PressAcademia
www.pressacademia.org/journals/jefa
JEFA
ISSN 2148-6697
Journal of Economics, Finance and Accounting YEAR 2025 VOLUME 12 ISSUE 1

DIGITAL ECONOMY AND TAX COMPLIANCE: EXPLORING THE RELATIONSHIP BETWEEN E-COMMERCE ADOPTION AND TAX PAYMENT MOTIVATION IN DIYARBAKIR

DOI: 10.17261/Pressacademia.2025.1979
JEFA- V.12-ISS.1-2025(7)-p.71-81

Salahattin Altundag
Dicle University, Diyarbakir Vocational School of Social Sciences, Diyarbakir, Turkiye.
salahattinaltundag@dicle.edu.tr , ORCID: 0000-0002-6198-7959

Date Received: February 8, 2025 **Date Accepted:** June 21, 2025

To cite this document
Altundag, S (2025). Digital economy and tax compliance: exploring the relationship between e-commerce adoption and tax payment motivation in Diyarbakir. Journal of Economics, Finance and Accounting (JEFA), 12(1), 71-81.
Permanent link to this document: http://doi.org/10.17261/Pressacademia.2025.1979

ABSTRACT

Purpose- This study investigates the relationship between e-commerce usage and tax payment motivation in Diyarbakır, Türkiye, focusing on how digital payment methods, income levels, and tax fairness perceptions influence tax compliance. It addresses regional challenges in aligning digital economic practices with tax policies, aiming to provide insights into reducing informal economic activities through enhanced e-commerce transparency.

Methodology- A cross-sectional quantitative survey of 675 participants was conducted, selected via Cochran's formula to ensure representativeness. Non-parametric analyses (Chi-square, Cramér's V) and regression models were employed to test hypotheses. Data reliability was confirmed by Cronbach's Alpha of 0.91, and ethical standards were maintained through informed consent and anonymization.

Findings- e-Commerce frequency positively correlates with tax motivation (β=0.42, p<0.01), while cash-on-delivery users exhibited 2.15 times higher tax evasion tendencies than digital payment adopters. Higher income levels strengthened tax compliance (β=0.37, p<0.01), though tax fairness perceptions only weakly influenced digital payment adoption (ρ=0.28, p<0.05). Regional disparities in digital infrastructure and socio-economic factors further shaped compliance behaviors.

Conclusion- Digital payment integration and tax literacy campaigns are critical for improving tax compliance in developing regions like Diyarbakır. Policymakers should prioritize digitalization of SMEs, incentivize non-cash transactions, and strengthen audit mechanisms for cash-based e-commerce. Future research should explore longitudinal impacts of digital transformation on tax behaviors across diverse socio-economic contexts.

Keywords: Tax compliance, e-commerce, digital payments, informal economy, regional economics
JEL Codes: H26, O17, L81

1. INTRODUCTION

The digital economy has profoundly transformed global trade dynamics, necessitating the adaptation of traditional tax systems. While the expansion of e-commerce is widely believed to enhance financial transparency and tax compliance, this relationship presents a paradox in developing regions where cash-based payment methods remain dominant. This study addresses this very paradox by examining the case of Diyarbakır, a region characterized by a technologically adept young population yet facing risks of informality. By doing so, it critically investigates the net impact of digitalization on tax motivation and compliance in a context where its benefits are not guaranteed.

e-Commerce, by shifting conventional trade models to digital platforms, ostensibly improves the traceability of economic activities. However, despite the increasing prevalence of digital payment systems, reliance on cash-on-delivery (COD) can lead to tax revenue losses, thereby complicating efforts to combat the informal economy (Schneider, 2004). The taxation of the digital economy in Turkey has been shaped by regulatory measures such as the Digital Services Tax (GİB, 2021). Nonetheless, regional economic structures significantly influence tax compliance dynamics. In Diyarbakır, where traditional commerce remains dominant, the extent of e-commerce adoption and preferred payment methods provide a distinctive research framework for assessing tax compliance.

Tax compliance is shaped by a confluence of economic, psychological, and sociological factors. Key determinants include income level (Alm & Torgler, 2011), perceived tax fairness (Wenzel, 2002; Kirchler, 2007), and education level (Richardson, 2006), all of which influence individuals' willingness to comply with tax regulations. Diyarbakır's economy, largely driven by

agriculture and SMEs, exhibits a relatively slow adaptation to digitalization, potentially increasing the risk of informality. Moreover, e-commerce usage among younger demographics may correlate with tax awareness, yet the mechanisms underpinning this relationship remain insufficiently explored.

This study examines the impact of e-commerce adoption on tax payment motivation in Diyarbakır through four core hypotheses:

H1: A higher frequency of e-commerce usage is associated with increased tax motivation.
H2: Individuals using cash-on-delivery payment methods demonstrate a greater propensity for tax evasion.
H3: Income level positively correlates with tax motivation.
H4: Individuals with a strong perception of tax fairness are more likely to prefer digital payment methods.

This research contributes to the tax compliance literature in three key areas: (1) it provides empirical data from a developing region, testing macro-level theories in a specific socio-economic context; (2) it is one of the first studies to quantitatively model the relationship between payment methods (COD vs. digital) and tax evasion propensity; and (3) it reveals the limited impact of socio-psychological factors, such as perceived tax fairness, on technology adoption, thus offering a new perspective for policymakers.

