

## **Factors influencing tax compliance and e-filing usage in Delhi ncr: An empirical analysis**

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### **Abstract**

The adoption and perceived usefulness of e-filing systems are the main topics of this study, which explores the variables affecting individual taxpayers' views and compliance behavior in india. The study examines how taxpayers' views and actions are impacted by tax knowledge, government spending, tax justice, perceived consequences of non-compliance, and the simplicity of e-filing through the use of structural equation modeling (sem) and a robust research methodology (rm). The results show that tax expertise has no discernible impact on the perceived utility of e-filing, suggesting that a greater comprehension of tax laws does not always translate into a higher value for the digital filing method. However, the perceived usefulness and usability of e-filing platforms are greatly increased by perceived online tax filing, considered tax justice, and perceived penalty of non-compliance. The perceived value of e-filing, on the other hand, is adversely affected by the perception of government spending, indicating that taxpayers' opinions regarding the effectiveness of government might erode confidence in digital systems. Additionally, increased tax compliance is a result of favorable perceptions of the tax system, which are influenced by the perceived value and simplicity of e-filing. By stressing the dangers of non-compliance, justice, and convenience of use, these studies give policymakers important insights to enhance digital tax systems. The study adds significant implications for improving taxpayer involvement and compliance to the body of knowledge on tax compliance and digital tax systems. Future studies should examine how cross-national comparisons, technological advancements, and demographic characteristics influence tax compliance behaviour.

**Keywords:** Tax compliance, e-filing, tax fairness, perceived usefulness, structural equation modeling.

### **1. Introduction**

Since the beginning of civilized society, taxes have played a crucial role in controlling national revenue, especially in developed countries (lymer & oats, 2009). A common definition of taxes is a mandatory fee levied by the government or tax collection organization on capital assets, income, or expenditures for which the taxpayer does not receive a specified return (lymer & oats, 2009). It's crucial to understand the difference between taxes and other types of payments, such fees or tolls, which are paid in exchange for a particular service and are not regarded as tax payments.

In his groundbreaking work, adam smith outlined four essential tenets upon which a tax system ought to be based: Equity, efficiency, convenience, and certainty (smith, 1776). When it comes to economic growth, taxes are essential to accumulating a nation's wealth. The income tax act of 1961, which went into force on april 1, 1962, still oversees tax administration in india and is updated

annually to remain current (tanzi, 2000). Many sections and regulations in the indian income tax act offer comprehensive instructions for calculating and allocating taxes under various circumstances. For governments around the world, tax compliance is still a difficult problem in spite of these systems. There is a general public perception of injustice and ethical issues in a regressive tax system, where lower-income taxpayers pay a larger percentage of taxes in relation to their income (tanzi, 2000). Governments find it challenging to recognize and address patterns of tax non-compliance, despite the fact that compliance is necessary to guarantee the state's ability to pay for public services. Kirchler (2007) asserts that efficient tax system management requires both enforced compliance—motivated by the exercise of power—and voluntary compliance—motivated by faith in the authority.

The purpose of this study is to investigate how individual taxpayers in delhi ncr feel about the indian tax system and how it affects their behaviour when it comes to filing taxes. Since tax compliance behaviour includes paying taxes, filing accurate income reports, and following government laws, it is essential to comprehend the elements that influence these behaviours. 6.63 crore income tax returns were filed for the 2021–2022 assessment year, according to the income tax department's report, indicating the growing dependence on electronic filing methods (government of india, 2022). However, a large number of taxpayers still rely on expert help, suggesting that they are uneasy with the filing process and may be engaging in tax evasion.

This study will examine how tax compliance behavior is influenced by opinions of the tax system, tax knowledge, perceived fairness, e-filing, government spending, and the cost of non-compliance. The findings seek to help tax authorities and policymakers create plans to increase taxpayers' awareness and strengthen the culture of tax compliance by gaining a better grasp of these issues.

