



RESEARCH ARTICLE

Do tax compliance costs mediate the relationship between the complexity of tax structure and fairness perceptions? Evidence from manufacturers

Vishnu Prasad C*, Ramaprabha D

Abstract

The phenomenon of tax fairness has been researched in the past with a host of dimensions and determinants. Tax fairness and attitudes towards compliance have majorly been affected by structural factors of taxation, of which a major component is the perceived complexity of the tax system. It has also been revealed by extant literature that compliance costs of taxation are critical indicators of how complex the taxation structure is in an economic system. At the outset, it becomes imperative to understand if the compliance costs of taxation play a role in serving as a causal link between tax compliance costs and fairness perceptions. The study employs a survey approach through a structured questionnaire to elicit responses on tax complexity, compliance costs and tax fairness perceptions. Structural equation modeling shows that there is a significant indirect effect of tax complexity on fairness perceptions through the mediating role of tax compliance costs.

Keywords: Tax fairness, Tax complexity, Tax compliance costs, Tax structure, Tax compliance behaviour, Determinants of tax compliance.

Introduction

Tax compliance behavior has been determined by a plethora of factors, as indicated by extant literature, through the advent of numerous theoretical frameworks and models. These determinants can be broadly classified into social, economic, and psychological factors. Researchers across the world, in developed and developing countries alike, have emphasized the need to understand the association between the various constructs affecting tax structure and the fairness perceptions of tax, which ultimately result in compliance or non-compliance. Economic factors in general, have been receiving enormous attention in the past few decades since these factors have a direct impact on cash outlay from an organization. Tax compliance costs constitute

one of the most remarkable economic determinants of tax compliance behavior. Compliance costs of taxation are usually understood as those expenses that taxpayers bear in addition to the statutory tax liability (Abdul-Jabbar & Pope, 2008). The various elements that are included in 'tax compliance costs' can be both voluntary and stipulated by law (Chattopadhyay & Das Gupta, 2002). However, what is generally perceived as tax compliance cost is the statutory rate of tax that is prescribed by the Government (Eragbhe & Modugu, 2014). When looked at from the perspective of 'efficiency', those tax compliance activities that generally attract higher levels of expenses are considered to be wasteful since they tend to magnify the burden of taxpayers without any value addition to the Government in terms of revenue (Eichfelder & Vaillancourt, 2014). In an attempt to understand the tax compliance costs in developing countries, it was observed by Coolidge (2012) that when expressed as a percentage of turnovers, tax compliance costs are generally much heavier when compared to larger firms. Therefore, perceptions of low levels of progressivity of taxes can also serve as a likely effect of higher levels of tax compliance costs. The complexity of a tax system can be understood as the extent to which taxpayers perceive the tax system/structure of a country as difficult to interpret. Generally, the more technical the tax laws are in a country, there exists higher level of perceived tax complexity among taxpayers. Whenever there is a high degree of perceived complexity among taxpayers, it is also

Department of Commerce, PES University, Bangalore, India.

***Corresponding Author:** Vishnu Prasad C, Department of Commerce, PES University, Bangalore, India., E-Mail: chandvinishekar@gmail.com

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observed that the cost of complying with the relevant tax laws also increases due to the various technical services availed. As observed by Musimenta (2020), tax systems which are more complex require excess training to be provided to the members of the firm, in addition to which consultation and advice by experts becomes an additional cost.

Fischer *et al.* (1992) in their model of tax compliance, have categorized the construct tax complexity under the factor "tax structure". It is noteworthy that researchers have also considered the cost of complying with tax as an important variable under "tax structure". Revenue mobilization from MSMEs is extremely critical for countries across to world to enhance growth and productivity. Hence, it is essential to examine the outcome of tax complexity and compliance costs on tax fairness perceptions, from the perspective of manufacturing MSMEs.

Based on the critical literature review, the present study aims to investigate the direct and indirect effects of tax complexity on tax fairness perceptions among taxpayers. The study examines whether the cost of tax compliance mediates the relationship between the complexity of tax structure/system and fairness perceptions among taxpayers.