2. LITERATURE REVIEW

2.1. Factors Influencing Tax Compliance

2.1.1. Economic Factors

Tax compliance is traditionally associated with individuals' income levels, tax rates, and tendencies toward participating in the informal economy. Alm and Torgler (2011) argue that tax compliance tends to increase as income levels rise; however, they also note that in certain high-income brackets, the motivation for tax evasion may become more pronounced. Slemrod (2007) further highlights that wealthier individuals have greater access to tax planning mechanisms, enabling them to engage in more sophisticated tax avoidance strategies.

In developing economies such as Turkey, the prevalence of the informal economy exacerbates tax revenue losses and negatively impacts tax compliance. Although the widespread adoption of digital payment systems facilitates the monitoring of taxable transactions, the continued reliance on cash-on-delivery (COD) perpetuates the risk of tax evasion (Schneider, 2004).

2.1.2. Psychological Factors

Tax compliance is closely linked to individuals' trust in the tax system and their confidence in governmental institutions (Kirchler, 2007). The perception of tax fairness is a key psychological determinant of compliance. Feld and Frey (2007) demonstrate that when individuals perceive the tax system as fair, they are more likely to voluntarily comply. Similarly, Torgler (2005) finds that in societies with high levels of trust in government policies, the inclination toward tax evasion is significantly lower.

2.1.3. Sociological Factors

Educational attainment and societal norms play a crucial role in shaping tax compliance behavior. Richardson (2006) asserts that as education levels increase, individuals develop a stronger awareness of taxation, leading to higher compliance. Additionally, digital literacy has emerged as a significant factor; individuals proficient in using e-commerce platforms and online payment systems are more likely to recognize and fulfill their tax obligations (McKinsey, 2021). In this context, the growing level of digital literacy fostered by e-commerce is widely regarded as a positive contributor to tax compliance.

2.2. The Impact of e-Commerce on the Tax System

The expansion of the digital economy has prompted a fundamental reassessment of traditional tax regulations. e-Commerce necessitates the development of new regulatory frameworks across various tax categories, including consumption taxes (such as VAT and SCT) and corporate income tax.

2.2.1. Global and National Academic Studies

Studies conducted in Germany and the United States highlight the potential of the digital economy to enhance tax collection while also emphasizing the necessity of adapting tax regulations to align with emerging technologies (Goolsbee, 2000). Research in Turkey suggests that the increasing adoption of digital payment methods could contribute to higher tax revenues. However, it is also noted that persistent consumer habits, such as cash-on-delivery, may continue to pose risks for informality (Schneider, 2004; McKinsey, 2021).

2.2.2. The Tax Potential of e-Commerce and Taxation Models in Turkey

In Turkey, transactions conducted via e-commerce primarily fall within the scope of Value Added Tax (VAT) and the Digital Services Tax (GİB, 2020). While cash-on-delivery provides convenience for consumers, it also presents a potential risk for increasing informality. In contrast, the widespread implementation of electronic invoicing and online documentation systems has proven effective in curbing tax evasion. Furthermore, supporting local e-commerce enterprises can contribute to broadening the tax base by increasing the number of officially registered businesses (T.C. Ministry of Trade, 2024a).

2.3. e-Commerce Taxation Models in Turkey

2.3.1. VAT Policies and the Digital Services Tax

In 2015, the European Union (EU) introduced a regulation that restructured the taxation of digital goods and services, aligning it with the consumer's country of residence. Similarly, Turkey implemented the Digital Services Tax in 2020, designed to impose tax obligations on e-commerce platforms operating within the country's borders (GİB, 2020).

2.3.2. OECD and EU Digital Tax Regulations

One of the key regulations proposed by the OECD for the digital economy involves requiring large technology firms to be subject to taxation in the countries where they generate revenue (Doksat, Sürücü, Coşkun, Ertem, & Ünlü, 2025; Topyıldız, 2025). While EU member states employ varying criteria for taxing revenues from digital services, they continue to develop unified policies aimed at enhancing tax compliance (Avrupa Birliği Bakanlığı, 2023; European Commission, n.d.).

2.4. The Relationship Between e-Commerce and the Informal Economy

2.4.1. The Prevalence of Cash-on-Delivery and Its Impact on Informality

The widespread use of the cash-on-delivery (COD) method in Turkey can undermine the transparency that e-commerce inherently provides. Schneider (2004) argues that invoice issuance rates tend to be low in COD transactions, which may contribute to the expansion of informal economic activities. Particularly, the preference for cash in high-value purchases complicates tax monitoring and enforcement efforts.

2.4.2. The Role of Online Payment Systems in Tax Audits

The increasing adoption of online payment methods, including credit cards and digital wallets, facilitates the digital recording of transactions (OECD, 2020). This, in turn, enhances the efficiency of data collection and tracking for tax audit purposes (BKM, 2017). In Turkey, the widespread implementation of online invoicing systems and electronic documentation is expected to play a significant role in reducing unregistered transactions (T.C. Ministry of Trade, 2024a).