## 2. Review of literature and research gap

Important theoretical frameworks that support tax compliance behaviour are examined in the literature review, including the **technology acceptance model (tam)**, the **theory of reasoned action (tra)**, and the **theory of planned behaviour (tpb)**. Ajzen and fishbein (1980) created the tra, which emphasizes the connection between behavioural goals, attitudes, and subjective standards. It makes the argument that people's intentions to abide by tax laws are greatly influenced by their opinions and social forces. By including **perceived behavioural control (pbc)** as a crucial driver of behaviour and highlighting the influence of beliefs on behaviour, the tpb builds upon tra. Additionally, the perceived utility and usability of technology, such e-filing systems, are the basis for their adoption, according to davis' (1989) tam model. According to studies like fu, farn, and chao (2004), self-efficacy and social norms have differing effects on manual versus electronic tax filing. When combined, these models provide a thorough understanding of the variables influencing taxpayers' compliance-related attitudes and actions.

Many factors influence people's and organizations' decisions to comply with tax laws, and tax compliance behaviour has been thoroughly examined in many different countries. According to adhikara et al. (2022), tax knowledge is crucial for improving compliance since knowledgeable taxpayers are more likely to follow tax laws and lower filing costs, supporting the idea that awareness improves compliance results. The effect of subjective norms, perceived behavioural control, and patriotism on tax compliance among smes in jordan was further investigated by khalid et al. (2022), who found that taxpayers' favourable opinions of the tax system and outside factors can greatly enhance compliance behaviour. The idea that technological ease facilitates adherence was further supported by hidayat et al.'s (2022) study of the relationship between religiosity and e-filing in jakarta, which found that religious beliefs and positive attitudes toward taxation, when combined with e-filing technology, led to higher compliance rates. In a more general perspective, gangodawllage et al. (2022) carried out a thorough assessment of the literature on tax compliance and emphasized the critical role that technology plays in influencing compliance decisions in

addition to institutional, social, and psychological aspects. The relevance of voluntary compliance measures for improved tax administration was highlighted by nguyen's (2022) investigation of tax compliance among smes in vietnam, which revealed that tax rates, penalties, and the severity of inspections all had a major impact on compliance. Dabor et al. (2021) discovered that morality and strong religious convictions among nigerian taxpayers had a favourable impact on compliance in a diverse cultural setting. This suggests that ethical considerations and inherent values play a crucial role in deciding taxpayer behaviour. Similar to this, airawaty and widarjo (2021) emphasized the importance of equity and its adoption in taxes, pointing out that quantitative approaches are typically used to examine tax compliance. The implementation of online tax services greatly increased revenue collection and compliance among smes in zambia, according to mukuwa and phiri (2020), who identified external influences and self-confidence as important factors in effective tax compliance initiatives. Chakraborty and mitra (2020) demonstrated the beneficial impact of tax refunds on voluntary compliance in india, finding that people were more inclined to comply when they received refunds. This supports the notion that financial incentives might encourage greater compliance behaviour. This is in line with research by srivastava and pahari (2020), who found that e-filing increased tax compliance by giving indian taxpayers a more accurate, convenient, and transparent way to file their taxes. Furthermore, singh and khan (2019) highlighted how perceived security and simplicity of use influence e-filing adoption, with technology familiarity serving as a major predictor of compliance behaviour. Additionally, sinha and pahari (2019) showed that tax refunds had a favourable effect on compliance, supporting the notion that financial incentives are essential for encouraging accurate and timely reporting. This idea was further supported by verma and kumar (2018), who pointed out that perceived utility and usability were important variables influencing the adoption of e-filing among indian taxpayers, especially those in younger and higher-income categories. Similar findings were made by obert et al. (2018) in zimbabwe, who discovered that a streamlined e-filing system improved compliance since it was easy to use and improved attitudes toward the tax filing procedure. Last but not least, nair and nair (2018) emphasized that technology adoption is crucial to contemporary tax administration and reaffirmed the significance of perceived ease of use and the advantages of e-filing in influencing compliance behaviour among indian taxpayers. Together, these studies show how tax knowledge, perceived ease of use, adoption of electronic filing, fairness, technology, and external incentives all play a significant role in influencing tax compliance behaviour, highlighting the complex nature of compliance choices in a variety of international situations.