Review of Literature

A comprehensive literature survey was carried out in order to understand the mutual interactions between tax complexity, compliance costs, and compliance behavior. These literature reviews were primarily intended to derive an understanding of the outcomes of the extant literature on the interaction between tax complexity, tax compliance costs, and tax fairness perceptions.

Saptono *et al.* (2024) investigated the complexity of the tax system and its impact on the propensity of business firms to evade taxes. This study adopted across-country approach by including 83 countries. Greater time in filing and higher tax payments showed an association with tax evasion. Also, this effect was higher in middle and low-income countries. Agersnap & Bjørkheim (2024) explored the pros and cons of a complex tax system by explaining that tax complexity could turn out to be favorable towards policymakers by enhancing revenue generation, thus contributing towards the progressivity of taxation. On the other hand, a complex tax structure may also lead to inequality in terms of income levels and disadvantage the demographic groups which are disadvantageous. Godwin *et al.*, (2023) aimed at investigating the association between 'tax knowledge' and 'cost of compliance among small businesses in Oyo state, using a 'descriptive survey' design. After administering the questionnaire to 625 respondents, it was observed that the association between tax knowledge and compliance was positive, while compliance costs also demonstrated a strong association with compliance.

Nyantaki *et al.*, (2024) estimated the moderating role played by 'political party affiliation' in assessing the

relationship between 'tax knowledge, service quality, and tax compliance'. Based on responses from 450 responses, it was concluded that age, education and income significantly affect the level of compliance. One key observation of the study was a suggestion to the Government to increase fair and equitable distribution of 'national infrastructure'. Benzarti & Wallossek (2024) observe that a progressive tax system, in general, leads to a higher level of complexity in the structure when compared to a flat tax system, which on the other hand, can turn out to be regressive as well. On the other hand, the study observed, based on the outcomes of the survey, that complexity has an effect of making the tax system less fair, and this is seen to be a long-term trend, as most of the respondents are experienced in filing returns for a period over a decade. Nandal & Diksha (2021) evaluated 'the prevalence of tax compliance, fairness and complexity' for indirect taxes among SMEs in India. Based on a sample of 728 small and medium enterprises, it was observed that both enhancing tax fairness and reducing the level of complexity can serve as a valuable tool to improve the level of tax compliance among taxpayers. This, again necessitates the investigation into the association between tax complexity and tax fairness. Latif *et al.*, (2023) aimed at understanding the 'impact of tax knowledge, system complexity and fairness perceptions' on compliance behavior among taxpayers in Peshawar. Based on a survey conducted using structured questionnaires, it was observed that enhanced knowledge and reduced complexity contribute towards improved levels of compliance. The study concluded that the founding basis of better levels of compliance lies in better perceptions. Positive perceptions are a function of both better knowledge and reduced complexity. Wulayo & Ali (2023) explain from a sample of 176 taxpayers that 'tax complexity' does not mediate the relationship between fairness perceptions and tax compliance. On the other hand, tax complexity has demonstrated a mediation between transparency and compliance. However, in terms of direct effect, all the constructs, namely, tax fairness, transparency and complexity, have shown a significant effect on compliance behavior. Mahangila (2017), in an experimental study on 75 small and medium firms, assigned participants to 3 random experiments with tax compliance costs of TAZ 50000, 100000, and 166667, respectively. Each participant was assigned a specific level of income. The results indicated in general, that higher cost of compliance were associated with a significantly lower level of compliance. Therefore, simplification of the tax system simultaneously accompanies lower costs of compliance and therefore, increased compliance.

