The Impact Study of Digital Economy on the Interprovincial Value-added Tax Revenue Transfer

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Abstract

The development of the digital economy has brought opportunities and challenges to the economic development of our country. Value-added tax determines the income attribution place according to the place of production, which may lead to imbalance between tax revenue and tax sources. The development of the digital economy has made inter-provincial tax flows more frequent, exacerbating the deviation between value-added tax revenue and tax sources, leading to issues such as tax competition and regional development imbalances. This article discusses the direct and indirect mechanisms through which the digital economy affects the deviation between tax revenue and tax sources. By using provincial panel data models from 2015 to 2021, we analyzed the extent to which the digital economy affects the deviation of value-added tax revenue and tax sources. In conclusion, the development of the digital economy will exacerbate the transfer of value-added tax revenue. Therefore, this article proposes the following recommendations: regulating the development of the digital economy, establishing mechanisms for distributing based on the principle of place of consumption, and improving the level of digital tax management.

Keywords

Digital Economy; Principle of Production Location; Tax Base Erosion; Tax Shifting.

1. Research Background and Literature Review

1.1. Research Background

The "14th Five-Year Plan" further emphasizes the importance of the digital economy, requiring continuous use of technology to accelerate the integration and development of the digital economy with the real economy, achieve profound changes in production methods, ways of life, and governance functions, thereby promoting better and faster development of the economy in China. The digital economy takes digitalized information as a production factor and, with the help of internet technology, achieves a perfect combination with the real economy. This has led to new economic development by upgrading the supply side with digitization and meeting demand side information. The scale of China's digital economy has expanded from 2.6 trillion yuan in 2005 to 45.5 trillion yuan in 2021. The industrialization of the digital sector and the digitalization of industries have further increased their share in the gross domestic product. Ecommerce, cross-border e-commerce, and the platform economy continue to demonstrate strong development momentum, making the digital economy a significant force in China's economic development. However, along with the development of the digital economy, the deviation between regional tax revenues and tax sources has become more serious, exacerbating the issue of tax revenue transfer between regions in China. This has led to an imbalance in fiscal resources between regional governments, hindering local governments from actively expanding fiscal expenditures, weakening the overall regional public product system and construction, and constraining regional coordinated development and optimizing fiscal effects. Research indicates that 77.7% of China's internet-listed companies are located in five cities: Beijing, Shanghai, Hangzhou, Shenzhen, and Guangzhou, leading to uneven tax distribution due to a tax suction effect, impacting tax revenue sharing (Xiao Rongmei et al., 2021)[1].

Therefore, it is necessary to pay attention to the issue of tax transfer between regions affected by the digital economy, explore its impact mechanisms, prescribe the right remedy, improve relevant tax systems, regulate the behavior of market entities and governments, balance regional digital economic development, thereby alleviating the issue of tax transfer between regions. This will better address regional financial difficulties, promote balanced and coordinated development in regions, enhance tax revenue and tax base construction in underdeveloped areas, strengthen overall financial functions, and achieve high-quality development.

1.2. Literature Review

The Institute of Information Technology (2021) believes that the deep integration of the real economy and digital technology elements has given rise to the digital economy, a new form of economy, which has transformed the ways of factor usage and production organization, being more digitalized, networked, and intelligent, driving innovation in economic and social development and governance models^[2]. Internationally, OECD has constructed the Digital Economic Development Index to highlight the significant role of digital development in economic progress, encompassing digital technology development, innovation, and the ICT industry[3]. In 2017, the European Union's statistical office designed the Digital Economy and Society Index to provide a basis for the analysis of changes and scale of digital economic development among EU member states[4]. Many domestic scholars have also extensively researched the compilation of digital economy-related indices: Du Chuanzhong, Zhang Yuan (2021) utilized the Tencent Research Institute's Digital Economy Index to measure the level of urban digital economic development. Liu Jun (2020) established a digital economic indicator system composed of information infrastructure, network technology, and online transactions[5]. Liang Xiaoqin (2020) employed the Digital Inclusive Finance Index measured by Peking University from 2011 to 2018 to study the impact of the digital economy[6]. Zhao Tao et al. (2020) quantitatively analyzed the development of the digital economy in Chinese cities over the past five years using a threshold model approach[7].

