

Corporate tax planning and corporate tax disclosure

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Abstract

Purpose – This paper aims to examine the impact of corporate tax planning (TP) on tax disclosure (TD). Using tax expenses data set, with the detailed effective tax rate (ETR) by reconciling individual items of income and expenses.

Design/methodology/approach – A firm-level panel data set is used to analyse 286 non-financial listed companies on Bursa Malaysia that spans the period 2010-2012. Multivariate statistical analyses were run on the sample data. The empirical understanding of TD depends on public sources of data in the financial statement, characterized in the aggregated note of tax expenses. Fitting with Malaysian environment, the authors measured TD using modified ETR reconciling items.

Findings – Results show that TP, exhibit a robust positive influence on TD. This suggests that TP is related to lower corporate TD. In addition, companies with high TP attempt to mitigate the disclosure problem by increasing various TD. The authors further find significant positive impact between each of firm size and industry dummy, on TD. This means that company-specific characteristics are significant factors affecting corporate TD.

Research limitations/implications – This study contributes to the literature on the effect of TP on TD. It depends on both the signalling theory and the Scholes–Wolfson framework, which are the main theories concerned with TP and TD. Therefore, from a theoretical side, the authors add to the current theories by verifying that users are the party influenced whether positively or negatively, by the extent of TD or the extent of TP activities through Malaysian organizations.

Practical implications – The evidence found in this paper has important policy and practical implications for the authorities, researchers, decision makers and company managers. The findings can provide them some relevant insights on the importance of TP actions from companies' perspective and contribute to the discussion of who verifies and deduces from TD directed by companies.

Originality/value – This paper originality is regarded as the first attempt to examine the impact of TP on TD in a developing country such as Malaysia. Malaysian setting is an interesting one to examine because Malaysia could be similar to other countries in Southeast Asia. Results contribute significant insights to the discussion about TD regarding, which parties are responsible for the verification of TD by firms, and which parties benefit from this disclosure. Findings suggest that companies face a trade-off between tax benefits and TD when selecting the type of their TP.

Keywords Tax disclosure, Tax planning, Disclosure and effective tax rate, Taxation, Effective tax rate

Paper type Research paper



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1. Introduction

Currently, there is extensive political and public pressure for the act to end harmful tax practices by firms such as illegal tax planning (TP). One response to this pressure was to increment the amount of information accessible to the public via mandatory tax disclosure (TD) to improve compliance and accountability. Which is specific concern to firms' managers fearing that the costs of public TD will outweigh the advantages (Graham *et al.*, 2014).

In this context, the outcomes of Hoopes *et al.* (2018) study shows that in Australia big private firms experienced some consumer reaction and maybe partially in expectation, some performed to avoid disclosure. They found that investors respond negatively to actual and expected disclosure of tax information, probably due to an expected policy reaction rather than consumer reaction or the disclosure of negative information about cash flows.

Our paper seeks to fill the void by considering the recent cases. To know, to which level the Malaysian firms disclosed information about tax. Our study trying to answer the following research question. Does the level of TP impact the level TD of Malaysian listed firms? In this regard, we analyse hypothesize of potential effects, focussing on investigating the effect of TP on TD within Malaysian companies. Multivariate statistical analysis was run on the sample of a firm-level panel data set. We show that TP, exhibit a robust positive influence on TD. This suggests that TP is related to lower corporate TD. In addition, companies with tax aggressive try to alleviate these transparency problems by increasing numerous TD. Which is in line with a recent study by Balakrishnan *et al.* (2018). Additionally, we find that there is significant positive influence between each firm size and industry dummy, with TD. Our results suggest that companies are trying to avoid as far as possible from disclosing tax-related information.

Moreover, international financial reporting standards (IFRS) applied new disclosure requirements for business taxpayers. Academics and scholars all over the world including Malaysia have spent extensive effort studying the instant outcomes of these requirements. While the profession has learned a great deal from these studies. We seek to better understand of TP and the corporate TD over the long-term. This article tries to carry in another paradigm in the taxation disclosure, specifically the precise disclosure requirement under other regulations that run in parallel with the company disclosure requirement.

The idea is if other regulatory associations enforce their particular rule of disclosure. Which is parallel with the taxation disclosure requirement. Then, TD is not seen to be the central focus of the disclosure requirement. Our study also looks at the level of TP, the rationale and circumstances for such practices. We want to discover whether a parallel principle of "disclose or explain" can be applied in the TD rules and regulations. For example, study by Ho (2017) shows that comply or explain approach is effective in increase corporate transparency, particularly in the markets that are similar to the USA.

Over the past decade, internal revenue service (IRS) and Financial Accounting Standards Board (FASB) have enforced various TD requirements on the US organizations, in both private federal tax returns and public financial statements (Henry *et al.*, 2016). Taxation is the government's main source of revenue and it is the most important contributor to public spending. In recent years, corporations have taken a wider view of their role in society. As a result, they intensified their consideration of tax significantly (Sabli and Noor, 2012). Besides, it remains a fact that taxpayers, specifically companies, continue to perceive taxes to be a burden. This perception stems from the fact that corporations, in general, are sceptical about paying substantial taxes to the tax authorities. This resistance makes them likely to involve in TP activities strategies to eliminate, decrease or defer tax obligations (Sabli and Noor, 2012).

The disclosure of companies' tax information could discourage explicit aggressive TP. Increase tax compliance or encourage companies to become less willing to undertake TP (Kornhauser, 2005). TD is a comparatively new area of the company reporting research. Yet, relatively little attention has been given to research in this area. TDs are important legal requirements. Which provide current tax information to parties external to the company, such as the government (Francois, 2012). By definition, an increase in the level of TD required by law will lead to some tax information. Which would have remained confidential under prior jurisdictions and will become part of the public domain. Such increased requirements to disclose tax information may be unlikely to meet with the full approval concerning the corporations themselves. Even so, it is presumed that there is no legitimate impediment to the privacy of this information being reduced or removed. In parallel, a case can be made as to whether there is, perhaps, an overriding advantage to enhanced disclosure. Convincing arguments in favour of moving towards greater TD have been presented. We can look forward to TD subsequently enjoying a higher profile. Moreover, by examining how this augmented disclosure will be realized (Lenter *et al.*, 2003).

Taxpayers are likely to be involved in TP strategies in an effort to cut or defer tax liabilities. TP, which is managed by complex laws, has today become a necessity for any company seeking to ensure that its financial affairs are well controlled. Various corporate entities, each with their own view of the prevailing tax jurisdiction, may look to these rules and regulations with dissimilar manner when performing TP. Hoffman (1961) noted that to properly understand the concept of TP activities, tax avoidance and tax evasion should be distinguished. In light of this, our study will consider all types of TP, including both tax avoidance and tax evasion. Tax avoidance refers to any TP, which is legally used by corporations to decrease their income tax (Rego, 2003). Tax evasion denotes to any means of TP, used by tax-payers to reduce tax payments level from their basis of income, which uses illegal tactics (Bruce, Deskins and Fox, 2007).

TP defined in this paper as a mixture of evasion and avoidance. This is in line with AbdulWahab and Holland (2012). We focus on the association between TP and TD. While the legal implications of avoidance and evasion are not investigated empirically. From this study perspective, the important motivation for companies to undertake TP is that they are looking for financial reimbursements. In particular, the core objective of the TP activities is to increase the after-tax return. Assuming that managers are performing in the best interest of the shareholders. While also attaining company objectives (Scholes *et al.*, 2009). TP can be undertaken after considering the possible costs and benefits of such activities. These activities are not only affected by the perceived risks or advantages but also depend on other factors such as transparency.

Several caveats required for our study results. First, to some extent we can establish a causative influence of raised TDs on company TP. Despite our examinations only document relationship between disclosure system and companies' tax outcomes. Second, our empirical measurement of tax-planning is indirect. Which capture TP strategies that impact tax payments. Third, growth (GRTH), leverage (LEVE) and capital intensity (CAPNT) are encompassed in the evaluation model to control for possible effects of tax-associated factors. Which is contains an area that could include TP. Even though, we include these control variables in our empirical examinations to control for business decisions, institutional structures inhibit us from being able to fully segregate TP strategies.

Fourth, though companies in Malaysia are not subject to the TD requirements. The sample in our analyses conducted to control for contemporary events. However, we cannot completely exclude the probability that raised levels of TP. We document over our sample era could be clarified in part by variations in the economy. Finally, we assume that

behavioural changes in response to TD will happen when Malaysia implements new disclosure regimes such as Schedule M-3, then the TD becomes effective. Nevertheless, companies could have responded to the raised disclosure requirements in a late manner, which makes attributing the influence of any exact TP strategies on any specific TD requirement more challenging.

Our study adds to the body of knowledge by giving insights into the implications for TP in relation to TD in the Malaysian context. We add to the literature in many ways. First, methodologically, it contributes to the existing literature by harmonising the TD measures in terms of tax saving components involving permanent differences (PD), temporary differences (TDF), foreign tax rates differentials (FTR) and tax losses (TLOS). It measures TD, by reference to Malaysian Financial Reporting Standards 112, International Accounting Standard (IAS) 12 and earlier studies, such as [Mgammal *et al.* \(2018\)](#). By categorizing the items of tax reconciliation into the components the study supplies a better depiction of the interested parties' assessment of the TD level. This refined TD measure allowed the researcher to examine whether interested parties (e.g. shareholders) make a diverse assessment of each tax saving component. While prior studies on tax saving components have been performed by researchers ([Boatsman *et al.*, 2002](#); [Hanlon, 2005](#); [Atwood and Reynolds, 2008](#); [Bauman and Shaw, 2008](#)) concentrate only on one selective component, this study covers various aspect as it does not concentrate merely on one particular component.

Second, the assumptions in this study depend on both the signalling theory and the Scholes–Wolfson framework. These are the main theories concerned with TD and TP, respectively. From a theoretical side, we add to the current theories by verifying that users are the party influenced whether positively or negatively, by the extent of TD or the extent of TP through Malaysian organizations. Our study complements previous work by investigating the association between TP tax and disclosure and whether the relation differs within Malaysian firms. Finally, the policy and useful implications focussed on the contributions to researchers, authorities and managers on the logic of corporate TD, activities of TP reporting and interested parties' concerns about activities of TP and TD.

An incentive to carry out this study is that to the best of the researcher' knowledge, there are no published studies, which investigate the effect of TP on TD within Malaysian companies. We report that TP exhibits a robust positive influence on TD and a positive and significant relationship between firm size and industry dummy with TD, which means that company-specific characteristics are important factors affecting corporate TD. Hence, using non-financial firms; we provide new evidence of the relationship between TP activities and TD.

The remaining of this article is organized as follows. Section 2 reviews previous studies and develops the hypotheses. Section 3 explains the data and variables measurements. The empirical results are shown in Section 4 and additional sensitivity analysis and tests are illustrated in Section 5. Finally, Section 6 concludes the article.

2. Literature review and hypotheses development

Taxes and the tax-system are essential components of any attempt for a developing country such as Malaysia ([McKerchar and Evans, 2009](#); [Sabli and Noor, 2012](#)). Tax compliance has continuously been an area of concern to tax administrators, policymakers and society ([Isa, 2014](#)). In Malaysia, all firms are required to disclose, declare and calculate their taxable income by using the self-assessment system (SAS). The main purpose of SAS applied in Malaysia is to increase the level of self-compliance, decreasing governmental costs, more disclosure and simplifying the assessment system ([Isa, 2014](#)). The effect of SAS has transferred more responsibilities to the tax-payers in ensuring the filing of accurate returns

and proper keeping of records for audit purposes. It likewise inspires a good understanding of other income tax legislation so as to avoid penalties.