2.5. Tax Awareness and Digital Transformation

Digitalization presents an opportunity to enhance voluntary tax compliance. The formation of tax awareness is influenced not only by educational and awareness programs but also by the extent to which digital platforms are utilized (McKinsey, 2021). The increased visibility of tax components in online transactions can positively influence consumer perceptions of their fiscal responsibilities (GİB, 2020).

3. DATA AND METHODOLOGY

3.1. Research Design

This study employs a quantitative research design that integrates both descriptive and relational analytical approaches. The descriptive analysis aims to identify prevailing trends in e-commerce adoption rates, payment preferences, and tax compliance behavior in Diyarbakır. The relational analysis investigates the statistical associations between variables such as e-commerce usage frequency, income level, and tax awareness with tax motivation and tendencies toward tax evasion.

3.2. Sample and Data Collection

According to data from the Turkish Statistical Institute (2024a), the population of Diyarbakır stands at 1,818,133. The minimum required sample size was calculated using Cochran's (1952) formula, yielding a threshold of 384 participants. However, to improve the robustness and representativeness of the analysis, data were collected from a total of 675 participants. To reflect the demographic structure of Diyarbakır (age, gender, education), a stratified sampling approach was targeted; however, due to practical constraints in fieldwork, convenience sampling was also utilized to reach participants. The data collection process was conducted over a 60-day period using a dual-method approach of online and face-to-face surveys to ensure a representative dataset. Participation was voluntary and anonymous, and the data were cleaned for analysis using IBM SPSS Statistics 30.0.

3.3. Data Analysis and Hypothesis Testing

The data were analyzed using various statistical techniques to address the research questions. Descriptive statistics were used to outline participant profiles and usage patterns. To test the hypotheses, several relational methods were employed. The relationship between scale-based variables (H1, H3) was assessed using Pearson Correlation and Linear Regression Analysis. The association between categorical variables (H2) was examined with the Chi-Square Test and Odds Ratio. Finally, the relationship between ordinal and categorical variables (H4) was analyzed using Spearman Correlation. This methodological framework (Field, 2018) enables the empirical evaluation of the hypotheses, which are detailed in Table 1. All statistical tests were conducted using a significance level of $p < 0.05$.

Table 1: Research Hypotheses and Statistical Methods Utilized for Testing

Hypothesis	Statistical Methods Utilized
H1: Increased frequency of e-commerce usage is associated with higher tax payment motivation.	Pearson Correlation
H2: Individuals using cash-on-delivery payment methods exhibit a higher tendency for tax evasion compared to those using digital payment methods.	Chi-Square Test, Odds Ratio
H3: Higher income levels are positively correlated with tax payment motivation.	Linear Regression Analysis
H4: Individuals with a strong perception of tax fairness are more likely to prefer digital payment methods over cash-on-delivery in e-commerce.	Spearman Correlation

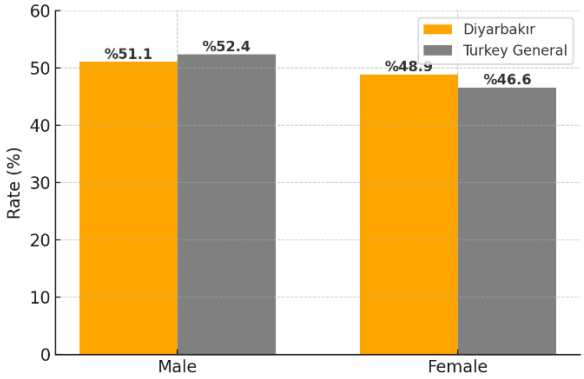
3.4. Validity and Reliability

The validity and reliability of the study were ensured through several measures. To ensure content validity, the survey instrument was developed using scales validated in previous literature on tax compliance and e-commerce. The study's internal reliability was confirmed by a Cronbach's Alpha coefficient of 0.91, indicating a high degree of consistency among the scale items. Key variables were operationalized as follows: tax motivation was measured on a 5-point Likert scale (1: Not at all motivated – 5: Very motivated), while tax evasion propensity was assessed through a scenario-based question where participants indicated their likelihood of engaging in a transaction without an invoice. To enhance external validity, the sample was selected to represent various socioeconomic and educational backgrounds within Diyarbakır. Furthermore, objectivity in data analysis was maintained by performing all statistical analyses using IBM SPSS Statistics 30.0, with a significance level set at $p < 0.05$.

4. FINDINGS AND DISCUSSION

The analysis of the data yielded significant insights into the interplay between e-commerce adoption and tax compliance in Diyarbakır. The demographic profile of the 675 participants reveals a balanced gender distribution (51.1% male, 48.9% female), which aligns closely with national e-commerce participation rates.

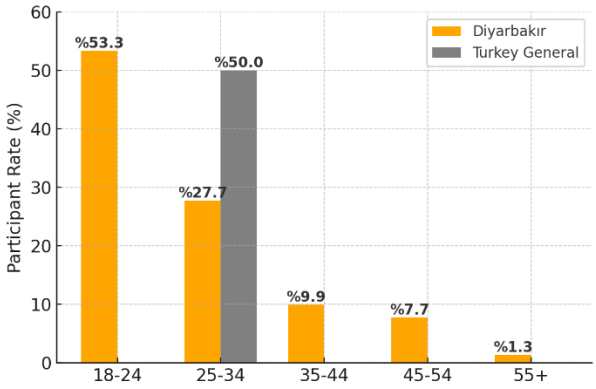
Figure 1: e-Commerce Adoption Rates by Gender in Diyarbakır and Turkey (National Overview)



References: Diyarbakır data are derived from a survey conducted on a sample of *n* = 675; Internet usage data in Turkey are sourced from Hizmetix (2024); e-commerce participation data in Turkey are obtained from MatOnline (2024).