The scale of tax revenue transfer between regions is a focal point studied by domestic scholars. Lingzishan et al. (2015) calculated the imbalance scale of value-added tax in each province using the method of social retail sales, analyzing the situation of interregional value-added tax revenue transfer[8]. Cui Zhiwen et al. (2016) calculated the amount and deviation of value-added tax revenue transfer among various provinces in China over the past decade, suggesting that the transfer of value-added tax revenue between regions is very obvious[9]. Moreover, the regions where tax revenue is transferred are mostly developed areas in the east, leading to an imbalance of value-added tax revenue between regions and affecting balanced development.

With the rapid development of the digital economy, an increasing number of scholars have begun to focus on the impact of the digital economy on interregional tax revenue distribution. For example, Wang Yongjun (2020) analyzed the impact of the digital economy on interregional tax revenue distribution from a theoretical perspective, suggesting that under the digital economy background, both the source rules and the destination principle that define interregional tax jurisdiction are facing high risks of erosion[10]. Ai Hua et al. (2021), using the digital economy index of 30 provinces in China excluding Tibet Autonomous Region and the Hong Kong, Macao, and Taiwan regions, empirically analyzed that the rapid development of China's digital economy has promoted the growth of local government tax revenue and to some extent widened the gap in tax revenue between regions[11]. Yuan Congshuai et al. (2021), after analyzing the current situation of tax revenue transfer between regions in China under the digital economy background, found that e-commerce, automated digital services, and other business models have led to the transfer of tax revenue from underdeveloped regions to developed regions[12].

In summary, the digital economy mainly focuses on studying digital economic indicators, while regional tax transfers focus on studying scale measurement, transfer formation reasons, and countermeasures. There is limited research on the impact of the digital economy on regional tax transfers, mostly discussing the impact of the digital economy on regional tax transfers from a single perspective. The research scope is narrow, and a systematic study on the overall impact of the digital economy on regional tax transfers has not yet been established. Therefore, it is necessary to systematically conduct an analysis of the impact of the digital economy on regional tax transfers, which is conducive to a comprehensive understanding of the overall impact of the digital economy on regional tax transfers and to establish a systematic framework.

2. The Concept of Digital Economy and Value-added Tax Revenue Transfer.

2.1. The Definition of Digital Economy

The definition of the digital economy in the "China Digital Economy Development White Paper" (2021) by the China Institute of Information and Communications says: The digital economy takes digitalized knowledge and information as key production factors, with digital technology as the core driving force, utilizing modern information networks as important carriers. It deeply integrates digital technology with the real economy, continuously enhances the digital, networked, and intelligent levels of the economy and society, accelerates the restructuring of economic development and governance models into new economic forms.

The digital economy is primarily divided into two main parts: digital industrialization and industrial digitalization. Digital industrialization refers to the industrialization. commercialization, and marketization of data elements, emerging only after the appearance of digital technology, such as the information and communication sectors and the Internet industry. Industrial digitalization involves the comprehensive and full-chain transformation of traditional industries using modern intelligent information technologies, enabling various industries to deeply integrate and develop with digital technologies. These industries already existed, but with the integration of digital technologies, their output and efficiency have increased.

2.2. Definition and Formation Reasons of Tax Revenue Transfer

In the relevant academic field, a precise definition of tax shifting has not been established. According to Liang Shicheng (2022), tax shifting of value-added tax is understood as the situation where differences in value-added tax revenue between regions arise under two different income allocation principles: the production principle and the consumption principle[13].