Accordingly, some studies find that knowledge plays an important role in improving compliance behavior. For example, the disclosure of firms' tax information could raise tax compliance, inspire firms to become less willing to undertake TP or discourage explicit aggressive TP (Kornhauser, 2005). If a tax-payer has inadequate tax information (less disclosure), it may consequence in erroneous tax returns, and hence, lead to non-compliance. Some studies argue that the complexity of a tax-system and less disclosure may also impact non-compliance. According to Isa (2014), most firms struggle in understanding the tax-system would discourage a tax-payer from getting enough tax information causing continuous non-compliance. In this context, tax resistance can happen through either tax avoidance or tax evasion (Kasipillai *et al.*, 2003). Every Malaysian has his/her own right to tax avoidance, while tax evasion is viewed as unacceptable on the ground that it is illegal, as it involves intentional non-compliance of tax law. Tax-payers' compliance has a positive linkage with their perceptions of the tax system (Schwartz, 2014).

2.1 Tax disclosure

Opponents debate that more disclosure will reveal sensitive tax information that is, by and large, misunderstood, while supporters of more TD debate that expanded transparency will enhance tax compliance (Henry *et al.*, 2016). Public disclosure of information about income tax is a tax system policy tool. Disclosure of information about a corporation's tax received additional care in 2003 (Hasegawa *et al.*, 2013). Sweden, Norway and Finland all currently have a policy requiring the public disclosure of taxable incomes. In Japan TD was required from 1950 until 2004. Australia is presently considering implementing a system of TD. During the past 10 years, legislators have forced numerous TD requirements on US businesses (Henry *et al.*, 2016). Schedule M-3 applied by the Internal Revenue Service in 2004, which requires businesses to offer on their federal tax returns a detailed reconciliation of taxable income to financial reporting income. The FASB in 2007 started requiring businesses to disclose collective reserves for uncertain tax statuses in their financial reports (ASC 740-10, Accounting for Uncertainty in Income Taxes "FIN 48,") (FASB, 2006). Moreover, recently in 2010 the IRS generated the Schedule uncertain tax position, which requires businesses to disclose on their federal tax returns individual uncertain tax statuses underlying the US part of their financial statement reserves (IRS, 2010; Mgammal and Ku Ismail, 2015a; Henry *et al.*, 2016; Mgammal, 2017).

Beuselinck *et al.* (2018) experimental that the negative association between tax aggressiveness and readability of financial statements is declining once the use of Schedule M-3. Likewise, they found a robust negative association between readability of financial statements and various proxies for tax aggressiveness. This proof recommends that manager's employment difficult financial reporting methods once the advantages of activity tax aggressive policies overexert the costs, though trust less on confusion through such complexness once the benefits of confusion efforts are minor. From different hand, organizations significantly increased the quality of TDs in their SEC filings overdue the execution of M-3, suggests that these changes in IRS non-public disclosure requirements affect firms' public disclosures too. Based on the discussion in Bozanic *et al.* (2017), study by Beuselinck *et al.* (2018) found it a reason that firms can have least physical property to hide their activities of tax management subsequent M-3. Consequently, they assume the adverse relationship between financial statement readability and tax aggressiveness to weaken once the obligation to file Schedule M-3.

[Christians \(2013\)](#) claimed that throughout the latest years, the worldwide financial crisis has coordinated and produced rescue operations over the rich republics. Adverse impacts on big commercial sectors and financial interests, composed of high budget deficits and budget cuts, have led to rising public anxiety about worldwide financial inequality and poverty. During that time, however, some multinational corporations declared record profits for their operations in all parts of the world, while obviously getting away from the charges ([Thomson Reuters, 2011](#)). TDs have been defined as a term used to depict two separate situations:

The first is the legal requirement to provide current taxation information to the other party. The second is related to transactions that may be viewed as tax sheltering that must be disclosed to the government when filing income taxes ([Francois, 2012](#), Para. 1.2).

The instant purpose of TD is to expand general knowledge regarding the universal incomes obtained by the MNCs ([Brauner and Stewart, 2013](#)). In any case, a definitive objective is to activate notable movements of the tax reform as communities collaborate with the knowledge obtained. Activists intend to report as a trial certainty a universal financial related settlement that systemically lets multinationals organizations escape tax assessment in ways that are predictable, if not purposefully arranged by legislators. According to [Murphy \(2011\)](#) in-country by country reporting (CBCR) the activists found that corruption and non-compliance by the government and organizations is leverage of this comprehensive settlement. However, this is not their just or even rudimentary, concern. Otherwise, they attempted to disclose the legitimate and institutional system that grants multinational organizations to avoid tax collection in full quiet submission with all feasible tax regulations. This is an expansion of a vast follow-up of the transparency goals underneath the “publish what you pay” scheme. The aim is to reveal collaboration between governments and businesses that encourage non-compliance and corruption with tax legislation. The motivation behind CBCR is to unveil collaboration amongst governments and organizations that advance under-taxation of multinationals organizations as an issue of systemic outline ([Christians, 2013](#)). In this context, we argue in this study the use of tax reconciliation items as the measurement of TD, which is not made available by CBCR.

The present types of tax evasion and tax avoidance depend on both a culture that ensures the privacy of organizations’ tax information and on complexity brought into taxation calculations. For example, to shackle a promptly achievable assessment of a company’s financial related status notwithstanding when information is unmistakable and available. A reduction in both aspects would be the most efficient route to increased tax transparency. Overcoming secrecy and complexity lies at the heart of the most recent changes to taxation law – these new standards rightly impose increased obligations on companies that publish only partial information about their transactions. TD is presented as the resolution to this issue. For example, with CBCR norms, a multinational organization is obliged to disclose data about their topographical areas in various parts of the world, e.g. the names of all its branches in different spots, their business sectors, business and money related exchanges between organizations, labour costs, the quantity of employees, properties in every places, assessed taxes, instalments in each state and further specialized tax specifics ([Christians, 2013](#)).

CBCR is, therefore, not a tax policy repair but an accounting disclosure repair, to be accomplished by financial security legislation applicable to large multinational firms in the country in which they are based ([Murphy, 2011](#)). A few governments as of now assemble some of this data, e.g. valuing practices amongst organizations, and the genuine tax installments by firms to the local government, albeit such data are not right now disclosed to

people in general. However, TD activists also look for information that governments may not necessarily gather at the present time. Some of these categories can be somewhat notorious, for instance the payment of taxes to foreign countries, the identity of beneficiaries, and chains of corporate ownership (Carr and Grow, 2011).

Besides, advocates of transparency recommend that few constituencies need to use TD data with a specific goal to settle on ideally educated market decisions (Christians, 2013). The essential target audience for this assessment translucence is investors, who might externally have encourage information with the final goal of investment decision making, which identifies with conceivably unsteady systems of government, tax shelters, and other sensitive areas (Murphy, 2011). In the USA, giving shareholders access to organization tax data and making corporate tax returns open were elements of early organization tax returns, which were immediately passed into statute, after weight was connected by business lobbyists[1] (Pomp, 1993; Christians, 2013).

However, TD is a new arena, and there is a lack of empirical studies that have delved into this area. In this situation, signalling theory is the most related and fitting theory that can clarify the context of TD. Furthermore, this theory highlights a strong argument on TD, compared with other theories. Signalling theory states firms' issue "signals" about who they are and what they believe (Spence, 1973, p. 355). The info disclosed by corporations, including information about tax, falls somewhere between no disclosure and full disclosure, reliant on their motivations (Premuroso, 2008). It is understood that these drives will differ, and will have diverse effects on the level of disclosure in different firms and countries. Causes for differences in the level disclosure may include, e.g. regulations and tax-law (Bhattacharya and Ritter, 1983).

2.2 Tax planning

TP is "the taxpayer's capacity to arrange his financial activities in such a manner as to suffer a minimum expenditure for taxes" (Hoffman, 1961, p. 274). Also, Pniowsky (2010) said TP is "the process of structuring one's affairs to defer, reduce or even eliminate the amount of taxes payable to the government" (Pniowsky, 2010, p. 1). As designated by Jeff Pniowsky in Canada TP is realistic, given that it occurs inside the arrangements set out by the Income Tax Act. Furthermore, TP has been perceived as the best decision, inside legitimate guidelines, to diminish the taxation rate. This is achieved over the contrasting of tax rates between economic exercises and particular jurisdictions, alongside various of the tax incentives offered under tax regulations (Fallan *et al.*, 1995).

A study on the tax evasion activities clarifies that the term "tax avoidance" incorporates any TP used legitimately by organizations to diminish their pay tax. The term "tax evasion" alludes to any approaches for TP used, by tax-payers, to cut the level of tax installments. In different terms, "avoidance" shows the activities of TP and the consequences of planned or unintended' vulnerability with respect to tax rules, technical angles (Rego, 2003). Past tax researchers have seen at tax evasion as a critical segment during the process of TP to comprehend the idea of TP (Rego, 2003). Another definition by Harvey (2011) TP is drawing strategies during the year to decrease tax liability; for instance, by choosing a tax documenting status that is most helpful to the taxpayer. Such TP can be accomplished by holding up until the following tax year to offer an advantage, so as not to recognize capital augmentations. Moreover, TP can mean settling on a business' investment choices in view of determined projected, revenue and current duty laws.

Tax is a noteworthy cost for businesses; thus, reducing tax will enrich profitability. Tax obligation is a manageable cost that can be lessened, like any operational costs (Garbarino, 2011). It is, in this way, a broadly acknowledged practice in a business' tax administration

that as indicated by their obligations of steadfastness and worry towards partners, managers practice an obligation of care and loyalty an obligation to diminish the business' taxation rate. It is undertaken with high levels of tirelessness, concern and involvement in the conviction that this minimization is to the greatest advantage of the corporate (Keinan, 2003). TP is a method that people, firms and partnerships use to survey their budgetary profile with the motivation behind diminishing the amount of taxes paid on individual income or business profit. Also, Hoffman (1961) contended that to comprehend TP concepts, tax evasion and tax avoidance should be distinguished. The defeat to make any distinction between these different concepts can lead to the discrediting the acceptable TP and drove to significant legitimate ramifications (e.g. sanctions because of the unawareness of a taxpayer on any legitimate side of TP). Hence, it can be concluded that the requisite conditions to clarify the distinction between tax-evasion and tax-avoidance are "legal" and "illegal" (AbdulWahab, 2010; Mgamal, 2015; Mgamal and Ku Ismail, 2015b).

Firms accept to take complete repayments of recompenses and arrangements in the tax code so they pay no more tax than is vital. A few organizations might be further aggressive in their TP and hope to exploit loopholes or make ideal illuminations of the vulnerability in tax regulation. While this sort of tax avoidance is authentic, numerous examiners contend that tax-avoidance is not in the soul of the regulation. TP is not the same as those encased in the hypothesis of tax-evasion, in which associations unlawfully fix their tax obligation (Bond *et al.*, 2014). Therefore, the mainstream of corporations widely engages in TP with the purpose of declining their income taxes, e.g. using income tax expenses to reduce their profits. In fact, businesses typically appoint a tax agent with the only purpose of reducing the taxes they are obligated to pay. According to Murphy, TP is allowable by the tax rules as it is considered a legal tax avoidance system. Bear in mind in the Malaysian tax legislation, tax avoidance may be captured as taxable under Section 140 of the Income Tax Act 1965.