A key demographic characteristic of the sample is its youthfulness; the 18-24 age bracket represents the largest group (53.3%), a finding that contrasts with the national trend where consumers aged 25-36 dominate e-commerce spending.

Figure 2: Age Distribution of Participants in Diyarbakır and Turkey (National Overview)



References: Diyarbakır data are derived from a survey conducted on a sample of *n* = 675; e-Commerce market data in Turkey are sourced from the Ministry of Trade, Republic of Turkey (2024).

Furthermore, the sample is highly educated, with over half (50.8%) holding a bachelor's degree or higher. This aligns with national reports suggesting a positive correlation between educational attainment and e-commerce use.

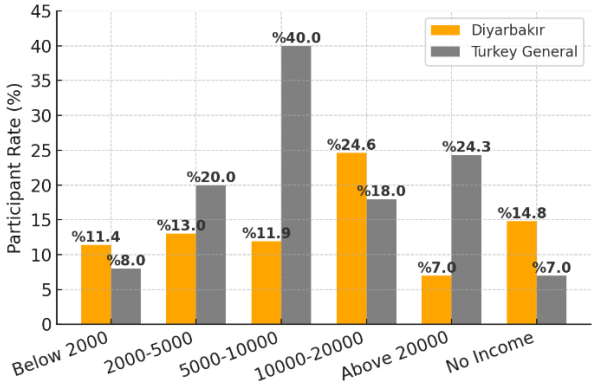
Table 2: Educational Attainment and e-Commerce Adoption Rates: A Comparative Analysis of Diyarbakır and Turkey (National Overview)

Educational Attainment	Diyarbakır (%)	Turkey (National Overview) (%)
Primary Education	%6,5	Data Not Available
Secondary Education	%37,2	Data Not Available
Higher Education (Bachelor's)	%50,8	Predominant Group Among e-Commerce Users
Master's Degree	%5	Data Not Available
Doctorate Degree	%0,4	Data Not Available

References: Diyarbakır data are derived from a survey conducted on a sample of *n* = 675; e-Commerce market data in Turkey are obtained from the Ministry of Trade, Republic of Turkey (2024)

Furthermore, the sample is highly educated, with over half (50.8%) holding a bachelor's degree or higher. This aligns with national reports suggesting a positive correlation between educational attainment and e-commerce use.

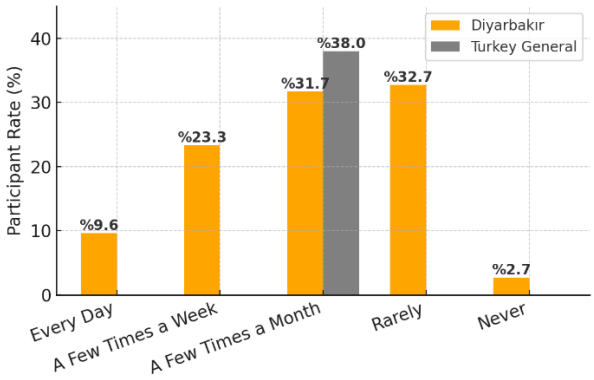
Figure 3: Income Distribution in Diyarbakır and Turkey (National Overview)



References: Diyarbakır data are derived from a survey conducted on a sample of *n* = 675; e-Commerce market data in Turkey are obtained from the Ministry of Trade, Republic of Turkey (2024)

E-commerce usage patterns in Diyarbakır are predominantly needs-based rather than habitual, with most users making purchases "several times a month" (31.7%) or "rarely" (32.7%).

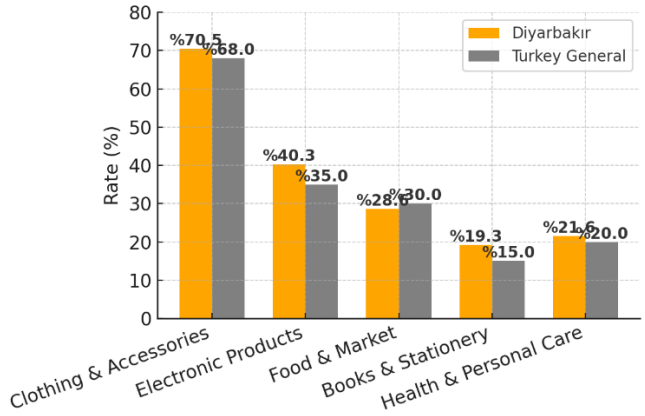
Figure 4: Frequency of e-Commerce Usage in Diyarbakır and Turkey (National Overview)



References: Diyarbakır data are derived from a survey conducted on a sample of *n* = 675; e-Commerce data in Turkey are obtained from MatOnline (2024).

The preferred product categories, led by apparel and electronics, mirror national consumption habits.