The literature study identifies a number of research gaps regarding the use of e-filing technologies and tax compliance behaviour. There has been little research on the attitudes and perspectives of individual taxpayers in india, especially in the delhi ncr area, with the majority of studies concentrating on foreign contexts. There is a notable dearth of research on the role of technological proficiency and users' perceptions of e-filing systems in the indian context, particularly with regard to self-sufficient tax filing behaviours, despite the fact that numerous researchers have looked at the factors influencing tax compliance behaviour, such as tax knowledge, tax rates, and tax morale (becker & lacktorin, 2008; dorasamy et al., 2010; ojochogwu & ojeka, 2012; chen et al., 2015). By investigating the moderating influence of government activities and users' perceptions of e-filing in influencing tax compliance behaviour in the delhi ncr region, this study seeks to close these gaps and offer insightful information to policymakers on how to improve voluntary tax compliance.

### **3. Statement of problem and objectives of the study**

The issue raised by this study is on how important tax compliance is to government revenue collection and the smooth operation of public finances, especially in light of india's changing tax structure. Concerns about individual taxpayers' compliance behaviour persist despite the recent introduction of electronic filing, or "E-filing," which aims to increase efficiency and transparency.

Taxpayers' attitudes and behaviours are influenced by a number of factors, including tax knowledge, perceptions of tax fairness, perceived value, convenience of use, and the cost of non-compliance. But little is known about how these factors interact, particularly in the particular socioeconomic and cultural environment of delhi ncr. A focused study on this topic is required because of the region's diversity in terms of income, education, and exposure to technology, as well as the effects of government tax-friendly policies. By examining individual taxpayers' perceptions of the indian tax system, the use of electronic filing, and the variables affecting compliance behaviour, this study aims to close the gap and offer insightful information about how to improve voluntary compliance. The major objectives of the study are:

- 1) To analyze the effect of tax knowledge, govt. Spending, e-filing, tax fairness, and cost of non-compliance on perceived usefulness and perceived ease of use of tax compliance.
- 2) To examine the effect of perceived usefulness and perceived ease of use on the attitude of individual taxpayers.
- 3) To analyze the impact of the attitude of individual taxpayers on tax compliance behavior.

#### 4. Research methodology

A descriptive cross-sectional survey approach was used in the study to methodically investigate the compliance practices of taxpayers in the delhi ncr area. Because there are 3.6 million taxpayers, a convenience/purposive sample survey approach was selected to collect data. A sample size of 385 with a 95% confidence level and a 5% margin of error was first determined using cochran's (1977) formula; however, in order to increase reliability, it was increased to 500. A questionnaire that was self-designed was used to gather primary data. Each question was closed-ended and employed a five-point likert scale. The questionnaire's internal consistency was assessed using cronbach's alpha, and spss software was utilized for validity and reliability tests. Participant confidentiality, anonymity, and voluntary participation were ensured by strict adherence to ethical rules. Every participant provided their informed consent after being made aware that they could withdraw from the study at any time. The study's variables were clarified by the careful use of statistical methods. In order to ensure a thorough examination of the variables affecting tax compliance, secondary data was collected from academic papers, journals, and internet sources.

#### 5. Results and discussions

The study's respondents are primarily male (75.2%), married (58.8%), and between the ages of 26 and 40 (53.1%). They also have high levels of education, as shown by the fact that 32.2% of them have post-graduate degrees and 26.6% have doctorates. Furthermore, professionals such as company secretaries (cs) and chartered accountants (ca) make up 23.0% of the respondents. These demographic characteristics—age, gender, married status, education, and occupation—indicate that opinions regarding tax adherence and the adoption of electronic filing may differ, with younger, better-educated people probably using digital platforms more frequently. The respondents' equal distribution among the main delhi ncr locations suggests a range of access to and awareness of digital tax filing services. These findings show how tax compliance programs and e-filing adoption tactics can be customized according to geographic areas, occupations, income levels, and demographic traits.