Research Methodology

Conceptual Framework

Based on a comprehensive review of the literature, the following conceptual framework has been constructed. The

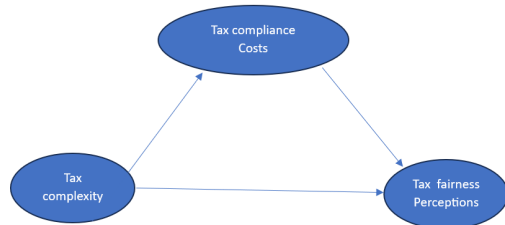


Figure 1: Conceptual framework

conceptual framework consists of ‘tax complexity’ as the independent variable, ‘tax compliance costs’ as the mediating variable, and ‘tax fairness perceptions’ as the dependent variable (Figure 1).

Objectives

- To measure the association between tax complexity and tax fairness perceptions
- To measure the association between tax compliance costs and tax fairness perceptions
- To test the mediating role of tax compliance costs between tax complexity and tax fairness perceptions

In order to attain these objectives, the study aims to test the following hypotheses:

H01: There is no significant direct effect of ‘tax complexity’ on ‘tax fairness perceptions.’

H11: There is a significant direct effect of ‘tax complexity’ on tax fairness perceptions

H02: There is no significant direct effect of ‘tax compliance costs’ on tax fairness perceptions.’

H12: There is a significant direct effect of ‘tax compliance costs’ on ‘tax fairness perceptions.’

H03: ‘Tax compliance costs’ do not mediate the effect of tax complexity on ‘tax fairness perceptions.’

H13: ‘Tax compliance costs’ mediate the effect of tax complexity on ‘tax fairness perceptions.’

Survey Instrument

A structured questionnaire has been employed to measure the three constructs: ‘tax complexity’, ‘tax compliance costs’, and ‘tax compliance behaviour’. Tax complexity and tax compliance costs were measured with 5 items each, while tax fairness perceptions were measured with 6 items. The respondents were asked to place their opinions on a 5-point scale. The points on the scale ranged from ‘strongly disagree’ to ‘strongly agree’ for items on ‘tax fairness perceptions’, ‘very simple’ to ‘very complex’ for ‘tax complexity’ and ‘very low’ to ‘very high’ for tax compliance costs.

The details of the items used to measure the constructs and their sources are given as in Table 1.

Sampling Design

The sample size requirements for structural equation modeling require a minimum of 5 to 10 times the number of items in the questionnaire. Since the number of items for the

Table 1: Sources of items used to measure constructs

Construct	Number of items	Items adapted from/framed based on
Tax complexity	5	Azmi et al(2016)
Tax compliance costs	5	Ofori (2020); Kakriya & Varadhe(2021)
Tax fairness perceptions	6	Azmi & Perumal(2008), Chau & Leung, 2009

Table 2: Profile of the respondents

Demographic factor	Descriptive statistics
Age	30-40: 67(52%) 40-50: 25(19%) 50-60:21(16%) >60: 16(13%)
Gender	Male: 100(78%) Female: 29(22%)
Education	SSLC and below: 32(25%) PUC:29(22%) Diploma: 48(37%) Degree:17(14%) PG: 3(2%)
Income level	<5 lakhs: 11(9%) 5-10 Lakhs:49(38%) 10 lakhs-1 crore:64(50%) Above 1 crore:5(3%)
Whether income derived from sources other than business and profession	Salary:0 House property:4(3%) STCG:6(5%) LTCG:5(4%) Other sources:29(22%)
Nature of ownership	Proprietorship: 87(67%) Partnership Firm:30(23%) Private Limited Company:12(10%)
Scale of business	Micro: 116(90%) Small:8(6%) Medium:5(4%)

Source: Primary data

study is 16, between 80 and 160 is considered as adequate for testing the theory through SEM. However, studies suggest that a minimum sample size of 100 is considered optimum for ensuring the robustness of the model through SEM. Therefore, the sample size of the present study, which is 129 MSMEs, caters to the minimum sample size requirements for SEM. The chosen geographical area for the study is Bangalore, which has the highest number of MSMEs in Karnataka.

The sampling unit for the study is an MSME entrepreneur who is involved in the manufacturing business. The study has employed non-probability sampling, since the sampling frame is not defined, and only manufacturers have been considered in the study.