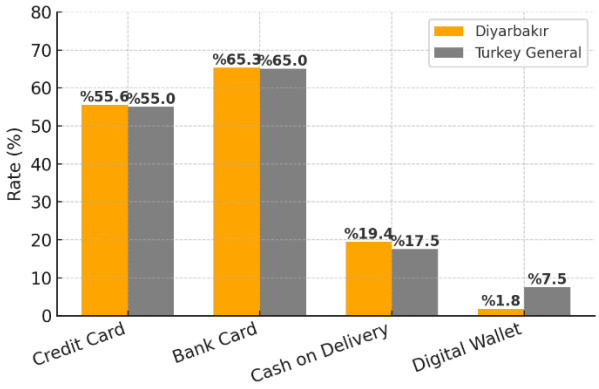
Figure 5: Most Frequently Purchased Product Categories in Diyarbakır and Turkey (National Overview)



References: Diyarbakır data are derived from a survey conducted on a sample of *n* = 675; The most sold e-commerce products in Turkey in 2023 are sourced from T-Soft (2023); Global fashion e-commerce market data are obtained from Research and Markets (2024); Consumer electronics e-commerce market insights are based on Research and Markets (2024).

However, a critical divergence appears in payment methods. While debit and credit cards are prevalent, the use of cash-on-delivery (COD) remains significant at 19.4%, and the adoption of digital wallets is conspicuously low. This points to regional disparities in digital financial infrastructure and user trust.

Figure 6: Payment Method Preferences in Diyarbakır and Turkey (National Overview)



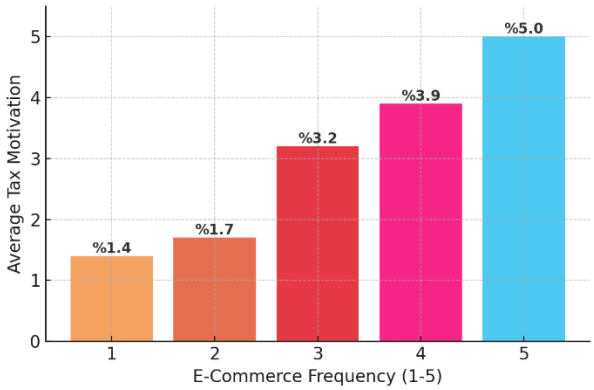
References: Diyarbakır data are derived from a survey conducted on a sample of *n* = 675; Card usage habits in Turkey are based on Interbank Card Center (2017); payment regulations and data-sharing services are sourced from Central Bank of the Republic of Turkey (2021); e-commerce success, consumer behavior, and emerging trends in Turkey are derived from Deloitte Turkey (2022).

Hypothesis testing confirmed several key relationships. First, to test the association between e-commerce frequency and tax motivation (H1), a Pearson correlation was conducted. The analysis revealed a statistically significant, moderately positive relationship ($r = 0.42$, $p < 0.01$), supporting the hypothesis that greater engagement with digital commerce fosters higher tax awareness.

Table 3: Pearson Correlation Results

Variable Pair	*r*	*p*	Significance
e-Commerce Frequency ↔ Tax Motivation	0.42	0.003	**

Figure 7: Relationship Between e-Commerce Frequency and Mean Tax Motivation

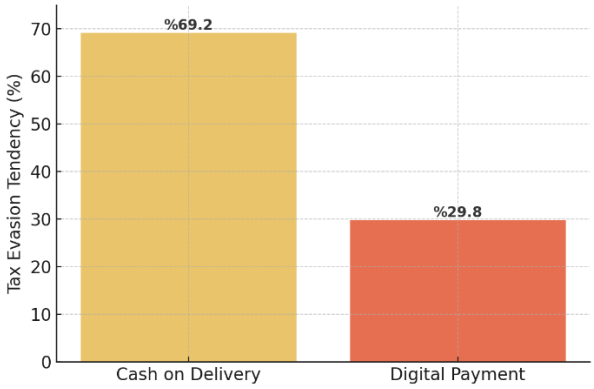


Second, the analysis for H2 provided strong evidence that payment choice is linked to tax evasion propensity. A Chi-Square test and Odds Ratio calculation showed that COD users are 2.15 times more likely to exhibit tax evasion tendencies than those using digital payments ($\chi^2=8.76$, $p<0.01$), validating concerns about COD facilitating the informal economy.

Table 4: Chi-Square and Odds Ratio Results

Payment Method	Propensity for Tax Evasion (%)	Chi-Square (χ^2)	*p*	OR	95% Confidence Interval
Cash-on-Delivery	63.2	8.76	0.002	2.15	[1.50 - 3.08]
Digital Payment	29.8				

Figure 8: Tax Evasion Propensities of Cash-on-Delivery and Digital Payment Users

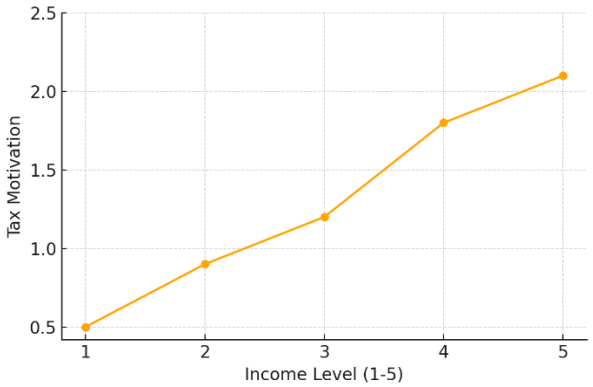


Third, supporting H3, linear regression analysis demonstrated a significant positive correlation between higher income levels and greater tax motivation (β=0.37, p<0.01). However, the model's limited explanatory power (R^2=0.14) suggests that income is just one of several factors influencing tax compliance.