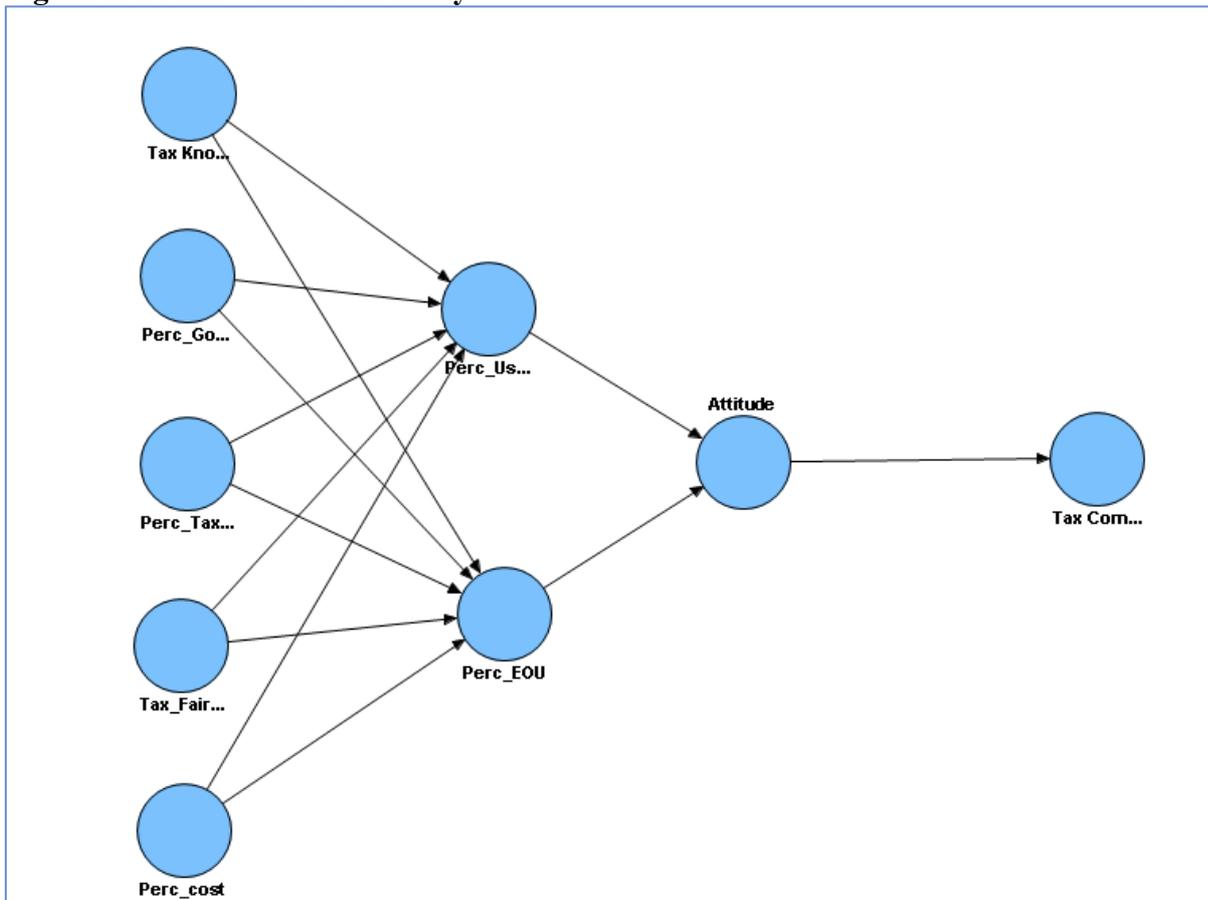
**Table 1: Respondents profile**

		Count	Column n %
Gender	Male	376	75.2%
	Female	124	24.8%
Marital status	Single	206	41.2%
	Married	294	58.8%