A few firms have the opportunity to hold out TP, but because of the pros and cons related to TP activities, a few organizations are unwilling to accept TP, whereas other corporations are implicated in such activities. Noor *et al.* (2010) said this is a direct result of particular firm elements, for example, the firm size and its abilities with respect to tolerating TP. However, the relations between the effective tax rate (ETR), size and profitability are varying in prior study (Derashid and Zhang, 2003). The extraordinarily productive organizations were found to hold up under least income tax rates as they used tax incentives and different arrangements to decrease their taxable income (Rohaya *et al.*, 2008). Thus, prompted a substandard ETR. Besides, corporate nature additionally influenced the probability of an organization taking part in TP. For instance, firms in trading, technological, industrial, plantation, consumer products, services and properties sectors were regularly involved in more forceful TP than other segments such as partnerships in construction and infrastructure segments because of the industrial nature and the tight tax incentives accessible to them (Noor *et al.*, 2010).

Given that diverse segments approach of TP in an unexpected way, these distinctions can prompt diverse scopes of taxation burdens (Derashid and Zhang, 2003). For instance in the US enterprises in the textiles, farming, petroleum coal products and real estate segments paid least income taxes compared to firms in the pharmaceutical sector (Omer and Molloy, 1991). The reason for this is aligned with capital increases and the proportion of exhaustion recompenses given to organizations occupied with extricating, developing or mining natural resources. In Malaysia firms engaged in the services and trading, property segments and construction segments confront high ETRs in light of the fact that they are involved in abnormal state of forceful TP because of various tax incentives qualified for them to apply.

Thus, the odds for these organizations to include in further forceful TP is developed (Noor *et al.*, 2010). Organizations in the development and infrastructure areas, however, detailed a significantly higher current-based ETR than others, proposing that the organizations in different sectors involved in less forceful TP (Noor *et al.*, 2010).

The difference between evasion and avoidance is discussed in detail by Slemrod (2004), who recognized that there is no vibrant line between two of them. This prompts changing elucidations of TP, frequently with contrasting slants on what is “acceptable” and “unacceptable”. Hoffman (1961) argues that it could be debated whether tax avoidance is consistent “totally acceptable”, as the strategies for avoidance used vary between organizations. This circumstance, in most recent years, has been negotiating among authorities, practitioners and taxpayers. In the meantime what is not worthy to one gathering might be adequate to others (Self, 2007), e.g. a lessening of stamp obligation rates infers an expanded incentive force for taxpayers to avoid the charges, and the fluctuation in rates for a scope of transactions rouse taxpayers to support one type of transactions rather than another with a specific end goal to diminish tax costs. Such practices will impact what the authorities and governing bodies see as unsuitable tax avoidance (Bowler, 2009).

To avoid issues in distinguishing and removal tax evasion and tax avoidance, there are further studies that figure out what is “acceptable avoidance” and “unacceptable avoidance”. Based on that this paper considers TP containing all behaviour avoidance and evasion. Following AbdulWahab (2010), this paper characterizes activities of TP as a blend of evasion and avoidance. Hence, this paper concentrates on the connection between TP and TD, while the legal aspects of avoidance and evasion are not experimentally investigated. At the point when there is past goal to diminish the tax burden, the procedures are portrayed as passive activities of TP. Without an earlier aim or reason, activities of TP are characterized as “effective”, despite the fact that it can be inferred that the activities of TP are either passive or active.

AbdulWahab (2010) also deliberated that in the case of loss-making firms, there are still decisions to be made related to TP. Although it could be debated that the association between accounting (profit or loss) and tax charge differs between loss or profit-making firms, a claim to counterbalance the losses should be made, and therefore, does not require any action by the company. Similarly, if a purchase decision does not look at the tax sides, the taxpayer is characterized as performing passive TP. For instance, a taxpayer could be considered a participant in activities of TP in buying capital assets (which entices capital allowances) if the intention is to minimize the taxable income (AbdulWahab, 2010; Mgamal, 2015).

In summary, any TP may be classified as either evasion or avoidance. However, IRS commonly views tax avoidance as a legal movement. They likewise use the expression “acceptable” or “unacceptable” avoidance to separate between conflicting activities associated with TP (Slemrod, 2004). Moreover, TP can likewise be characterized as either “active” or “passive”, in view of the taxpayer’s motivations when directing a transaction. TP is viewed as a continuous issue. It is also important to taxpayers, practitioners, IRS and scientists. The issues of business tax avoidance and evasion are of concern to IRS and scientists as they are related to open arrangement. Both activities may disfigure taxation rate appropriations and from an economic perspective, could misrepresent resource provisions (Slemrod, 2004; Mgamal and Ku Ismail, 2015b).

TP theories present ideas and rules that are normally pertinent to tax experts. TP cannot be continued in the long term unless the activities or TP are “flexible”. It means that there is continuity in the strategies deployed (Hoffman, 1961). This is especially appropriate to the instances of TP procedures that are subject to ambiguities and loopholes in tax regulations.

TP strategies must be time-situated and proportionate, after the rationale that “consistency requires that the past limit the present and the future but the present must be further circumscribed in the light of the taxpayer’s future requirements” (Hoffman, 1961, p. 280). Furthermore, TP should be personalized and coordinated, meaning that it is an activity, which must be addressed for the individual taxpayer. There may also be with different approaches, depending on the types of taxes in question and it may be necessary to provide for “a resolving of conflicting interests”. There is the implicit expectation that tax-payers will be “completely honest”, will act in accordance with some basic honesty and will keep up good obligation regarding any practices in the process (Hoffman, 1961).

Appropriately, Shackelford and Shevlin (2001), while investigating the advancement of income tax in accounting, they contended that the structure of Scholes–Wolfson chooses a certifiable approach in clarifying the capacity of taxes in organizations. Scholes *et al.* (2009) illuminate that the Scholes–Wolfson TP framework recommends three considerable standards in TP:

- (1) an adaptable strategy, for example, all contracting parties, which could specify to businesses’ and employees’ taxes;
- (2) the noteworthiness of undetectable charges (as a delineation, “all taxes” could say to broad tax documents, for instance, unequivocal taxes – the tax paid to the household tax authority – and certain taxes, which may contain tax prompted decreases in pre-tax of return); and
- (3) the significance of non-tax costs. “All costs” would contain trade-offs and management incentives, and transaction costs between tax targets and business financial accounting targets.

It has been highlighted that TP has to take into consideration all parties and all costs. The theme of making TP an all-encompassing activity has been introduced as follows:

[...] all contracting parties must be taken into account in TP [...] the importance of hidden taxes – all taxes must be taken into account; and importance of non-tax costs [...] all costs of business must be considered, not just tax costs (Scholes *et al.*, 2009, p. 3).

TP has two main objectives according to the American Institute of Certified Public Accountants (AICPA). The first objective is to reduce the general income tax obligation, although the other objective is to accomplish financial planning purposes with minimal tax outcomes (AICPA, 2015). These objectives are accomplished through three broad strategies. The first purpose are to decrease the income tax resulting from a transaction or an arrangement. The second contains exchanging the planning of a taxable occasion and the third identifies with exchanging income to other taxpayers, which will diminish tax obligation (AICPA, 2015). Predictable with AICPA, it is dynamic that the key target of TP is to diminish the taxation burden. When taxpayers have the ability to diminish their tax commitments, in taking advantage of this capacity, they achieve the goal of TP as depicted by (Hoffman, 1961). On the other hand, there are two different perspectives that we can look at TP. Firstly, as a result of the negative influence of managerial opportunism, TP is on par with tax evasion. The other angle offers a direct solution for managerial opportunism problem. In the event that led effectively, TP activities embraced within the tax rule will advantage both managers (operator) and shareholders (principal) and can diminish the tax burden endured by each party through operative TP strategies (Minnick and Noga, 2010; Sabli and Noor, 2012).

The targets of TP ought to mull over all the components of the financial plan with the reason to avoid creation of new costs conveyed by the business, and ought to help diminish

the tax burden with regard to the necessities of operative readiness for the work of the business in general (Scholes *et al.*, 2009). Instead, the point of TP is not to avoid installment of tax, but rather for a tax-payer to improve his or her TD (Badertscher *et al.*, 2011). In many circumstances, the real point of TP is the use of the guidelines in such a way they enable corporate or a person to shrink the amount of taxable income in any given time. In this manner, making arrangements for taxes needs the knowledge of which to sorts income to be currently qualified to be free of taxes. The methodology correspondingly requires a comprehension of what sorts of costs can be considered as genuine decreases and any conditions that can be used in applications, which a taxpayer makes for duty diminishment (Jones and Rhoades-Catanach, 2005).

Scholes *et al.* (1990) start to scratch the surface in identifying and measuring the tax and advantages and non-tax costs of economic rearrangement in reply to the changes in economic conditions. Their aim was to offer a means by which TP analysis can be used to measure incidentally transaction costs that are otherwise unobservable. They document a significant association between tax status and companies' investment and financing decisions. They further deliver evidence of nontax costs linked with rearrangement economic balance-sheets that impede tax-related rearrangement. In macro tests, they document a strong response of bank holdings of municipal bonds to legislative changes in tax rules. In this case, asset turnover costs are low and the date of change in tax circumstances is relatively well-documented. The ability to document strong responses of asset allocations to changes in tax rules is an encouraging prelude to investigations in other circumstances in which the non-tax costs of balance-sheet restructuring are higher and the date of a change in tax circumstances is more elusive. The evidence suggests that banks are more inclined to take actions that reduce taxes when the costs of doing so, in terms of the effects on income reported to shareholders and regulators, are relatively small and the magnitude of the potential tax benefits is large.

The Scholes–Wolfson framework illustrates three significant principles of efficient TP: “all costs”, “all taxes” and “all contracting parties” (Scholes *et al.*, 2009). In reality, societies are the more impacted parties as activities of TP could produce problems in resource distribution (AbdulWahab, 2010; Mgammal, 2015). In terms of the “all costs” and “all taxes”, managers should include these principles in activities of TP, to achieve the goal of TP, which is to maximize after-tax returns, managers need also to consider the trade-off between the advantages and TP costs (AbdulWahab, 2010). In this regard, all contracting parties, the significance of non-tax costs—all costs of business and the significance of unobserved taxes—all taxes must be considered in TP. This argument is based on the theoretic perspective of the Scholes–Wolfson framework (Mgammal and Ku Ismail, 2015b).

2.3 Tax planning and tax disclosure

A growing number of studies inspect how investors rate the publication of tax-related information about firms, concentrating on the occurrence of disclosure (Brooks *et al.*, 2016; Chen, 2017; Hoopes *et al.*, 2018). Nevertheless, a handful is known about how related parties react to variations in rules requiring the disclosure of additional information, i.e. a rise in TD. Disclosure of organizations on income tax return data derives forceful tax avoidance and outright evasion for two reasons (Lenter *et al.*, 2003). Initially, if business authorities are stressed that a business' taxable returns were uncovered to be suspiciously low, the finding could yield an unfavourable open answer. Various business authorities may feel embarrassed for being the officers of the organizations presented to be lesser than good companies' citizens. All the more seriously, they fear an inverse impact on the business'

main concern, as their business relies on upon their clients' affirmation that they are good public citizens (Kornhauser, 2005).

Another reason, despite less straight, is that the disclosure of corporate tax data rouses better compliance. TD encourages the reconciliations of the first contrasts amongst book and tax, either because the business itself offers these reconciliations or as reconciliations are figured by invested individuals, (e.g. business press and the scholastics). These reconciliations could help the IRS in finding a business' tax evasion. Consequently, organizations might be more undecided to include in aggressive TP (Lenter *et al.*, 2003). For example, one may book extended tax reconciliation and concentrates on the tax protect exchanges. In the framework of the current approach, the methodology might not have been disclosed unmistakably in the note of financial statement, as point by point in the Schedule M-1 (Mills and Plesko, 2003).

On the association between TP and TD, more tax transparency could have various advantageous effects. Firstly, TD can put weight on regulators to build up the tax system. Besides, the TD may compel organizations to move far from some of their viable procedures just to decrease taxes. For instance, in situations where organizations expect that the disclosure of tax installments that lower the normal tax level, could prompt negative buyer responses. The negative reaction would happen when consumers and investors consider low tax payments to be an indicator of highly aggressive TP. Finally, extra disclosure can add to enhancing the execution of financial markets, by improving the level of data incorporated into financial statements (Lenter *et al.*, 2003).