Table 5: Regression Analysis Results

Variable	β	Standard Error	*t*	*p*	R^2
Income Level	0.37	0.12	3.08	0.004	0.14

Figure 9: Relationship Between Income Level and Tax Motivation

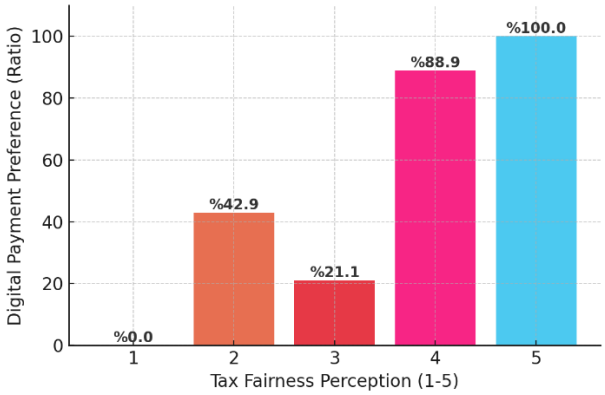


Finally, H4 was only partially supported; a weak but significant Spearman correlation was found between perceived tax fairness and the preference for digital payments (ρ=0.28, p<0.05). This indicates that practical considerations like security and usability likely outweigh abstract perceptions of fairness in driving payment method selection. This finding challenges the direct applicability of some Western-centric tax compliance theories (e.g., Feld & Frey, 2007; Kirchler, 2007) in this regional context. It suggests that in environments with lower institutional trust or digital literacy, pragmatic factors such as perceived security, transaction costs, and usability may be more potent drivers of payment choice than abstract concepts like the fairness of the tax system.

Table 6: Spearman Correlation Results

Variable Pair	ρ	*p*	Significance
Perceptions of Tax Fairness ↔ Digital Payment	0.28	0.021	*

Figure 10: Relationship Between Perceptions of Tax Fairness and Digital Payment Preference



The discussion of these findings highlights a critical paradox in Diyarbakır: a young, technologically adept population shows high e-commerce adoption, yet structural factors and behavioral patterns, such as the persistence of COD, create significant risks for tax non-compliance. The persistence of this paradox may be rooted in the region's unique socio-economic fabric, where informal, trust-based commerce is prevalent and institutional trust in government or financial systems can be lower than national averages. These underlying factors can suppress the formalizing effect of technology. The lower tax motivation among the youngest demographic, coupled with the high propensity for tax evasion among COD users, points to a clear need for targeted policy interventions. The weak influence of perceived tax fairness on payment choice further suggests that policy should focus on tangible incentives and structural improvements, implying that building a secure and accessible digital payment ecosystem is a more urgent policy priority than campaigns focused solely on tax fairness.

From these findings, several policy recommendations emerge. To counter the risks associated with COD, it is essential to strengthen digital payment infrastructure and build consumer trust. This can be achieved by mandating digital invoicing for all e-commerce transactions and expanding secure payment options with features like two-factor authentication. Financial incentives, such as tax benefits or discounts for using digital payments, could effectively shift consumer behavior away from cash. Furthermore, targeted educational campaigns are needed to enhance tax awareness and digital literacy, especially among the youth and in rural areas. Supporting the digital transformation of local SMEs with technical and financial assistance is also crucial for integrating them into the formal economy and broadening the tax base.

The study is not without its limitations. The sample's overrepresentation of young, educated, urban participants may limit the generalizability of the findings to the entire regional population. Moreover, the reliance on self-reported data for a sensitive topic like tax evasion introduces a potential for social desirability bias. Future research should therefore seek to diversify its sample to include more rural and varied demographic groups. Integrating qualitative methods, such as in-depth interviews, would provide deeper context to the quantitative findings, particularly regarding motivations for tax evasion and distrust in digital payments. Advanced statistical models like Structural Equation Modeling (SEM) could also be employed to analyze the complex, multidimensional relationships between institutional trust, technology adoption, and tax compliance.

5. CONCLUSION AND IMPLICATIONS

This study provides a pioneering regional analysis in Turkey by examining the relationship between the digital economy and tax compliance in Diyarbakır. Using a quantitative research design with survey data from 675 participants, the study investigated how e-commerce usage frequency, payment methods, income level, and perceived tax fairness influence tax motivation. The findings confirm that increased e-commerce frequency is positively associated with higher tax motivation ($\beta=0.42$, $p<0.01$), supporting the literature that suggests digital transactions enhance financial transparency and compliance. Conversely, the study reveals a significant challenge for fiscal policy: individuals using cash-on-delivery (COD) methods exhibit a 2.15 times greater propensity for tax evasion compared to digital payment users. This finding highlights the role of cash-based transactions in fostering the informal economy, a conclusion that aligns with previous research by Schneider (2004).