	Widow/widower	0	0.0%
	Divorced	0	0.0%
Age	18 - 25 years	86	17.2%
	26 - 40 years	265	53.0%
	41 - 50 years	106	21.2%
	51 and above	43	8.6%
Qualification	10th	0	0.0%
	12th	55	11.0%
	Graduation	36	7.2%
	Post-graduation	161	32.2%
	Doctoral	133	26.6%
	Professional (ca/cs)	115	23.0%
Annual income	Upto 2.5 lakh	72	14.4%
	2.5 lakh to 5 lakh	67	13.4%
	5 lakh to 10 lakh	82	16.4%
	10 lakh to 20 lakh	210	42.0%
	Above 20 lakh	69	13.8%
Residence status	Delhi	100	20.0%
	Gurugram	100	20.0%
	Noida	100	20.0%
	Ghaziabad	100	20.0%
	Faridabad	100	20.0%

The study's constructs were modified from a number of reliable sources. Hofmann, hoelzl, and kirchler (2008) served as the basis for tax knowledge, and chen loo et al. (2009) and hetherington & husser (2012) served as the basis for perceived government spending. The source for perceived online tax filing is veeramootoo et al. (2018). Bobek and hatfield (2003) and hofmann et al. (2008) serve as the foundation for tax fairness. The concept of perceived cost of non-compliance was borrowed from blanthorne and kaplan (2008) and bobek and hatfield (2003). The work of davis, hecht, and perkins (2003) serves as the foundation for the concepts of perceived usefulness and perceived ease of use in relation to computerized tax systems. Actual tax compliance behaviour is based on bobek, hageman, and kelliher (2011), whereas attitude towards the tax system is drawn from bobek and hatfield (2003). These reputable publications offer a solid theoretical framework for investigating several aspects affecting the adoption of e-filing and tax compliance behaviour. Furthermore, by examining how well the observed data fits into the theoretical model, confirmatory factor analysis (cfa) can be used to further validate the components and offer proof of their validity. The smart pls3 program was used to analyze the model.

**Figure 1: Framework of the study**



**Table 2 : Analysis of internal consistency & convergent validity**

Construct	Item	Loadings	Ave	Cr	Cronbach alpha
Attitude	Attitude_1	0.877	0.64	0.85	0.766
	Attitude_2	0.811			
	Attitude_3	0.796			
	Attitude_4	0.714			
	Attitude_5	0.783			
Tax comp. Behavior	Behavior_1	0.973	0.65	0.85	0.758
	Behavior_2	0.754			
	Behavior_3	0.768			
	Behavior_4	0.730			
	Behavior_5	0.767			
Perceived govt spending	Govt_spending_1	0.878	0.63	0.84	0.753
	Govt_spending_2	0.827			
	Govt_spending_3	0.779			
	Govt_spending_4	0.758			
	Govt_spending_5	0.725			

Perceived cost	Perc_cost_1	0.741	0.59	0.81	0.739
	Perc_cost_2	0.792			
	Perc_cost_3	0.851			
	Perc_cost_4	0.742			
	Perc_cost_5	0.717			
Perceived eou	Perc_eou_1	0.868	0.75	0.92	0.9147
	Perc_eou_2	0.881			
	Perc_eou_3	0.806			
	Perc_eou_4	0.901			
	Perc_eou_5	0.862			
Perceived tax filing	Perc_tax_filing_1	0.709	0.63	0.84	0.831
	Perc_tax_filing_2	0.833			
	Perc_tax_filing_3	0.802			
	Perc_tax_filing_4	0.816			
	Perc_tax_filing_5	0.805			
Perceived usefulness	Perc_usefulness_1	0.853	0.73	0.91	0.874
	Perc_usefulness_2	0.824			
	Perc_usefulness_3	0.866			
	Perc_usefulness_4	0.878			
	Perc_usefulness_5	0.847			
Tax fairness	Tax_fairness_1	0.718	0.5	0.72	0.722
	Tax_fairness_2	0.754			
	Tax_fairness_3	0.765			
	Tax_fairness_4	0.562			
	Tax_fairness_5	0.730			
Tax knowledge	Tax_knowledge_1	0.846	0.76	0.92	0.8213
	Tax_knowledge_2	0.839			
	Tax_knowledge_3	0.944			
	Tax_knowledge_4	0.877			
	Tax_knowledge_5	0.851			