Moreover, the disclosure of company tax information encourages incremented compliance (Mgammal and Ku Ismail, 2015a). TD encourages the reconciliation of the contrasts between the recording of income and costs for the motivations behind accounting and the financial statements, and the recording of income and costs for tax purposes. This will happen either knowing that the organization itself gives these reconciliations or on the grounds that reconciliations are processed by related parties such as in scholastics. These reconciliations could assist the tax authorities in revealing company tax evasion. Consequently, firms might be further hesitant to involve themselves in aggressive TP (Lenter *et al.*, 2003). For example, extended tax reconciliation ought to reveal insight into the tax shelter exchanges. With regard to the present arrangement, the procedure might not have been disclosed independently in the tax references of financial statements (Lenter *et al.*, 2003). Interestingly, the FASB does not, for the most part, require the revelation of data on particular operations. Tax reserve levels and disclosures in regard to dubious tax positions are used by authorization operators to arrange their own particular reviews. Therefore, managers have the consolation to supply low-quality disclosures and least tax reserves, as the size of the reserve tax alone will be sufficient to show to the TP authorities the way of the TP that an organization has performed (Frischmann *et al.*, 2008; Blouin *et al.*, 2010).

Slemrod (2005) discusses the advantages and disadvantages of raising the level of TD, in the context of several additional items of several tax return information. The author suggests that such disclosure might well "exacerbate the race to the bottom of ETRs" (Slemrod, 2005, p. 95), as well identifying as an issue the question of where shareholders believe that minimum ETRs come from. While it may be that certain companies have more highly-skilled tax personnel than others, Slemrod (2005, p. 95) pointed out that "savvy investors realize that lower ETRs result from a more aggressive stance that pushes the limits of what is legal". This question similarly raises the issue as to whether businesses, which reward the diminishing of the ETR are in effect supporting an aggressive TP approach, which may not necessarily be in the best interests of other stakeholders (Mgammal and Ku Ismail, 2015b).

It is important to mention that TP could be evaluated from a shareholder's perspective by using ETR information. This is because the ETR reflects TP activities (AbdulWahab and Holland, 2012). Earlier researchers documented the association between shareholder evaluation and TP (Atwood and Reynolds, 2008; Frank *et al.*, 2009). The difference between tax expenses and statutory tax expenses is important because it reflects the effectiveness of TP activities, which aim to provide long-term financial benefits (Schmidt, 2006). Shareholders could benefit via data on the productivity of TP activities, as the variation among tax costs and statutory tax costs demonstrates the amount of tax spared by firms as for the financial reporting year. It is, therefore, preferable for companies to disclose this difference as an amount in the financial reports (AbdulWahab and Holland, 2012).

Furthermore, the impact of TP could be seen from the perspective of deferred taxes, enabled by the transfer of TLOS and net operating losses. AbdulWahab (2010) deduces that shareholders are likely to view any reduction in the total tax payable as a measure of TP and its effectiveness; this does of, course, depending on how an item is presented in financial statements. Additionally, Atwood and Reynolds (2008) argue that a review of the current disclosure environment supports the proposal of the FASB that financial reporting requirements should now include an independent statement of taxable income in the financial statements. It could, therefore, be deduced that shareholders are expected to assess TLOS to be an element of how effectively a company has realized its TP. In so doing, the shareholders rely on how the relevant information appears in the financial statements (Atwood and Reynolds, 2008).

Shareholders are not the only group assessing tax savings in a comprehensive assessment of TP activities. Those directly involved in implementing tax savings are also important. This is predictable with the aftereffects of Lev and Nissim (2010), who found that shareholders may not absolutely appreciate the aggregate tax book distinction. Disclosure of income taxes, especially when combined with other data required of companies, provides key information to statement readers who know how to extract it. Much of this information is not available from other sources (Lev and Nissim, 2010). To support the assessment of the importance of the total value of tax savings because of TP, it is important to investigate the shareholders' perspectives of the disclosure of tax savings assessments.

The previous discussions have documented that high TD could have several beneficial effects, such as forcing firms to resist some of their effective strategies for the reduction of tax due when they perform TP. Tax exposure can likewise add to enhancing the execution of financial related markets. This would clearly be achieved via an enhanced level of information being included in financial statements (Lenter *et al.*, 2003). The disclosure of company tax information encourages increased compliance. This is because TD facilitates the reconciliation of the differences between income and tax (Lenter *et al.*, 2003). For instance, an extended tax compromise ought to reveal insight into tax shelter exchanges. Moreover, Kvaal and Nobes (2013) scrutinized the TDs by studying in detail how countries under study perform two numerical reconciliations mandated by IAS 12. They said that there are systematic differences in IFRS reporting practices between firms from different countries. Also, they found diverse reporting practices within some industries, e.g. the extractive industry. Based on their observations, they recognize a number of elements of IAS 12 that could be improved. Additionally, Lopes (2014) based on the accounting standards as a proxy for reporting quality awareness highlighted the importance of information compliance indexes. This approach is evidenced through an illustrative example of disclosures on deferred taxes, as required by IAS 12. The index was regressed with a set of performance and control indicators, study found that information compliance and disclosure levels depend from several performance and control indicators.

In this context, [Dutt et al. \(2018\)](#) investigated whether the negative reactions of investors recognized in previous studies are generalizable to other settings and industries, namely, to the introduction of a public CBCR requirement for EU financial organizations. Their analysis delivers proof of the influence of tax transparency on the capital market. They took together the findings of their study, [Chen \(2017\)](#) and [Hoopes et al. \(2018\)](#), who argued that the reaction of capital market to a new TD requirement is probable to realize the inspiration of the rule and on the way the information is presented. The European Commission recommends that firms shall disclose the CBCRs on their website and in a publicly available register of the European Commission. This could improve the availability of the information, and hence, be crucial when it comes to assessing how the suggestion will be perceived by investors and eventually, how it will affect TP.

[Zummo et al. \(2017\)](#), discussed that aggressive TP could be attended through public disclosures by revenue authorities of particular taxpayer information gathered from annual company tax returns. They considered the concept of aggressive TP in the context of the OECD/G20 base erosion and profit-shifting programme of reform and then investigates the perception of compulsory company TD by the revenue authorities. Moreover, they implemented a case study approach to examine the hypothesis that company taxpayers respond to compulsory disclosure requests by boosting their disclosures and by implementing impression management strategies to validate their identity and image. Their finding accomplishes that a mixture of basic TD by revenue authorities and the following replies of company taxpayers subordinate to the disclosure regulation is probably to boost public assurance in the honesty of institutions, rules and systems.

Finally, [Balakrishnan et al. \(2018\)](#) explored whether tax-aggressive managers enhance financial disclosures in an effort to diminish the transparency implications of tax-aggressiveness. Whether managers offer descriptive disclosures, though, depends not only on the benefits of offering such disclosures but also on the costs. For instance, companies may be hesitant to clearly disclose the organizational details connected to assure tax strategies if doing so would offer a roadmap for a review by the tax authorities. Additionally, managers may be hesitant to deliver disclosures that disclose their incentive for tax strategies ([Desai and Dharmapala, 2006](#)). Therefore, they viewed the level to which managers use disclosure to moderate the disclosure costs of aggressive TP. Generally, their findings highlight lower financial transparency as a possible significant cost of aggressive TP ([Balakrishnan et al., 2018](#)).

Managers may try to prevent the IRS's capability to classify and restrain the activity of TP by providing less TDs. In contrast to this, a firm with insignificant tax-planning would have slight to discuss, subsequent in a more uncomplicated disclosure, while a firm with complex operations of tax would need extra explanation, subsequent in a less straightforward disclosure. In this context, managers decrease disclosure problems formed by aggressive TP by cumulative the volume of TDs in conference calls when the corporation has more tax aggressive ([Balakrishnan et al., 2012](#)). However, managers could disclose unnecessary information in the footnote of tax to decrease the attention to the related info contained in the disclosure, which would be constant with covering tax-avoidance information by changing footnote disclosures of tax.

Managers of a reduced TP company anticipated does not include insignificant high-risk strategies of TP, making the need to curtail the tax authority's ability to audit lower and decreasing the cost of offering forthright TD. Organizations manager with small levels of TP is in its place rigorous on improving performance by increasing TP. [Inger et al. \(2018\)](#) assume managers of these corporations to write more straightforward TD to highpoint successful tax performance as a tax-avoidance holds the finest level. Finally, the TD is

exceptional in that the information disclosed could be used by the tax authorities to compel tax avoidance. Prior studies such [De Simone et al. \(2014\)](#) and [Inger \(2014\)](#), suggesting that the difference in the readability of TD across firms could also impact the value of TP. Based on the above-mentioned studies, TD is presumed to be affected by the extent of TP. Thus, it is alternatively hypothesized that:

H1. The degree of corporate TP relates to the level of corporate TD.

3. Data and empirical method

3.1 Sampling procedure, composition and coverage

This study used a panel data set from a large sample of publicly-traded listed companies in Malaysia. The sample framework of this study is non-financial Bursa Malaysia-listed firms for a three years period 2010-2012. The sample framework was chosen because of information relating to corporate governance and financial positions being publicly accessible. Malaysian listed companies commit to present their annual reports openly after the end of the year ([MFCCG, 2000](#)). The structure of the sample frame focusses only on non-financial companies, as financial companies have particular laws that may affect the association between TP and TD. These criteria yield a balanced panel sample of 858 companies-year observations out of 888. All the information necessary for the analyses in this paper was hand collected from the financial statements of Malaysian firms. The types of financial statements were used to gather the information necessary for the analyses is based on IFRS.

Nevertheless, because of the new listing and delisting of firms, we could not get a complete set of the three years' annual reports for some firms. To begin with, we only selected firms that had three out annual reports. This is because these firms are expected to have strong disclosure quality and have better market experience. Upon reviewing the annual reports, we find that some required data were missing. Such as date of fiscal year-end is not 31/12/ and accounting period is further than 12 months, and extreme value of ETR. Consequently, we omitted observations (firm-years) that did not have the data for any of the required variables.

The three sequential years are chosen because of some circumstances. For example, it is the time of Market upturn-economic going up. Also, 2010 was the period immediately after recession was over in 2009. Moreover, this is the period when tax management activities are more spread. For example, in 2010, the Malaysian economy experienced a robust recommencement of growth, recording an extension of 7.2 per cent following the downturn in 2009. Growth was driven mainly by robust local demand; and primarily by activity of private sector. Furthermore, afterward a sharp contraction in 2009, private investment make progress strongly to index a double-digit growth in 2010, brilliant the extension of capital expenditure throughout all sectors ([Bank Negara, 2010](#)).

3.2 Outliers and influential observations

Influential observations are the observations that have lopsidedly affected at least one of the sides of the regression estimates because of the extreme values of the independent or dependent variables ([Hair et al., 2009](#)). In terms of outliers, this study used a studentized residual to identify outliers of the data. In this scenario, outliers are observations that have "a substantial difference between the actual value for the dependent variable and the predicted value" ([Hair et al., 2009](#), p. 155). Outliers can be distinguished by a variety of tools, for example, bivariate, univariate and multivariate techniques, based on the number of

variables and the cook distance test^[2] (Hair *et al.*, 2009; Hamilton, 2012). In view of Chen *et al.* (2005) scrutinize, the outliers were determined using studentized residual $> |2|$. Because this displays a high perceptions residual that may raise an anomalous approximation of the variable present its value on the regressors.

