods sector, both health care and utilities sectors are also important and under the government supervision, thus unable them to engage in the aggressive tax planning.

The results of this study are incomparable with Derashid and Zhang (2003) as this study grouped companies differently from their study. This study classified companies into seven industries: basic material, industrial, consumer goods, health care, consumer services, utilities and technology, which utilise the data from the Thomson Analytic Database. However, Derashid and Zhang (2003) classified companies into consumer, manufacturing, mining, finance, construction, trading, hotel and plantations, where the data are based on the Bursa Malaysia classification. Interestingly, their study also found evidence that some of the industries, that is manufacturing and hotels, paid significantly less ETRs than other industries.

6.0   Conclusion and future recommendation

Tax collection generates large amounts of revenue and is a vital source of income for government to promote overall economic stability and growth. Since Malaysia has implemented the self-assessment system for companies since 2001, it is important to ensure high compliance by taxpayers. The aim of this study is to examine the relationship between different sectors and tax avoiding activity, resulting in lower effective tax rate (ETRs).

The results reported that companies across different industries do have significantly different characteristics and levels of tax avoiding activity. It shows that companies which paid less tax in Malaysia are those in the basic material, industrial, consumer goods and consumer services.

The results confirmed the importance of industry differences in explaining the corporate tax burden. The evidence showed that companies across different industries do have significantly different levels of tax avoiding activity. Four sectors, namely basic material, industrial, consumer services and technology demonstrated a high correlation between profitability and tax avoidance activity. The evidence, however, is not always consistent with predicted direction across industries, particularly for the technology sector.

In the technology sector, it appears that companies with higher income would have a higher ETR than other companies. Thus, not all companies with higher income would pay less tax, especially for the companies under the government supervision.

This study bridge the research gaps with significant contributions both (1) theoretically and (2) practically. (1) Most research on corporate tax avoidance has been conducted in the US, the UK and Australia, and very few to the authors knowledge to be carried out in an emerging market. This study investigates corporate tax avoidance in Malaysia, thus adding to the corporate tax avoidance literature by examining an emerging market.

(2) This study would provide the tax authorities the valuable information regarding tax avoiding activity which will be an essential factor to assist them to develop a fairer tax system. Currently, modern businesses have become increasingly large and complex, and with more complex businesses, the loopholes in the tax system have expanded. Maybe, it is the right time to close some of these loopholes and protect the tax system base. It is hoped that this study would be able, partially, to assist the tax authorities to develop tax reforms to reduce the opportunities for unintended tax avoidance. The outcome from the reform and the closing of the loopholes may be able to significantly improve the integrity of the Malaysian tax system.

In sum, there is a recommendation for future research.. This study does not examine the association between corporate tax avoidance and non-listed companies in Malaysia. In the future, as more data becomes available, one could include tax avoidance in non-listed companies.

References

Alavi, R. (1996). Industrialisation in Malaysia: Import substitution and infant industry performance. London: Routledge.

Alchian, A.A. & Demsetz, H. (1972). Production, information costs and economic organization. *American Economic Review, 62*(5), 777-795.

Armstrong, C .S., Blouin, J.F., & Larcker, D.F. (2012). The incentives for tax planning. *Journal of Accounting and Economics, 53,* 391 411.

Buijink, W. Janssen, B. & Schols, Y. (2001). *Corporate tax competition in the European Union*, MARC, Maastricht University.

Buijink, W., Janssen, B. & Schols, Y. (2000). *Effective tax rates for listed companies in the OECD*, MARC, Maastricht University.

Buijink, W., Janssen, B. & Schols, Y. (1999). *Corporate e*f*fective tax rates in the European Union,* MARC, Maastricht University.

Callihan D.S. (1994). Corporate effective tax rates: A synthesis of the literature. *Journal of Accounting Literature, 12*, 1 - 43.

Clowery, G., Outslay, E. & Wheeler, J. (1986). The debate on computing corporate

Derashid, C. & Zhang, H. (2003). Effective tax rates and the industrial policy hypothesis: Evidence from Malaysia. *Journal of International Accounting, Auditing and Taxation, 12*(1), 45-62.

Dyreng, S.D., Hanlon, M. & Maydew, E.L. (2008). Long-run corporate tax avoidance. *The Accounting Review, 83*(1), 61 82.

Eisenhardt, K. (1989). Agency theory: An assessment and review. *Academy of Management Review, 14*(1), 57-74.