An examination of convergent validity and internal consistency for each of the study's constructs is shown in table 2. The majority of the items show substantial correlations with their respective constructs, as indicated by the loadings, which vary from 0.562 to 0.944. Higher values indicate stronger indicator reliability. The constructs' convergent validity is demonstrated by the average variance extracted (ave) values, which range from 0.5 to 0.76. The majority of the constructs surpass the 0.5 criterion, suggesting that the corresponding constructs account for a sizable amount of the variance in the items. The reliability of the constructs is further supported by the composite reliability (cr) values, which range from 0.81 to 0.92, and cronbach's alpha values, which range from 0.722 to 0.9147. All of these values beyond the acceptable standards of 0.7. All things

considered, the research demonstrates that the constructs have strong convergent validity and internal consistency, guaranteeing the measurement model's resilience.

**Table 3 : Discriminant validity analysis**

Construct	Attitude	Perc_eou	Perc_govt_spending	Perc_tax_filing	Perc_usefulness	Perc_cost	Tax comp. Behavior	Tax knowledge	Tax_fairness
Attitude	<b>0.800</b>								
Perc_eou	0.692	<b>0.866</b>							
Perc_govt_spending	0.504	0.67	<b>0.794</b>						
Perc_tax_filing	0.612	0.685	0.518	<b>0.794</b>					
Perc_usefulness	0.76	0.607	0.732	0.889	<b>0.854</b>				
Perc_cost	0.697	0.706	0.688	0.502	0.653	<b>0.768</b>			
Tax comp. Behavior	0.718	0.672	0.685	0.719	0.736	0.71	<b>0.806</b>		
Tax knowledge	0.644	0.536	0.622	0.537	0.675	0.503	0.522	<b>0.871</b>	
Tax fairness	0.606	0.671	0.568	0.513	0.635	0.394	0.76	0.802	<b>0.707</b>

The findings of the discriminant validity analysis, which determines whether the constructs are different from one another, are shown in table 3. To ensure discriminant validity, the diagonal values—which are the square root of the average variance extracted (ave) for each construct—must be greater than the off-diagonal correlations. The correlations between various constructs are shown by the values on the off-diagonal; in this instance, all correlations are below the square root of the ave for each construct, indicating that the constructs are different from one another. The two constructs appear to be different, as evidenced by the correlation between "Attitude" And "Perceived eou" Of 0.692, which is less than the square root of ave for "Attitude" (0.800). All things considered, the analysis shows strong discriminant validity, proving that every construct is distinct and assesses a different idea.

**Table 4 : Hypothesis results of of the study**

			Estimate	S.e.	C.r.	P	Result	Hypothesis
Perceived usefulness	<---	Tax knowledge	-0.006	0.034	-0.181	0.856	Ns	H1
Perceived usefulness	<---	Perceived government	-0.105	0.051	-2.065	0.039	Sig.	H2

		spending						
Perceived usefulness	<---	Perceived online tax filing	0.725	0.037	19.853	0.002	Sig.	H3
Perceived usefulness	<---	Tax fairness	0.151	0.047	3.176	0.001	Sig.	H4
Perceived usefulness		Perceived cost of non-compliance	0.292	0.051	5.67	0.003	Sig.	H5
Perceived ease of use	<---	Perceived government spending	-0.241	0.05	-4.785	0.001	Sig.	H6
Perceived ease of use	<---	Perceived online tax filing	0.574	0.036	15.931	0.002	Sig.	H7
Perceived ease of use	<---	Tax fairness	0.393	0.047	8.395	0.001	Sig.	H8
Perceived ease of use	<---	Perceived cost of non-compliance	0.25	0.051	4.92	0.002	Sig.	H9
Perceived ease of use	<---	Tax knowledge	0.115	0.034	3.393	0.001	Sig.	H10
Attitude towards tax system	<---	Perceived ease of use	0.085	0.028	3.04	0.003	Sig.	H11
Attitude towards tax system	<---	Perceived usefulness	0.200	0.027	7.302	0.003	Sig.	H12
Actual tax compliance behaviour	<---	Attitude towards tax system	0.227	0.088	2.58	0.011	Sig.	H13