Based on that 18 observations (2.03 per cent) have extreme ETR values and 12 inspections (1.35 per cent) were determined as influential observations and outliers in view of the studentized residual $> |2|$). The 30 observations from the approximation model that was used to look at the association between TP and TD have been indicated as outliers, and thus, have been omitted from the multivariate test. To avoid deformation in the results, the 30 outliers were excluded (Hair *et al.*, 2009). Taking into consideration only firms that have robust motivations to carry out the activities of TP is line with Mills *et al.* (1998) method in their research of TP investment. Consequently, the final data set is 858 observations out of 888. However, to give an additional understanding of the various outcomes depending on the entire sample and with the exclusion of outliers. Appendix 2 presents the regression results of both before and after eliminating the outliers' observations. The final sample is the foundation for the remaining analysis, i.e. descriptive, bivariate, multivariate and additional tests.

3.3 Tax disclosure and tax planning measurements

Disclosure of tax information can be measured using the level of company TD. In this regard, TD is measured by assigning a score for TD information based on the number of items disclosed in the companies' annual reports. The current accounting standards such as IFRS 12, provide guidance about ETR disclosure. In relation to reconciliation adjustments, there are PDs, which cause the ETR to deviate from the statutory rate. PDs arise from some items that are included in taxable income. Which are not included in calculating pre-tax book income or vice versa. Instances of PDs include; interest on tax exempt municipal bonds and life insurance proceeds on an officer of the company, penalties and fines, qualified stock options accounted for using the fair value method, key employee life insurance premiums and most goodwill and in-process research and development in acquisitions. While these items are included in pre-tax book income but they are not part of taxable income or tax-deductible expenses (Schmidt, 2006). Note that there is also a category of items that are recognized in taxable income, but not recognized in pre-tax book income.

However, some specific items that are in fact considered as impermanent contrasts have an indistinguishable impact from a permanent distinction. In light of the fact that a conceded tax liability is not recorded for these items (Weber and Wheeler, 1992). TDFs of ETR reconciliation includes changes not only for the tax influences of pre-tax income from continuing operations but also similarly for the tax influence of other items attributable to continuing operations, e.g.

- deferred asset tax assessment allowance account adjustments;
- deviations in tax laws or tax rates;
- changes in the tax position of an enterprise (e.g. from a partnership to a corporation); and
- tax loss carry-forward advantage.

The difference from the profit tax component reflects the overall impact of ETR reconciliation items. Therefore, the extent to which the tax adjustment component of profits continues and helps to predict future gains ETR reconciliation items can be used in analysing the financial statements as discussed by Schmidt (2006).

Accordingly, items associated with TLOS and FTR are categorized separately in [Appendix 1](#) because of their different nature in explaining TP ([AbdulWahab, 2010](#); [Mgammal, 2015](#)). The unclassified items segment is spoken to by ETR compromise items that were not be arranged under the other four groups. Because of the potential for them to be sorted in more than one group. With the end goal of the robustness of the categorization, the previously mentioned classes are likewise independently regressed as impermanent differences and PDs. Therefore, all the tax expenses and tax reconciliation items in the annual reports have been listed and compared from all Malaysian listed companies' annual reports over the three years period of the study ([Appendix 1](#)). This is to ensure consistency and uniformity in the classification of the data and to ensure consistency of the items in the companies' annual reports with the measurement score's items in previous study such as [Mgammal et al. \(2018\)](#).

Moreover, [Mgammal et al. \(2018\)](#) conceded that items have been disaggregated based on the IAS 12, which Malaysian companies have complied with since 1st January 2012 (under the name Malaysian Financial Reporting Standards 112 Income Tax). This covers the required items that will form the TD information in the annual report. Although the observation period of this study covers years 2010-2012, we did not observe in 2012 that the adoption of IAS 12 changed the disclosure requirements regarding tax-related information for Malaysian firms. In such a manner, this paper measured the level of firm TD in light of the number of items disclosed in the organizations' yearly reports, to fill the gap in the literature that was noted by [World GAAP Info \(2009\)](#) and [AbdulWahab and Holland \(2012\)](#).

Accordingly, firms must disclose at least something regarding ETR reconciliation (see: IAS 12). Therefore, we measure the level of organization TD based upon the level of detail provided for each reconciling item [Flagmeier et al. \(2017\)](#) and by appointing a score for TD data in view of the number of items disclosed in the yearly reports of the organizations. This study assigned the score based on items identified by [Mgammal et al. \(2018\)](#). Although, [Mgammal et al. \(2018\)](#) items had been built based on Malaysian companies. They disaggregated the items based on the standard IAS 12 and Malaysian Financial Reporting Standards 112 Paragraph 81 (C) standard in Malaysia and its amendments from other Standards, which became effective from 15 Apr 2016 MASB.

Moreover, the exposures required by Section 81(C) Malaysian Financial Reporting Standards 112 Income Tax, enable clients of financial statements to comprehend whether the relationship between tax costs or income and accounting benefit or loss is unusual. Also, give additional comprehension of the huge components that may impact this relationship later. The association between accounting profit or loss and tax expenses or income is influenced by factors such as ordinary income exempt from taxation (as the expenses are not subtracted in deciding the loss or gain for tax), the impact of TLOS or possible tax rates incurred overseas ([MASB, 2012](#)). In view of this accounting standard and the previously mentioned literature, all items have been carefully scrutinized to reflect Malaysian taxation regulations. As a result, "tax benefit from goodwill deduction" has been moved from TDFs section into PDs section, as the item is not allowable or taxable in calculating taxable income based on Income Tax Act 1967. [Appendix 1](#) reports the categorization of the ETR reconciling items that used as the estimation of the level of organization TD in view of past previously mentioned studies, such as [Dhaliwal et al. \(2004\)](#), [Atwood and Reynolds \(2008\)](#), [Bauman and Shaw \(2008\)](#) and [Mgammal et al. \(2018\)](#).

TP in this article is measured using ETR, which is in conformity with prior studies ([Rego, 2003](#); [AbdulWahab, 2010](#); [Dyreng et al., 2010](#); [Hanlon and Heitzman, 2010](#); [AbdulWahab and Holland, 2012](#); [Mgammal, 2015](#)). ETR is suitable for measuring TP

compared to other measurements, for instance, book-tax gap and marginal tax rates. Because the information when calculating the ETR is obtainable from the financial statements of companies, and hence, available to shareholders (Stewart, 1981). Therefore, the ETR-based TP variable is a suitable approach to avoid that issue in connection to tax credit and tax costs on foreign income. In perspective of this, ETR is measured as the rate of existing tax costs on profit before tax, in which the numerator wipes out deferred tax cost to imitate “persistent” tax savings starting from strategic TP. This paper measured TP as the contrast between an organization’s available tax saving (revealed of the firm in its yearly money financial statements) and the level of tax that is payable by the organization (AbdulWahab and Holland, 2012).

3.4 Regression model of the associations between tax planning and tax disclosure

The estimation model considers TP variable and firm-specific characteristics variables, such as firm size, growth, earning management and industry. The control variables fundamentally relate to agency costs, for instance, dividends (DIVID) (Rees, 1997). With a view to controlling the firm-specific attributes, this paper incorporates a few factors that have been observed by earlier studies to be noteworthy in depicting TP and TD. Basically, the estimation model (see Table I for variables definitions) is as per the following:

$$TD_{it} = \beta_0 + \beta_1 TP_{it} + \beta_2 EM_{it} + \beta_3 CAPINT_{it} + \beta_4 LEVE_{it} + \beta_5 DIVID_{it} + \beta_6 FSIZ_{it} + \beta_7 INDS_{it} + \beta_8 GRTH_{it} + \varepsilon_{it}$$

This paper uses a few organization particular attributes as control variables with a specific goal to ensure that the finding on the coefficient estimation of the TP is not driven by these factors. These variables control the conceivable impacts of tax-related variables, for example, firm size, leverage, dividend and industry. This is in accordance with Chen *et al.* (2010), who used organization particular factors to control the fundamental impact of the hypothesized variable.

The first firm-specific characteristics control variable is earnings management (EM). This variable is incorporated to control the difference in the TP variable (tax saving) that rises from earnings management (Holland and Jackson, 2004; Desai and Dharmapala, 2009). In this paper, earnings management is measured based on total accrual measures, which is determined by subtracting net operating cash flow from profit before tax (Phillips *et al.*, 2003).

Table I.
Variables definitions
and measurement

Variable	Description (expected sign)	Measurement
TD_{it}	Tax disclosure	Appendix 1: reconciling items (ETR reconciling items)
TP_{it}	Tax planning ±	(Statuary tax rate – ETR) × profit before tax
$FSIZ_{it}$	Firm size +	Log of total assets
EM_{it}	Earnings management –	(Profit before tax – cash flow from operating activities)/PBT
$CAPINT_{it}$	Capital intensity +	Equipment and gross machinery/total assets
$LEVE_{it}$	Leverage of business +	Long term debt/total assets
$DIVID_{it}$	Dividend pay-out proportion +	(Dividends per share/earnings per share) × 100
$GRTH_{it}$	Growth +	The percentage change in annual net sales
$INDS_{it}$	Industry dummy ±	Coded 1 for every certain industry classification, 0 otherwise

The next control variable, capital intensity (CAPNT), is used to control the level of equipment utilization and machinery in a company's activity. Thus, to control the impact of capital expenditure in TP, the capital intensity variable is measured by the equipment and ratio of gross machinery to total assets (Derashid and Zhang, 2003). Property and plant are disposed of from the estimation as tax incentives or capital allowances related to them are minor when contrasted with equipment and machinery and subsequently are less alluring for TP aims (AbdulWahab and Holland, 2012).

Leverage (LEVE), is included to control for interest tax shield. This variable is found in previous literature to be associated with TP as leverage could denote the utilization of debt financing, aiming at achieving a high level of interest tax shield (Kim and Limpaphayom, 1998; Derashid and Zhang, 2003). In this study, the leverage variable is measured by the proportion of long term debt to total assets and is incorporated to catch the level of the tax shield of debt (Armstrong *et al.*, 2012).

Moreover, dividend (DIVID) is included to the model to control for signalling impact. The dividend is measured as the ratio of dividend per share on earnings per share. This measure is steady with the study by Berkman *et al.* (2002). The next company-specific attributes variable, FSIZ is incorporated to control the impact of organization size on TP. Previous studies found mixed results in the research on the association between generally accepted accounting principles (GAAP) ETR and company size (Armstrong *et al.*, 2012). Furthermore, Zimmerman (1983) and Rego (2003), documented a negative relationship between firm size and GAAP ETR, a result that is connected with the "political cost" hypothesis. Firm size is measured in various ways, for example, turnover, total assets, total assets used, number of employees and the firm's average market value. In line with Holland (1998) and Armstrong *et al.* (2012), this study measure firm size by total assets.

This study uses industry dummies (INDS) variable to control the industry influence on the study model because of the sample heterogeneity. Industry sectors could impact TP chances. This is because of some factors for instance: the nature of the industries, the restricted tax incentives accessible for the industries and the distinctive way to deal with TP taken by every industry. Subsequently, the industry grouping depends on Bursa Malaysia arrangements. In his paper INDS, measured by 1 for each specific industry classification, and otherwise 0 (Mills *et al.*, 1998).

Regarding, growth (GRTH), is incorporated on request to control the effect of the growth that can happen in various parts of an organization's operations, for example, its cash flow, cash sales, net income and market share on organizations' TP (Murphy *et al.*, 1996). A variety of growth measurements have been used by previous studies such as new product success Appiah (1998) and product quality alongside more traditional measurements such as sales level, target market share, growth rate, gross margin, return on investment and return on equity (Pelham, 1997). In this paper, growth is measured by the proportion change in annual net sales revenues (Xu *et al.*, 2012).