Existing value-added tax is mainly allocated between regions based on the location of the producers, but the actual tax burden is mainly borne by the consumers. This tax burden shift results in value-added tax revenue flowing from the place of consumption to the place of production, creating a deviation between the location of income attribution and tax burden attribution. When the place of production and the place of consumption are in different regions, under the current production principle, there will be inconsistencies between the location of tax revenue and the location of tax burden, meaning the government of the place of production obtains the portion of value-added tax borne by residents of the place of consumption through purchasing goods. This difference in amounts is referred to as tax shifting.

3. The Impact Mechanism of Digital Economy on the Transfer of Local Value-added Tax Revenue

3.1. The Mechanism of the Impact of Digital Economy on Tax Shifting

3.1.1. Direct Mechanism of Action

The industrialization of the digital sector is the foundation of digital economic development and an important component of the national economy. The emerging patterns of the digital economy have expanded consumer demand and increased the overall tax base. The faster the development of the digital industry, the more local tax revenue and the larger the scale of fiscal revenue. At this point, the industrialization of the digital sector has two aspects of impact on tax revenue and tax sources. On one hand, local governments can utilize the achievements of digital industrialization to reduce the asymmetry of information exchange between regions, implement tailored fiscal policies to increase economic interaction between two regions, narrow the gap in regional digital economic development, and reduce the uneven horizontal distribution of tax revenue. On the other hand, digital industrialization does not develop at the same level in all regions. For example, the level of digital economic development in the eastern coastal areas is significantly higher than in underdeveloped areas, leading to a Matthew effect between regions.

The digitalization of industries serves as a powerful driver for the development of the digital economy, primarily focusing on the deep integration between the digital economy and traditional industries. Its mechanism involves utilizing information technologies such as big data and cloud computing to expand the sales reach of traditional industries, leading to uneven economic development in different regions, resulting in a discrepancy between tax revenue and income. Traditional industries are constrained by geographic limitations in the sales process, requiring businesses to establish physical establishments in target market areas. On the other hand, the digital economy can overcome geographic constraints by creating online trading spaces, expanding market scope, such as through e-commerce and platform economy. Consequently, the development of the digital economy further concentrates regional production, mainly in developed coastal cities, enhancing the local economic development level. However, it also leads to a polarization in national economic development, accompanied by corresponding discrepancies in tax revenues.

3.1.2. Indirect Mechanism of Action

The main paths through which the indirect tax revenue deviates from the tax base in the digital economy include principles of tax distribution, tax competition, and cross-regional operations of enterprises. The specific mechanism and analysis of these paths are as follows:

Based on the principle of production location, local governments should distribute value-added tax according to where the producers are located. As a type of indirect tax, the tax burden can be shifted, and it is borne by consumers. According to the principle of benefit, consumers should receive this part of the tax revenue in the place where they consume. Therefore, this tax distribution principle causes a deviation between tax revenue and the tax base. Under the development of the digital economy, the production of goods is increasingly centralized and scaled, the distance of sales is expanding, and cross-regional transactions are becoming mainstream. This scenario clearly distinguishes the production and consumption locations of goods and services, exacerbating the contradiction caused by the tax distribution based on the production location principle.

Tax competition is a key factor leading to the deviation between tax revenue and tax base. In a system of fiscal decentralization, regions engage in strategic interactions to attract capital inflows in order to increase fiscal revenue. Due to the diverse resource endowments across regions, the economic development disparities between regions will continue to widen, leading

to an incongruent tax burden level. This incongruence results in the deviation between tax revenue and tax base. With the development of the digital economy, the concentration of production is further enhanced, reinforcing the desire of local governments to maximize their own interests. As a result, local governments will further attract investments and expand their economic scale, exacerbating the distortion between tax revenue and tax base.

In the traditional economic era, enterprises that operate across regions could resolve interregional tax allocation issues through physical branch establishments. With the evolution of the digital economy, cross-regional operations by enterprises are becoming more common. However, unlike before, enterprises no longer need to establish offline branches or pay taxes to provinces other than where their headquarters are located. At present, the traditional tax allocation rules are unable to appropriately allocate this tax revenue across regions, leading to certain regions being unable to benefit from the tax revenue they should rightfully receive, thus causing a deviation between tax revenue and tax base.