Furthermore, the research substantiates the positive correlation between income level and tax motivation ($\beta=0.37$, $p<0.01$), consistent with the work of Alm and Torgler (2011). However, the model's limited explanatory power ($R^2=0.14$) indicates that tax compliance is a multifaceted issue influenced by other sociopsychological factors beyond income, such as social norms and institutional trust. Interestingly, the study found only a weak relationship between the perception of tax fairness and the preference for digital payments ($\rho=0.28$, $p<0.05$). This suggests that practical concerns, such as technological trust deficits and financial literacy, are more decisive in payment choices than abstract notions of fairness, a point that complements multidimensional tax compliance models (Feld & Frey, 2007; Kirchler, 2007).

Based on these findings, several strategic policy implications emerge for enhancing tax compliance in developing regions. It is imperative to strengthen the digital financial infrastructure by mandating electronic invoicing for all transactions, including COD, and by expanding secure mobile payment systems through measures like two-factor authentication. Concurrently, tax incentives for digital payments could steer consumers away from cash. Educational initiatives are also crucial; tax literacy programs targeting young consumers and digital literacy campaigns in rural areas can foster a culture of compliance. Supporting the digital transformation of SMEs through technical training and financial aid will further help integrate local businesses into the formal economy.

While this study offers valuable insights, its limitations—such as a sample skewed towards young, educated urban participants and reliance on self-reported data—necessitate caution in generalization and open avenues for future research. Subsequent studies should aim for broader sample diversity, particularly including rural populations, and integrate qualitative methods like in-depth interviews to explore the sociocultural nuances of tax evasion. Employing advanced statistical models, such as Structural Equation Modeling (SEM), would also allow for a more comprehensive analysis of the complex interplay between institutional trust, technological adoption, and tax motivation. Ultimately, as Turkey's digital economy grows, a holistic approach that combines regulatory oversight, technological innovation, and public education will be critical for enhancing fiscal sustainability and combating informality.

REFERENCES

Alm, J., & Torgler, B. (2006). Culture differences and tax morale in the United States and in Europe. Journal of Economic Psychology, 27(2), 224–246. https://doi.org/10.1016/j.joep.2005.09.002

Alm, J., & Torgler, B. (2011). Do ethics matter? Tax compliance and morality. Journal of Business Ethics, 101(4), 635–651. https://doi.org/10.1007/s10551-011-0761-9

Anadolu Agency (AA). (2023). New trends in e-commerce in Turkey: Innovations in logistics and payment systems. https://www.aa.com.tr/tr/ekonomi/e-ticarette-en-buyuk-kirilmanin-cevrim-ici-odeme-sistemlerinde-olmasi-bekleniyor/3096115

Anadolu Agency (AA). (2024, January 29). Income distribution figures announced in Turkey. https://www.aa.com.tr/tr/ekonomi/turkiyede-gelir-dagilimi-rakamlari-aciklandi/3121682

Central Bank of the Republic of Turkey. (2021). Regulation on information systems of payment and electronic money institutions and data-sharing services in the field of payment services. Retrieved from https://www.tcmb.gov.tr/wps/wcm/connect/80b75c08-7e61-4c79-ab5f-6791f2f2973d/%C3%96deme%2Bve%2BElektronik%2BPara%2BKurulu%C5%9Flar%C4%B1n%C4%B1n%2BBilgi%2BSistemleri%2B%C4%B0le%2B%C3%96deme%2BHizmeti%2BSa%C4%9Flay%C4%B1c%C4%B1lar%C4%B1n%C4%B1n%2B%C3%96deme%2BHizmetleri%2BAlan%C4%B1ndaki%2BVeri%2BPayla%C5%9F%C4%B1m%2BServislerine%2B%C4%B0li%C5%9Fkin%2BTebli%C4%9F.pdf?MOD=AJPERES

Cochran, W. G. (1952). The chi-square test of goodness of fit. The Annals of Mathematical Statistics, 23(3), 315–345. https://doi.org/10.1214/aoms/1177729380

Deloitte Turkey. (2022). The outstanding success of e-commerce: Consumer behavior and emerging trends. https://www.deloitte.com/tr/tr/services/consulting/analysis/e-ticaretin-one-cikan-basarisi-2022.html

Doksat, C., Sürücü, B. G., Coşkun, S., Ertem, İ., & Ünlü, M. (2025, February 3). 2024 annual tax law bulletin on the taxation of the digital economy. Erdem & Erdem Law Office. https://www.erdem-erdem.av.tr/bilgi-bankasi/dijital-ekonominin-vergilendirilmesine-iliskin-yillik-vergi-hukuku-bulteni-2024

European Commission. (n.d.). Digital Services Act. European Commission Official Website. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/digital-services-act_en

Feld, L. P., & Frey, B. S. (2007). Tax compliance as the result of a psychological tax contract: The role of incentives and responsive regulation. Law & Policy, 29(1), 102–120. https://doi.org/10.1111/j.1467-9930.2007.00248.x

Field, A. (2018). Discovering statistics using IBM SPSS Statistics (5th ed.). Sage Publications. https://dl1.cuni.cz/pluginfile.php/1329289/mod_resource/content/1/Andy%20Field%20-%20Discovering%20Statistics%20Using%20IBM%20SPSS%20Statistics-Sage%20Publications%20Ltd%20%282018%29.pdf