3.4.1 Multicollinearity. Multicollinearity occurs when in excess of two or two independent variables correlate with one another (Hair *et al.*, 2009). High level of multicollinearity affects the estimation and interpretation of each independent variable in the regression variant (Hair *et al.*, 2009). Therefore, it is substantial to check any existence of the multicollinearity problem using some examinations before carrying out the multivariate analyses; thus, the association between the independent variable and the dependent variables can be specified strongly. Consequently, for this purpose, several diagnostic investigations were performed, e.g. analyses of correlation coefficients matrix test and variance inflation factors (VIF) test.

Variance inflation factors (VIF) are applied to further investigate the existence of multicollinearity. VIF measures the multicollinearity by inverting the tolerance value. Which is the value that measures the inconsistency of an independent variable (IV) that is not described by the other (IVs) (Hair, 2006)[3]. In this context, the recognized grade of multicollinearity is when a VIF less than 10 (Hair *et al.*, 2009; Pallant, 2010). Based on that there are no VIF values that confirm no significant multicollinearity between the independent variables in Appendix 3. As the mean VIF values of the model is 2.67 and the higher variable (INDPROD) got 7.79, this designates multicollinearity does not occur in relative to the independent variables.

In the analysis of correlation coefficients, statistically the coefficients of correlation matrix is high with 0.9 and above indicates a serious problem of substantial collinearity (Hair *et al.*, 2009). The reason behind that was 10 industry sectors have been used to measure the control variable industry dummies (INDS). INDS is one of the company-specific characteristic variables. The sector of real estate investment trusts (REITS) has been deleted due to the multicollinearity problem in STATA software (there was no difference from year to year). Consequently, the correlations matrix in Appendix 4 shows that there is no multicollinearity because none of the variables correlates over 0.9 in the whole model. All variables have a correlation of less than 0.4840. Thus, the correlation matrix test indicates that multicollinearity does not constitute an issue in the study model.

3.5 Descriptive statistics

This section highlights the descriptive statistics of dichotomous and continuous variables for the sample of the model. To determine and perceive the circumstance of each construct (dependent, an independent), descriptive statistics, for example, mean and standard deviation, were used as a method for illumination. This is an attempt to discuss and interpret the outcomes gained from descriptive statistics for the independent variables and control variables. When estimating the model of testing the association between TD and TP outliers and influential observations were excluded to give a more representative analysis. Table II reports the variables descriptive statistics. TD scores for the sample companies vary from 3.23 to 70.97 per cent with a mean of 22.31 per cent. This indicates that TD tends to be low on the average within the sample companies. The data represents a sample of the study with an average TP of 6.15 per cent. This indicates that TP tends to be low on average. The average TP of Malaysian listed companies in this study is low compared to finding by AbdulWahab and Holland (2012) for the UK corporations (persistent profitable companies 27.11 per cent and non-persistent profitable companies 32.90 per cent).

The control variables for the study model as shown in Table II reveal that the mean of firm size (FSIZ) is 5.6477, with a maximum of 7.8161 and a minimum of 3.7564. Regarding the companies' earning management (EM), the average mean is 0.86 per cent, with a maximum of 10.52 per cent and a minimum of -9.90 per cent. In terms of "capital intensity" (CAPNT) the results reveal that its mean is 39.34 per cent, with a maximum of 133.95 per cent and a minimum of 0 per cent. This indicates that CAPNT tends to be moderate on the average. The mean of companies' growth (GRTH) is 11.93 per cent, with a minimum of -99.83 per cent and a maximum of 158.14 per cent. Moreover, the average leverage (LEVE) of the sample companies is 7.76 per cent, with a maximum of 58.32 per cent and a minimum of 0 per cent. The results reveal the dividends mean is 1.2095 per cent, with a minimum of 0 per cent and a maximum of 7 per cent. Finally, the industry dummy variable indicates an average mean between 26.57 per cent in the TRADSERV sector and 1.05 per cent in the HOTELS sector. Nevertheless, the descriptive analysis is a somewhat limited analysis because it does not consider the interrelationships amongst independent variables.

N = 858		Mean	SD	Min	Max
TD		0.2230619	0.0815178	0.0322581	0.7096774
TP		0.0614556	0.189442	-0.7615241	1.145052
FSIZ		5.647745	0.6372165	3.756408	7.816082
EM		0.0086334	0.0255394	-0.0989506	0.1051601
CAPNT		0.393437	0.295831	0.0000000	1.339524
GRTH		0.1192671	0.3215849	-0.9983	1.5814
LEVE		0.0775803	0.1017025	0.0000000	0.583249
DIVID		1.209499	1.04431	0.0000000	7.000000
6INDS*	Firms	(%)			
^a INDPROD	75	26.22			
^b CONSUM	44	15.38			
^c CONSTR	14	4.90			
^d TRADSERV	76	26.57			
^e TECHNO	20	6.99			
^f REITS**	10	3.49			
^g PROPERT	21	7.34			
^h PLANT	20	6.99			
ⁱ IPC	3	1.05			
^j HOTELS	3	1.05			
Total	286	100			

Notes: *Industry dummy variable; ^aIndustrial; ^bConsumer; ^cConstruction; ^dTrading&Services; ^eTechnology; ^fReal estate investment trusts (**this industry sector has been removed from the regression by STATA software); ^gProperties; ^hPlantation; ⁱInfrastructure (IPC); and ^jHotels

Table II.
Descriptive statistics:
TP effects on TD

4. Results

Table III demonstrates the after effects of the relationship amongst TP and TD. The model is significant ($p < 0.0000$) with Wald χ^2 estimation of 127.60 and R^2 of 17.60 per cent. In accordance with the hypothesis, the results connote that there is a positive relationship amongst the degree of TP and TD and this relationship is profoundly significant with ($p < 0.000$). This does not support the outcomes of previous empirical evidence by Lenter *et al.* (2003), who reported that high TD could have some gainful impacts. For example, TD may compel firms to oppose viable techniques to diminish TP. This might be because of the distinctive environment in the US compared to Malaysia. Moreover, studies on TD and TP in the non-US context are next to non-existent. Furthermore, no detailed analysis has been performed to study the link between TP and TD. Also, a high level of disclosure of tax information may help tax-payers to engage in legal tax avoidance planning. Such as giving them some directions on how they can avoid paying inappropriate amounts of tax. In addition, this outcome is conflicting with AbdulWahab and Holland (2012) study that documented a negative significant association amongst TP and firm value in the UK. This may be because of the fixed ETR in Malaysia contrasted to the UK. Furthermore, the outcome in Malaysia is significantly unique in terms of performance, size and sector, this is in line with Derashid and Zhang (2003), which investigated ETR and the “industrial policy” hypothesis in Malaysia.

Regarding the firm-specific characteristic variables, the outcomes specify significant positive associations between TD and two variables: industry dummies and firm size. There are eight sectors of the control variable industry dummies measurement that are positively significant: industrial products, consumer, construction, trade services, technology, property, plant and hotels, respectively. Significant associations were not found between TD

Variables	z-value	Coefficient
<i>TP</i>	(4.16)***	0.0464
<i>FSIZ</i>	(5.37)***	0.0452
<i>EM</i>	(1.35)	0.0793
<i>LEVE</i>	(-0.79)	-0.0231
<i>CAPINT</i>	(-0.07)	-0.00081
<i>DIVID</i>	(-1.12)	-0.00195
<i>GRTH</i>	(-0.18)	-0.000927
<i>INDPROD</i>	(7.77)***	0.128
<i>CONSUM</i>	(5.82)***	0.116
<i>CONSTR</i>	(4.47)***	0.0970
<i>TRADSERV</i>	(7.25)***	0.107
<i>TECHNO</i>	(5.62)***	0.118
<i>PROPERT</i>	(6.00)***	0.0891
<i>PLANT</i>	(4.62)***	0.102
<i>IPC</i>	(0.42)	0.0106
<i>HOTELS</i>	(4.77)***	0.0935
<i>Cons</i>	(-2.76)***	-0.135
<i>R</i> ²		0.1760
<i>N</i>		858
<i>Wald χ^2</i>		127.60***
<i>Degree of freedom</i>		18
<i>Breusch-Pagan</i>		101.48***
<i>Degree of freedom</i>		16

Table III.

Regression results:
TP and TD
(dependent
variable = TD)

Notes: Numbers in brackets and italic symbolize cross-section clustered Eicker-Huber-White adjusted of z-statistics. *significance level at 5%; **2.5% and ***1%, respectively. Coefficient is outside parentheses, while z-values are within parentheses. The z-values are based on the robust standard errors clustered at the firm level for heteroscedasticity and autocorrelation; year dummies are included

and any other control variables, namely, earnings management, leverage, capital intensity dividend and growth. This evidence does not underpin the argument concerning the awareness of shareholders about management's discretion in financial statements (Lev and Nissim, 2010).

4.1 The multivariate results of the association between tax planning and tax disclosure

Not all TP activities essentially reduction the tax liability to one's anticipated lowest level (Hoffman, 1961). Meanwhile, there is no assurance in TP because of the probability of non-tax costs in restricting the success of the TP activities. It is similarly significant to note that the ideal purpose of TP must be to increase after-tax returns. Meanwhile, the tax minimization aim will add to non-tax costs (Scholes *et al.*, 1992). Hence, Scholes *et al.* (1992) consider ideal TP as an activity that adopts into consideration TP constraints in terms of "all taxes", "all costs" and "all parties". These implications can be described by mentioning to the costs and non-tax costs of TP. Prior study has underlined the significance of costs for TP in numerous diverse matters. For instance, TD, the decision of TP, the role of auditors and effective TP (Tran-Nam and Evans, 2000; Slemrod, 2001; Rego, 2003; Maydew and Shackelford, 2007; Mgamal *et al.*, 2018; Mgamal, 2019).

In other words, TP activities are about using knowledge and skills to decrease tax duty. While instantaneously safeguarding an increase of after-tax returns. Such TP activities are efficient TP in which the role of taxes and other implications' costs inspires the decision rule of exploiting after-tax returns or enhancing tax liability (Scholes *et al.*, 1992). Equally, the

purpose can be quantified as exploiting the after-tax net present value of a transaction (Jones and Rhoades-Catanach, 2005). While the process of TD, TP and tax minimization can be pricey. It is important to consider these costs earlier undertaking TP activity (Slemrod, 2004; Mgamal and Ku Ismail, 2015b).

The outcomes demonstrated that there is an association amongst the extent of TP and TD and this association is positively significant (*H1*). This is suggesting that TP is related to higher corporate TD. Also, companies with tax aggressive try to alleviate these transparency problems by increasing numerous TD. This inline with Balakrishnan *et al.* (2018) study who investigates the effect of tax aggressiveness on corporate transparency. They viewed the level to which managers use disclosure to moderate the disclosure costs of aggressive TP. On contrary, this does not support the results of prior empirical evidence by Lenter *et al.* (2003), who documented that high TD could have some beneficial effects such as it may force firms to resist effective strategies to reduce TP. This may be because of the different environments in the US compared to Malaysia. Moreover, Lenter *et al.* (2003) argued that the disclosure of organization tax information supports increment compliance. This is because of TD simplifies the reconciliation of the varieties between income and tax. These reconciliations could help tax authorities in discovering firms' tax evasion and this discussion may support the results of *H1*.

On another hand, and in contrast with Gross (2011), who found that companies involved in further TP are related to lower-quality disclosures and are less expected to foster tax reserves when they use FIN 48. However, Inger *et al.* (2018) study suggests the tax authority acquires information in TD, making a trade-off for managers on whether to hide information from the tax authority or provide constructive information for stakeholders. They discovered an assured relationship between readability of tax footnote and tax-avoidance for firms with tax-avoidance under the median of industry-year, coherent with managers draw consideration to good performance in the form of tax savings with open disclosures. In contrast, they discovered unfavourable association between readability of tax footnote and tax-avoidance for corporations with levels of tax-avoidance beyond median of the industry-year, consistent with managers hiding tax-avoidance from the tax authority. Moreover, the investors place discount on tax-avoidance when the tax footnote is honest in firms with tax-avoidance under (beyond) median of the industry-year.