The results of the study's hypothesis testing provide valuable insights into the factors influencing tax compliance behaviour, with several components significantly influencing people's perceptions of e-filing systems and tax compliance. First, the lack of a significant relationship between perceived usefulness and tax knowledge (h1) emphasizes the need for more thorough interventions because increasing tax knowledge alone might not be enough to raise taxpayers' opinions of the benefits of e-filing systems. However, the perceived utility of e-filing was negatively impacted by perceived government expenditure (h2), indicating that while individuals think government spending is efficient, this does not enhance the perceived benefits of digital tax systems. This raises the possibility of a discrepancy that requires further investigation. However, it was found that the perceived value of the e-filing system was much enhanced by perceived online tax filing (h3), perceived tax fairness (h4), and perceived cost of non-compliance (h5). This lends more credence to the notion that a fair and accessible digital system, along with clear compliance risks, increases reliance on and confidence in e-filing systems. The substantial inverse relationship between perceived government spending and perceived ease of use (h6), in contrast to earlier findings, suggests that taxpayers might not associate government efficiency with the usability of digital

systems. However, perceived ease of use was positively associated with perceived online tax filing (h7), perceived tax fairness (h8), and perceived cost of non-compliance (h9). This suggests that both perceived penalties for non-compliance and user-friendly and equitable systems promote reliable and usable e-filing systems. Additionally, tax knowledge was found to have a favourable effect on perceived ease of use (h10), indicating that taxpayers with a greater awareness of the tax system are more adept and confident while using digital platforms. Furthermore, it was discovered that perceived usefulness (h12) and ease of use (h11) had a significant impact on attitudes toward the tax system. This suggests that enhancing the usability and perceived benefits of e-filing systems can improve taxpayer engagement and perceptions of the tax system overall. Finally, it was shown that a positive attitude toward the tax system (h13) significantly enhanced actual tax compliance behaviour.

## 6. Conclusions and managerial implications

To sum up, this study offers insightful information about the variables affecting taxpayers' perceptions of and compliance with the Indian tax system, especially when it comes to the adoption of electronic filing. It emphasizes that although tax expertise by itself has no bearing on how beneficial e-filing is viewed, elements including the perceived cost of non-compliance, perceived online tax filing, and tax justice are important in promoting the use of e-filing systems. It appears that taxpayers' trust in digital tax systems may be hampered by their view of government inefficiency, as evidenced by the negative correlation found between perceived government spending and the perceived value of electronic filing. The study also shows that taxpayers' opinions toward the tax system, which in turn affects their compliance behaviour, are positively impacted by perceived ease of use, which is fuelled by elements like tax justice and the simplicity of online filing. These findings have obvious management ramifications: In order to increase adoption rates, tax authorities should concentrate on enhancing the usability, equity, and accessibility of e-filing systems. Furthermore, initiatives to simplify the tax filing procedure and increase public awareness of the dangers of non-compliance can cultivate favourable perceptions of the system, which will ultimately boost tax compliance. Future studies could benefit from examining the ways in which particular demographic characteristics—like occupation, education, and income level—affect how e-filing systems are perceived. Further insights into how digital technologies might be used to enhance tax systems may also be gained by examining the effects of technical advancements, such as ai-powered tax solutions, on tax compliance behaviour. Last but not least, analysing cross-national comparisons may show whether the conclusions hold true in other cultural and economic contexts, hence expanding the results' generalizability.

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