Results and Discussions

Table 2 depicts that a vast majority of the respondents (52%) belong to the age group of 30 to 40, followed by

Table 3: Descriptive analysis of items

<i>Items</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Max</i>	<i>Min</i>	<i>N</i>
TFP1- On an average, MSMEs are reasonably burdened by Indian Income tax structure	3.73	1.01	5	1	129
TFP2-MSMEs bear a proportionately fair burden of taxes in India in comparison to larger and wealthier industries and corporates	3.88	1.16	5	1	129
TFP3-The distribution of income tax burden among different categories of taxpayers is fair in India	4	1.13	5	1	129
TFP4-The Government spending is adequate towards welfare for the common man in exchange for taxes collected (education, health, social security)	4.02	1.05	5	1	129
TFP5-The Government spending is adequate towards infrastructure and developmental projects in relation to taxes collected	4.1	1.05	5	1	129
TFP6-My MSME receives adequate subsidies and other incentives from the Government in exchange for the taxes paid	4.13	1.04	5	1	129
TCX1-Legal clauses in Income tax Act	2.37	1.13	5	1	129
TCX2-Computation procedure of Income tax liability (Taxable income, slab rates, deductions and exemptions)	2.46	1.23	5	1	129
TCX3-Procedure for Filing of returns, TDS and claiming refunds	2.65	1.29	5	1	129
TCX4-Maintenance of books of accounts /documents	2.56	1.24	5	1	129
TCX5-Procedural aspects and pre requisites for tax audits	2.55	1.32	5	1	129
TCC1-Maintenance of books of accounts	2.53	1.03	5	1	129
TCC2-Storing income tax data(including e-databases)	2.51	1.11	5	1	129
TCC3-Hiring professionally qualified auditors	2.62	1.21	5	1	129
TCC4-Tax payment processing and filing returns	2.63	1.26	5	1	129
TCC5-Training to staff on tax compliance	2.65	1.24	5	1	129

Source: Primary data

age groups 40 to 50, 50 to 60, and above 60, at 19, 16 and 13% respectively. The survey is male dominated (78%). The highest proportion of respondents at 37% constitute diploma holders, while only 14 and 2% are either degree holders and postgraduates respectively. Half of the respondents (50%) fall under the income range of 10 lakhs to 1 crore, while only 3% earn above a crore. Income from other sources appears to be the most common source of income other than business and profession, with as high as 22% respondents reporting incomes. The survey is dominated by proprietors at 67%, and micro enterprises at 90%, closely following the national trend.

All items pertaining to tax fairness perceptions demonstrate an average of beyond 3, which imply a favorable attitude towards the level of tax fairness. The average of all items pertaining to tax complexity and tax compliance costs are slightly lesser than 3, which reflect a simpler tax system, and low average compliance cost perceptions (Table 3).

In addition to descriptive statistics, the study has employed structural equation modeling to identify the relationship between constructs.

The structural equation model has been classified into two components:

Table 4: Results of the reliability test using Cronbach's alpha

<i>Construct</i>	<i>Number of items</i>	<i>Cronbach's alpha</i>
Tax complexity	5	0.899
Tax compliance costs	5	0.903
Tax fairness perceptions	6	0.845

Source: Primary data

- The measurement model
- The structural model

The measurement model has been tested for validity and reliability. Cronbach's alpha has been employed to check reliability. Confirmatory factor analysis has been run to examine standardized factor loadings, which are used to test convergent and discriminant validity.

The reliability and validity of the measurement model have been presented in Tables 4, 5 and 6.

Cronbach's alpha for all three constructs, tax complexity, tax compliance costs and tax fairness perceptions are above 0.7, which indicates an acceptable level of reliability (Table 4).

Table 5: Test for convergent validity using Average Variance Extracted (AVE).