Based on that premise, in Malaysia TP is not viewed as a value-increasing activity within companies. This is also because these activities are considered to be unconnected with managers' moral hazard, as Desai and Dharmapala (2009) claimed or for the reason that higher TP levels cannot merely be gained if further risks are taken (Slemrod, 2005; Chen *et al.*, 2010). Furthermore, this result could be related to taxpayer' lack of concern about investigation by the authorities. As Tiley (2005) illustrated in the case of "Furniss v Dawson[4]" there is a risk of provoking the tax authority when the prospective tax saving may be decreased by the authority's behaviours in resisting TP. Consequently, it can be concluded that the findings underpin the hypothesis forecasts a relationship between TD and the extent of TP.

In terms of firm-specific characteristic variables, the results show positive and significant associations only between TD and two variables: firm size and industry dummy (INDS). The positive and significant relationship between firm size and TD is consistent with a study by Evers *et al.* (2014). The results are generally consistent with the empirical disclosure literature. Insignificant relationships are found in capital intensity (CAPNT) and earnings management (EM). These results suggest that the interested parties may not pay attention when they assess the extent to which firms are involved in earnings manipulation.

This evidence does not underpin the argument concerning the awareness of interested parties about management's discretion in financial statements (Lev and Nissim, 2010).

In connection to the above affiliations, the results additionally show that there is no noteworthy relationship amongst TD and leverage, dividend and growth. As for growth, for the most part, they are related with good performance and management. It is contended that the management of an organization with good prospects is eager to advise financial specialists of its growth chances (Kanto and Schadewitz, 1997). Predictable based on signaling theory, high growth organizations are probably going to disclose more data to highlight news on possible improvement in performance to offer assurance to investors. On the contrary, firms with low or negative growth will probably hide negative news by disclosing less information. In accordance with Ku Ismail and Chandler (2005), which inspected the effect of growth on the level of disclosure in Malaysia, this study find that there is no substantial connection between growth and TD.

With respect to leverage, Jensen and Meckling (1976) contended that higher monitoring expenses would be incurred by organizations that are significantly leveraged. To diminish the monitoring expenses, it is typical for organizations with exceptionally high leveraged to disclose more data in their financial reports. In this specific situation, the connection between leverage and the level of disclosure should be positive. All things considered; prior evidence demonstrates that the results were uncertain. A few studies demonstrated a noteworthy relationship (Schadewitz and Blevins, 1998), while other studies of annual reports discovered no relationship (Ahmed and Nicholls, 1994). Considering the contentions of agency theory, this paper anticipates to found that highly leveraged firm to reveal more information in their financial reports in contrast with the lesser leveraged organizations. In disagreement with Ku Ismail and Chandler (2005), which analysed the impact of leverage on the level of disclosure in Malaysia, we find that there is no noteworthy connection between leverage and TD. Nevertheless, the consequences of this paper are incongruent with the findings of the previously mentioned study by Ahmed and Nicholls (1994) and Evers *et al.* (2014).

5. Additional sensitivity analysis and tests

Further robust and effective tests were done on the model to assess the strength and the robustness of the outcomes and to further provide supplementary results. The analysis was related to the results of the ordinary least squares (OLS) regression, autocorrelation and possible effects of TP-related factors.

5.1 Pooled OLS regression results

The outcomes of this study were exhibited considering the random effect estimation. This approximation is reasonable as this paper aims to generalize the outcomes of the sample to its population (Kennedy, 2003). Table IV introduces the aftereffects of testing the speculations on OLS regression, estimating a regression of the connections between TP and TD by using the OLS regression technique, using the STATA to assess this relationship. We conducted a robust check using OLS regressions to confirm that all time-invariant differences between the companies were controlled for. The table depicts estimated model coefficients, the associated significant test outcomes and R^2 of the model.

Table IV shows the results of testing the hypotheses on the model of the relationships. TD is statistically significant with some variables, indicating that the overall TD can be interpreted. The R^2 for the model is 18 per cent. These statistics show that TD level explained 18 per cent of the total variance in the TD behaviour. Furthermore, this illustrates that the level of TD has a good level of explanatory power.

Dependent variable = TD	Coefficient	z-statistic
<i>TP</i>	0.0533	(3.81)***
<i>FSIZ</i>	0.0473	(7.78)***
<i>EM</i>	-0.00651	(-0.07)
<i>LEVE</i>	-0.0711	(-2.30)**
<i>CAPNT</i>	0.062	(0.38)
<i>DIVID</i>	-0.00291	(-1.05)
<i>GRTH</i>	0.00503	(0.67)
<i>INDPROD</i>	0.120	(11.36)***
<i>CONSUM</i>	0.109	(8.82)***
<i>CONSTR</i>	0.0913	(6.81)***
<i>TRADSERV</i>	0.102	(11.15)***
<i>TECHNO</i>	0.111	(8.2)***
<i>PROPERT</i>	0.0821	(8.25)***
<i>PLANT</i>	0.0945	(6.89)***
<i>IPC</i>	0.0072	(0.34)
<i>HOTELS</i>	0.0853	(6.47)***
<i>Cons</i>	-0.138	(-4.15)***
<i>N</i>		858
<i>R²</i>		0.18
<i>F-statistic</i>	18 [#]	16.66***

Notes: Numbers in brackets and italic symbolize cross-section clustered Eicker–Huber–White adjusted of z-statistics; *significance level at 5%, **2.5% and ***1%, respectively; and #degree of freedom

Table IV.
OLS Regression
results of TD and TD

5.2 Autocorrelation

Autocorrelation indicates that the regression's assumption infringement of the error terms is not correlated with one another, either on the size through a series of observations in time series or cross-sectional data or in the direction. While the panel data set includes duplicated observations on similar cross-section, the firm-year observations in this study possibly show autocorrelation (Wooldridge, 2010). Therefore, an autocorrelation test (Wooldridge, 2010) was used to discover any possible first-order time series autocorrelation problems. The test results in Table V show no significant autocorrelation in the study model. In the estimation model, which tests the association between TP and TD, the *F*-statistics of the tests are 0.089 (*p*-value of 0.7658).

5.3 Tax planning related factors

In assessing the relationship between TP and TD, growth (GRTH), leverage (LEVE) and capital intensity (CAPNT) were incorporated into the assessment model to control for conceivable impacts of tax-related elements. Any of these elements contains a territory that could incorporate TP. Therefore, the TP variable may in effect be incorporating TP in another non-determined area. For instance, because of their related absence of transparency

	TP and TD	
F(1, 285) =		0.089
Prob > F =		0.7658

Table V.
Wooldridge test for
autocorrelation in
panel data

contrasted with capital structure, interested parties and shareholders may assess these elements negatively. In this context, the model was re-estimated except for growth (GRTH), leverage (LEVE) and capital intensity (CAPNT), to examine whether the outcomes of the TP-related variables, Table VI presents the results of this re-estimation. Table VI indicated that all results of the model are in accordance with the primary outcomes, suggesting that the absence of growth, leverage and capital intensity variables have no effect on TD-TP relationship.

6. Conclusions and implications

In this article, we investigate the relationship between TP and TD using data of Malaysian non-financial listed firms. We use a firm-level panel data analysis and provides evidence that TP has a positive influence on the TD level. Overall, our results suggest that companies face a trade-off between tax benefits and TD when selecting the type of their TP.

In particular, this paper contributes to the current knowledge by giving insights into the implications of TP relative to TD in the Malaysian context. Methodologically, it contributes to the existing literature by harmonising the TD measures in terms of components of tax saving involving PD, TDF, FTR and TLOS. From the hypothetical side, this study adds to the existing theories by confirming that clients are the party impacted whether positively or negatively, by the level of TD or the degree of TP within Malaysian firms. A consistent positive relationship arises between TP and TD, which is generally strong in several diverse controls and specifications. The findings of this study provide insights into the importance of TP from the companies' viewpoints.

Inclusively, the analysis shows a relationship between the measure of TP and TDs. The results specify that there is an association the extent of TP between and TD and this relationship is significantly positive. This means that TP is related to lower corporate TD and companies with a tax aggressive stab to alleviate these transparency problems by increasing various TD. This inline with Balakrishnan *et al.* (2018) new study who investigates the effect of tax aggressiveness on corporate transparency. Moreover, there are

Dependent variable = TD	Coefficient	z-statistic
<i>TP</i>	0.0464	(4.15)***
<i>FSIZ</i>	0.0434	(5.52)***
<i>EM</i>	0.0787	(1.35)
<i>DIVID</i>	-0.00194	(-1.12)
<i>INDPROD</i>	0.130	(8.55)***
<i>CONSUM</i>	0.119	(6.21)***
<i>CONSTR</i>	0.0984	(4.54)***
<i>TRADSERV</i>	0.109	(7.54)***
<i>TECHNO</i>	0.120	(6.16)***
<i>PROPERT</i>	0.0906	(6.06)***
<i>PLANT</i>	0.104	(4.86)***
<i>IPC</i>	0.0113	(0.45)
<i>HOTELS</i>	0.0960	(5.17)***
<i>Cons</i>	-0.129	(-2.70)***
<i>N</i>	-	858
<i>Wald χ^2</i>	15#	120.82***

Table VI.
Potential effects of
related factors of tax
planning

Notes: Numbers in brackets and italic symbolize cross-section clustered Eicker-White adjusted of z-statistics; *significance level at 5%, **2.5% and ***1%, respectively; and #degree of freedom

significant positive associations between each of firm size and industry dummy, and TD, which means that company-specific characteristics are important factors affecting corporate TD

Providing incentives for better disclosure can be an additional important strategy to be introduced to promote good TD in Malaysia. Back in 1949, Prof. Karl Soup suggested a blue return system be applied in Japan. The system inspires firms to have better tax accounting records and disclose exhaustively the tax information in the annual report. For this, the firms were given a blue return status (instead of the white and the pink return), which offer them the privileges as a firm to operate not only when dealing with the government departments but also when dealing with the financial institutions and suppliers in their business. The system has been implemented in Taiwan and Nepal successfully. This system could promote good disclosure of tax information using a new principle of “disclose and enjoy” the privileges (Khadka (1992) and PWC (2015).

This article evidence has a policy and practical knowledge implications for at least of three crews. The authorities contain legislators and regulatory agencies associated with taxation, and financial reporting. The findings illustrate that the relationship between the level of TD and the extent of TP activities in Malaysia is positive and significant. This has general implications for diverse governance, tax policy and the law on firms’ market value. As a result, TP and TD researchers, especially in the studies that used Malaysian data, have to give careful consideration to the policy and practical variations in generalising the outcomes of literature based on other countries’ settings. Additionally, the findings provided policy and practical implications for the authorities in respect of regulation and enforcement. Regarding taxation, the findings identify that there is a particular extent of TP activity within companies in Malaysia. According to Slemrod (2004), a high extent of TP occurring anywhere is something contrary to the public good. Thus, the results suggest that the tax authority in Malaysia must enforce additional regulation to diminish the existing tax evasion and avoidance schemes and strategies.