General Directorate of Population and Citizenship Affairs. (2024). 2023 provincial population information. https://nvi.gov.tr/kurumlar/nvi.gov.tr/IcSite/konya/haberler2024/2023_Iller_Nufus.pdf

General Directorate of Revenue Administration. (2020, March 20). Digital Service Tax General Implementation Communiqué under Law No. 7194 (No: 31074). Resmî Gazete [Official Gazette]. https://www.gib.gov.tr/dijital-hizmet-vergisi-uygulama-genel-tebligi-0

Goolsbee, A. (2000). In a world without borders: The impact of taxes on internet commerce. Quarterly Journal of Economics, 115(2), 561–576. https://doi.org/10.1162/003355300554854

IBM. (2024). IBM SPSS Statistics 30 brief guide. https://www.ibm.com/docs/en/SSLVMB_30.0.0/pdf/IBM_SPSS_Statistics_Brief_Guide.pdf

Interbank Card Center (BKM). (2017). Card Monitor 2017 card usage habits survey [Online report]. https://bkm.com.tr/wp-content/uploads/2018/03/Kart_Monitor_2017.pdf

Interbank Card Center. (2017). Card Monitor 2017: A study on card usage habits. https://bkm.com.tr/wp-content/uploads/2018/03/Kart_Monitor_2017.pdf

Kirchler, E. (2007). The economic psychology of tax behaviour. Cambridge University Press. https://doi.org/10.1017/CBO9780511628238

Matonline. (2024). TÜİK Research: e-Commerce data in Turkey. https://www.matonline.com.tr/post/t%C3%BCi-k-ara%C5%9Ft%C4%B1rmas%C4%B1-t%C3%BCrkiye-de-e-ticaret-verileri

McKinsey & Company. (2021). The 2021 McKinsey global payments report. https://www.mckinsey.com/industries/financial-services/our-insights/the-2021-mckinsey-global-payments-report

Ministry of European Union Affairs. (2023, August 28). EU Digital Services Act enters into force. https://www.ab.gov.tr/ab-dijital-hizmetler-yasasi-yururluge-girdi_53583.html

Ministry of Trade (Republic of Turkey). (2024a). 2023 annual activity report of the Ministry of Trade. https://ticaret.gov.tr/data/65e1730213b8768d8422d054/Ticaret%20Bakanlığı%202023%20Yılı%20Faaliyet%20Raporu.pdf

Ministry of Trade (Republic of Turkey). (2024b). e-Commerce outlook report in Turkey. https://www.eticaret.gov.tr/haberler/10096/detay?utm

OECD. (2000). Improving access to bank information for tax purposes (Hesap Uzmanları Kurulu, Trans.). OECD Publications. https://www.oecd.org/content/dam/oecd/tr/publications/reports/2000/04/improving-access-to-bank-information-for-tax-purposes_g1ghgc93/9789264064881-tr.pdf

ResearchAndMarkets. (2023). Fashion e-commerce global market report. https://www.researchandmarkets.com/reports/5939666/fashion-e-commerce-global-market-report

Richardson, G. (2006). Determinants of tax evasion: A cross-country investigation. Journal of International Accounting, Auditing and Taxation, 15(2), 150–169. https://doi.org/10.1016/j.intaccaudtax.2006.08.005

Schneider, F., & Klinglmair, R. (2004). Shadow economies around the world: What do we know? SSRN Electronic Journal. https://doi.org/10.2139/ssrn.518526

Slemrod, J. (2007). Cheating ourselves: The economics of tax evasion. Journal of Economic Perspectives, 21(1), 25–48. https://doi.org/10.1257/jep.21.1.25

Topyıldız, H. F. (2025, February 7). Taxation of the digital economy: Digital service tax. IKV E-Bülteni, 2024 (August 16-31), Global Agenda. Economic Development Foundation. http://10.0.0.5/ikv_bulten/?ust_id=14179&id=14184

Torgler, B. (2005). Tax morale in Latin America. Public Choice, 122(1–2), 133–157. https://doi.org/10.1007/s11127-005-5790-4

TSoft. (2023). Turkey's best-selling e-commerce products in 2023. https://www.tsoft.com.tr/blog/2023-de-turkiyede-en-cok-satilan-e-ticaret-urunleri?utm

Turkish Statistical Institute (TÜİK). (2024a). Address-based population registration system results, 2023. https://nip.tuik.gov.tr/

Turkish Statistical Institute (TÜİK). (2024b). Household information technologies (IT) usage survey 2024 [Dataset]. https://data.tuik.gov.tr/Bulten/Index?p=Hanehalki-Bilisim-Teknolojileri-%28BT%29-Kullanim-Arastirmasi-2024-53492

Turkish Statistical Institute (TÜİK). (2024c). Income distribution statistics – 2023. TÜİK Data Portal. https://data.tuik.gov.tr/Bulten/Index?p=Gelir-Dagilimi-Istatistikleri-2024-53712

Yenigazete. (2024). This report sheds light on customer trends: Turkey below global average in satisfaction. https://www.yenigazete.net/bu-rapor-musteri-trendlerine-isik-tutuyor-turkiye-memnuniyette-kureselin-altinda-49810.html