Confirmatory factor analysis was conducted to understand whether all items loaded significantly on the

Table 5: Results for convergent validity of constructs

Construct	Items	Factor loadings	AVE
Tax complexity	TCX1	0.798	0.61
	TCX2	0.864	
	TCX3	0.86	
	TCX4	0.793	
	TCX5	0.759	
Tax compliance costs	TCC1	0.828	0.65
	TCC2	0.832	
	TCC3	0.844	
	TCC4	0.793	
	TCC5	0.759	
Tax fairness perceptions	TFP1	0.729	0.69
	TFP2	0.763	
	TFP3	0.881	
	TFP4	0.702	
	TFP5	0.798	
	TFP6	0.798	

Source: Primary data

Table 6: Results test for discriminant validity

	TCX	TCC	TFP
TCX	0.78	0.24	-0.13
TCC	0.24	0.81	-0.3
TFP	-0.13	-0.3	0.83

Source: Primary data

respective constructs. The results of the convergent validity is given in Table 5.

All the items load significantly on their respective constructs, with standardized factor loading above 0.5. Therefore, all items are retained in the measurement model.

Also, the average variance extracted for all the constructs is greater than 0.5, indicating convergent validity (Table 5).

The square root of the average variance extracted (AVE) for every construct is higher than its correlation with every other construct. Therefore, the measurement model satisfies discriminant validity (Table 6).

Second Order Structural Equation Modeling

Second order structural equation modeling has been employed to understand the association between the constructs tax complexity, tax compliance costs and tax fairness perceptions.

The regression coefficient of tax complexity on tax compliance costs is 0.248, which is significant at 1%. The regression coefficient of tax compliance costs on tax fairness perceptions is -0.271 which is also significant at 1%. However, the direct effect of tax complexity on tax fairness perceptions is -0.05, which is insignificant.

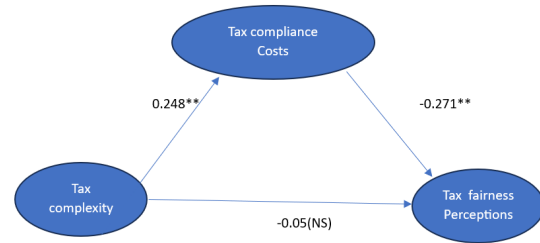


Figure 2: Path diagram showing mediating role of compliance costs between tax complexity and fairness perceptions

Table 7: Mediation analysis of tax complexity on tax fairness perceptions

Variables	Direct effect	Indirect effect	Result
Tax complexity to Tax fairness perceptions	-0.062(NS)	-0.06*	Full mediation

The results of the mediation analysis reveal that tax complexity does not demonstrate any direct effect on tax fairness perceptions. However, there is an indirect significant effect of complexity on fairness perceptions through tax compliance costs. Therefore, it can be stated that full mediation exists (Table 7).

It can, therefore, be stated that in the context of the present study, although tax complexity may not have demonstrated a direct significant effect on tax fairness perceptions, it is observed that the associated increase in compliance costs due to varying degrees of complexity has in turn, affected fairness perceptions Figure 2.

Conclusion

While extant literature has seen some degree of association between tax complexity and fairness perceptions of taxation, there are limited studies on how a complex tax system can affect fairness through compliance costs, especially in the Indian context. Understanding these aspects, especially in light of MSMEs, becomes extremely important, especially in an era where the Government has strived to give a ‘great level of significance’ to enhance the status of MSMEs (Behera, 2023). Also, MSMEs are most vulnerable to economic shocks, such as those caused by the pandemic, owing to limited managerial and financial resources (Malik & Shah, 2023).

Therefore, the study addresses this knowledge gap by understanding that in the context of manufacturers in India, there is no evidence to state that tax complexity can directly affect fairness perceptions, and it can be deciphered that a complex tax rule need not be perceived as unfair. However, whenever the added complexity of tax structure leads to a higher cost of compliance, it consequently leads to lower fairness perceptions.

Therefore, it is prudent for policymakers to optimize the level of user-friendliness of tax laws and provisions in a manner that the cost of complying with these provisions is minimized, thus leading to a high level of perceived fairness.

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