The findings also establish that the TP activities are not seen by interested parties as wealth creation activities. The sample period is associated with tax risk evaluation. This may involve optimistic implications of the evaluation from the interested parties’ opinions. By the way, they may be less probably to underpin TP by managers as it might be a guide to a “high risk” category by the authorities. Thus, may influence managers’ decisions related to TP, consequential in them focussed on “tax assurance” as opposed to “aggressive TP” (SustainAbility, 2006). The practical implications for firm managers are more concerned with TD and transparency of TP information. The findings on the positive view of interested parties on TP activities in terms of TD may suggest that an insufficient providing of TP information to interested parties, which may influence their activities. If this information has been considered by the managers in TP reporting as an asymmetry issue, the managers should make related TP decisions with the responsiveness of the decrement effect on TD.

This paper is regarded as the first attempt to scrutinize the effect of corporate TP on corporate TD in a developing country as Malaysia. In spite that this study concentrated on a single country, it contributes significantly into the insights of the discussion about TD. While the Malaysian data a delivers deeper understanding of this study, there should be restraint about generalising the findings to other countries with different legislation, economic factors and practices. The capital market of Malaysia diverges from other international markets in terms of the number of listed companies, size and market evaluation. However, our findings and policy implications can be extended to other countries’ economies where there are similarities. This study’s restrictions are linked to the

methodology aspects, counting, the data collection and sample framework. The sample framework of this article was restricted to non-financial Malaysian public listed companies. Thus, the results of this paper may not be applicable for generalization to all categories of companies. Despite the above-mentioned limits, the outcomes of this paper offer some indications and motivations for future studies.

The contradictory results between this article and other studies in this area may be a consequence of the several policies and regulations between countries, in precise of taxation. Therefore, to verify this dispute, a future study that compares and examines the issues from the viewpoint of different regulations and rules should be conducted. Besides, as this paper addresses the issue of the adequacy of TD in Malaysia, future' studies have to consider the adequacy of recent TD requirements in giving significant tax-related information to the users and decision makers in other countries. This matter should be studied further from taxation angles.

Moreover, this paper considered TP activities as a combination of avoidance and evasion. However, to further investigate related parties' TP assessment from the side of evasion, autonomously from avoidance or vice versa. Future studies must explore this evaluation regarding the lawful definitions of evasion and avoidance. Therefore, future research should concentrate on acquiring additional advanced proxies of invisible tax evasion and avoidance to assess their comparative evaluation implications. Furthermore, as we do not observe whether the results are restricted upon the tax implications for peer firms, studies could be conducted to decide whether there is any "infection" influence on other firms with similar characteristics, e.g. within a precise industrial classification (Gleason *et al.*, 2008).

Notes

1. This is according "44 Congress Rec. 4000 (1909) (Senate debate in the Payne-Aldrich Tariff Act of 1909, the predecessor of the current US corporate income tax system); Pomp supra note 5 at 387-388 (discussing the efforts of the Illinois Manufacturing Association to prevent company TD)".
2. There are numerous approaches to recognize an outlier observation, for example, studentized residual to detect influential observations in which the DV is exceptional for certain values of the IVs and Leverage discover whether the IV' observation has swerved from its mean and which might affect the regression coefficients estimation. According to the study, observations with leverage of more than $2k/n$ (n = number of observations and k = number of IVs) determine outliers.
3. Tolerance is computed by $1-R^2$ of the regression that is analysed without the selected independent variable. Then, VIF is calculated by dividing 1 with the tolerance.
4. House of Lords case in the area of UK tax (1984).

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Components	ETR reconciling items ^a (31 items)
PD	1) Associates and joint venture
10 Items	2) Expenses that are not taxable/tax effect of income/allowable in determining taxable profit
	3) PD
	4) Sale of property
	5) Income tax suffered
	6) Rate change adjustment
	7) Tax on capital items
	8) Withholding tax or secondary taxation
	9) Share-based payments/share options
	10) Tax benefit from goodwill deduction
TDF	11) Impairment of long leasehold property
12 Items	12) Recognition of a deferred tax asset not prior recognized
	13) Provided deferred tax/movement in unprovided
	14) Exchange differences
	15) Timing differences
	16) Present year deferred tax
	17) Adjustments in respect of equity accounted investments
	18) Deferred tax on retirement benefit obligations
	19) Pensions and post-retirement benefits
	20) Previous period adjustments
	21) Deferred taxation on unremitted earnings of overseas subsidiaries
FTR 1 Item	22) Liability not recognized/deferred tax asset
TLOS	23) Subsidiaries operating in other jurisdictions
3 Items	24) Not-used TLOS and other assets/tax effect on utilization of formerly unrecognized
	25) Recognition of TLOS/ tax effect on utilization
	26) Tax effect of unrecognized/not-used losses
UNC	27) Incentives/credit/relief
5 Items	28) Restructuring and impairment
	29) Exceptional items/accruals/provisions
	30) Other
	31) Tax on derivative financial instruments

Note: ^a1 if the company discloses the ETR reconciling items, 0 otherwise

Sources: AbdulWahab (2010); Mgamal *et al.*, 2018)

Table AI.
Reconciling items

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Variables	After exclusions of outliers		Full sample	
	Coefficient	z-statistic	Coefficient	z-statistic
<i>TP</i>	<i>0.0456</i>	<i>(3.19)***</i>	0.00372	(1.33)
<i>PD</i>	<i>-0.0567</i>	<i>(-2.26)**</i>	-0.0032	(-0.46)
<i>TDF</i>	-0.0537	(-1.34)	-0.0057	(-1.30)
<i>FTR</i>	-0.119	(-1.07)	<i>-0.0789</i>	<i>(-2.53)***</i>
<i>TLOS</i>	<i>0.146</i>	<i>(2.38)**</i>	0.00681	(1.27)
<i>UNC</i>	-0.0745	(-1.12)	0.00161	(0.15)
<i>FSIZ</i>	<i>0.0521</i>	<i>(7.21)***</i>	<i>0.0460</i>	<i>(8.01)***</i>
<i>EM</i>	-0.0124	(-0.13)	0.0118	(0.3)
<i>LEVE</i>	<i>-0.0779</i>	<i>(-2.48)**</i>	<i>-0.0528</i>	<i>(-2.07)**</i>
<i>CAPNT</i>	-0.0005	(-0.05)	-0.001	(-0.16)
<i>DIVID</i>	-0.0027	(-0.94)	-0.0023	(-0.93)
<i>GRTH</i>	0.00538	(0.75)	0.004	(0.63)
<i>INDPROD</i>	<i>0.129</i>	<i>(10.82)***</i>	<i>0.124</i>	<i>(8.02)***</i>
<i>CONSUM</i>	<i>0.119</i>	<i>(8.67)***</i>	<i>0.113</i>	<i>(7.11)***</i>
<i>CONSTR</i>	<i>0.0985</i>	<i>(6.42)***</i>	<i>0.0893</i>	<i>(4.84)***</i>
<i>TRADSERV</i>	<i>0.110</i>	<i>(10.54)***</i>	<i>0.102</i>	<i>(6.78)***</i>
<i>TECHNO</i>	<i>0.121</i>	<i>(8.13)***</i>	<i>0.116</i>	<i>(6.46)***</i>
<i>PROPERT</i>	<i>0.0941</i>	<i>(8.16)***</i>	<i>0.0880</i>	<i>(5.27)***</i>
<i>PLANT</i>	<i>0.106</i>	<i>(7.12)***</i>	<i>0.0921</i>	<i>(5.37)***</i>
<i>IPC</i>	0.00887	(0.41)	0.0153	(0.53)
<i>HOTELS</i>	<i>0.0923</i>	<i>(7.18)***</i>	<i>0.0933</i>	<i>(3.26)***</i>
<i>Cons</i>	<i>-0.176</i>	<i>(-4.36)***</i>	<i>-0.136</i>	<i>(-3.89)***</i>
R^2		0.213		0.168
N		858		888
Wald χ^2	25 [#]	135.5***	23 [#]	76.47***
Breusch-Pagan	23 [#]	126.15***	23 [#]	108.16***

Table AII.
Tax planning and
TD – residual
analysis

Notes: Figures in parentheses and italic represent cross-section clustered Eicker–Huber–White adjusted of z-statistics; *significance level at 5%, **2.5% and ***1%, respectively; and #degree of freedom

Appendix 3

Corporate tax
planning

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Variable	VIF	1/VIF
<i>INDPROD</i>	7.79	0.128355
<i>TRADSERV</i>	6.85	0.145953
<i>CONSUM</i>	5.26	0.189966
<i>TECHNO</i>	3.30	0.302605
<i>PLANT</i>	3.02	0.331479
<i>PROPERT</i>	3.01	0.332092
<i>CONSTR</i>	2.39	0.417942
<i>FSIZ</i>	1.54	0.649909
<i>LEVE</i>	1.42	0.705582
<i>CAPINT</i>	1.37	0.730428
<i>HOTELS</i>	1.33	0.754390
<i>IPC</i>	1.32	0.756729
<i>GRTH</i>	1.05	0.956231
<i>DIVID</i>	1.04	0.964821
<i>TP</i>	1.03	0.967225
<i>EM</i>	1.02	0.976042
<i>Mean VIF</i>	2.67	

Table AIII.
Variance inflation
factors

Table AIV.
Pearson correlation
matrix

N = 858	TD	TP	FSIZ	EM	LEVE	CAPNT	DIVID	GRTH	INDPRO	CONSU	CONST	TRADISE	TECHN	PROPE	PLANT	IPC	HOTELS
TD	1.0000																
TP	0.1213**	1.0000															
FSIZ	0.2429***	-0.0460	1.0000														
EM	-0.0011	-0.0035	-0.0107	1.0000													
CAPNT	-0.0003	-0.0113	0.4840***	-0.0273	1.0000												
LEVE	0.1223***	0.0627	-0.1001	0.0309	-0.1022**	1.0000											
DIVID	0.0041	0.0030	0.0375	0.0216	-0.0114	-0.0270	1.0000										
GRTH	-0.0019	0.0148	0.0067	-0.0346	0.0353	-0.0766	0.0793*	1.0000									
INDPROD	0.1072**	0.1291***	-0.1710	0.0189	-0.1380***	0.3899***	0.0248	-0.0789*	1.0000								
CONSUM	0.0336	-0.0296	-0.0371	0.0569	-0.1277***	0.0605	-0.0037	-0.0494	-0.2512***	1.0000							
CONSTR	-0.0159	-0.0490	0.0646	-0.0694	0.0722	-0.0798*	-0.0216	0.0075	-0.1353***	-0.0967*	1.0000						
TRADSER	0.0318	-0.0709	0.1388***	-0.0271	0.1425***	-0.1246***	0.0533	0.0081	-0.3587***	-0.2565***	-0.1365***	1.0000					
TECHNO	-0.0613	0.0440	-0.2981***	0.0661	-0.1172**	0.0828*	0.0266	0.0172	-0.1635***	-0.1169**	-0.0622	-0.1650***	1.0000				
PROPERT	-0.0365	-0.0063	0.0902	-0.0893*	0.0695	-0.2024***	-0.0614	0.1629***	-0.1678***	-0.1200	-0.0639	-0.1693***	-0.0772*	1.0000			
PLANT	0.0237	-0.0811*	0.1480***	0.0015	-0.0262	-0.1079**	-0.0176	0.0010	-0.1635***	-0.1169**	-0.0622	-0.1650***	-0.0752	-0.0772	1.0000		
IPC	-0.0599	0.0576	0.1660***	-0.0044	0.1314***	-0.0894*	-0.0756	0.0158	-0.0614	-0.0439	-0.0234	-0.0619	-0.0282	-0.0290	-0.0282	1.0000	
HOTELS	-0.0192	0.0372	-0.0189	-0.0307	-0.0329	-0.0615	-0.0490	-0.0383	-0.0614	-0.0439	-0.0234	-0.0619	-0.0282	-0.0290	-0.0282	-0.0106	1.0000

Notes: Indicate significant *5%, **2.5% and ***1%, respectively

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