Gupta, S. & Newberry, K. (1997). Determinants of the variability in corporate effective tax rates: Evidence from longitudinal data. *Journal of Accounting and Public Policy, 16*(1) 1 34.

Harberger, A.C. (1959). *The corporate income tax: An empirical appraisal*. In Proceedings of the Tax Revision Compendium, 1, 231-250. House Ways and Means Committee.

Holland, K. (1998) Accounting policy choice: The relationship between corporate tax burden and company size. *Journal of Business Finance and Accounting, 25*(3 and 4), 265-288.

Jensen, M.C. & Meckling, W.H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305 360.

Kern, B. & Morris, M. (1992). Taxes and firm size: The effect of tax legislation during the 1980s. *Journal of the American Taxation Association, 14*(1), 8096.

Kets de Vries, M. F. R. (1990). The organizational fool: Balancing a leaders hubris. *Human Relations, 43*(8), 751-770.

Kets de Vries, M. F. R. (1991). Whatever happened to the philosopher-king? The leaders addiction to power. *Journal of Management Studies, 28*(4), 339-351.

Kim, K. & Limpaphayom. (1998). Taxes and firm size in Pacific-Basin emerging economies. *Journal of International Accounting, Auditing and Taxation, 7*(1), 47-63.

Kroll, M.J., Toombs, L.A. & Wright, P. (2000). Napoleons tragic march home from Moscow: Lessons in hubris. *Academy of Management Executive, 14*(1), 117-128.

Lymer, A. & Oats, L. (2006). *Taxation policy and practice*. 12th edition. Fiscal Publication.

Manzon, G. & Plesko, G. (2002). The relation between financial and tax reporting measures of income. *Tax Law Review, 55*, 175-214.

Manzon, G.B. Jr. & Smith, W.R. (1994). The effect of the Economic Recovery Tax Act of 1981 and the Tax Reform Act of 1986 on the distribution of effective tax rates. *Journal of Accounting and Public Policy, 13*(4), 349-362.

McIntyre, R.S. & Nguyen, T.D.C. (2000). *Corporate income taxes in the 1990s*. Washington, DC: Institute on Taxation and Economic Policy.

Mills, L., Erickson, M. & Maydew, E. (1998). Investments in tax planning. *Journal of the American Taxation Association, 20*(1), 1-20.

Omer, T.C., Molloy, K.H. & Ziebart, D.A. (1991). Measurement of effective corporate tax rates using financial statement information. *The Journal of the American Taxation Association, 13*(1), 57-72.

Omer, T.C., Molloy, K.H. & Ziebart, D.A. (1993) An investigation of the firm size effective tax rate relation in the 1980s. *Journal of Accounting, Auditing and Finance, 8*(2), 167-182.

Phillips, J. (2003). Corporate tax planning effectiveness: The role of compensation-based incentives. *The Accounting Review, 78*(3), 847-874.

Porcano, T. (1986). Corporate tax rates: Progressive, proportional, or regressive. *The Journal of the American Taxation Association, 7*(2), 17-31.

Rego, S.O. (2003). Tax avoidance activities of US multinational corporations. *Contemporary Accounting Research, 20*(4), 1-35.

Rosenberg, L.G. (1969). Taxation of income from capital, by industry group. In A.C. Harberger & M.J. Bailey (Eds), *The Taxation of Income from Capital*, Washington, DC.

Seigfried, J. (1972). The relationship between economic structure and the effect of political influence: Empirical evidence from the federal corporation income tax program. *PhD dissertation*, University of Wisconsin.

Shevlin, T., & Porter, S. (1992). The corporate tax comeback in 1987: Some further

Slemrod, J. (2004). The economics of corporate tax selfishness. *National Tax Journal, 57*(4), 877-899.

Spooner, G.M. (1986). Effective tax rates from financial statements. *National Tax Journal, 39*(3), 293-306.

Stickney, C. & McGee, V. (1982). Effective corporate tax rates: the effect of size, capital intensity, leverage and other factors. *Journal of Accounting and Public Policy, 1*(2), 125 152.

Wilkie, P. (1988). Corporate average effective tax rates and inferences about relative tax preferences. *The Journal of the American Taxation Association, 10*, 75 88.

Wilkie, P. & Limberg, S. (1993). Measuring explicit tax (dis)advantage for corporate taxpayers: An alternative to average effective tax rates. *Journal of the American Taxation Association, 15*(1), 46-71.

Zimmerman, J.L. (1983). Taxes and firm size. *Journal of Accounting and Economics, 5*(2), 119 149.