Based on the analysis of the mechanism of action in the previous text, the research hypothesis H is derived: the digital economy has a significant impact on interregional tax transfers. Regions with a more developed digital economy are more likely to receive tax transfers, while regions with a less developed digital economy are more likely to experience tax outflows.

4. The Empirical Analysis of the Impact of Digital Economy on the **Transfer of Local Value-added Tax Revenue**

4.1. **Model Configuration**

Based on theoretical analysis and research hypotheses, this paper sets up a panel data model to examine the relationship between digital economic development and regional tax distribution, constructing a panel individual fixed effect model:

$$tr_{it} = \gamma_1 dig_{it} + \gamma_2 tl_{it} + \gamma_3 ur_{it} + \gamma_4 shxf_{it} + \gamma_5 save_{it} + \gamma_6 hj_{it} + \gamma_7 open_{it} + a_0 + \mu_i + \varepsilon_{it}$$
(1)

Among them, tr is the model's dependent variable, dig is the core explanatory variable, tl, ur, shxf, save, hj, and open are all control variables, y is the regression coefficient, ε is the random disturbance term, a0 is the constant term, and μ is the individual fixed effect.

4.2. Variable Selection and Data Sources

4.2.1. Variable Explanation: The Digital Economy Composite Development Index (DIG)

Referring to the research by Zhao Tao et al. (2020), the comprehensive development level of the digital economy is measured from the perspectives of internet development and inclusive digital finance [14]. Specifically, it includes five indicators: internet penetration rate, relevant professionals, relevant output, mobile phone penetration rate, and digital financial development. By standardizing these indicators and then using principal component analysis, the Digital Economy Composite Development Index is obtained.

4.2.2. Explanatory Variable: Value-added Tax Revenue Transfer (tr)

This study adopts the calculation method of Huang Xialan (2012), using the total retail sales of consumer goods in various regions as the base for measuring value-added tax revenue [15].

Value-added tax revenue under the principle of consumption place = Sum of value-added tax revenue in each province * (total retail sales of consumer goods in that province/total national retail sales of consumer goods).

Tax transfer amount = Actual collected value-added tax revenue - Value-added tax revenue under the principle of consumption place.

A positive difference indicates receiving more tax revenue than theoretically expected, belonging to the tax-receiving province; conversely, a negative difference indicates that the actual collected value-added tax is less than the expected tax revenue, belonging to the tax-transferring province.

4.2.3. Control Variables

Based on understanding the factors influencing inter-regional tax transfer and the literature on the impact of digital economy on tax transfer, the following variables have been selected as control variables for empirical testing in this study: (1) Industrial structure (tl). The secondary and tertiary industries are the main industrial sectors that promote inter-regional tax transfers. The more developed these sectors are, the more favorable conditions they have for interregional tax inflows. (2) Level of urbanization (ur). The higher the urbanization rate of a certain region, to some extent, represents a higher income level in that region, indicating a larger purchasing power of the population in the region, which makes it easier to cause tax outflows. (3) Social consumption (shxf). Social consumption amount is an important factor affecting inter-regional tax transfers. The higher the social consumption, the more likely it is to act as a consumption destination and contribute to tax revenues. (4) Economic development (save). Economic development is an important factor affecting inter-regional tax transfers. Differences in economic development among regions will lead to inter-regional tax transfers. (5) Environmental regulations (hj). The intensity of tax collection reflects the government's tax collection efforts and the strength of corporate tax compliance. Different regional tax collection intensities will lead to different responses in corporate tax transfer behaviors, which may cause tax flow between regions and affect inter-regional tax transfers. (6) Degree of openness to the outside world (open). The higher the degree of openness to the outside world, the higher the income level of the region, resulting in more tax inflows.

The data in this article mainly comes from "China Tax Yearbook," "China Financial Yearbook," and "China Statistical Yearbook." Due to the availability of tax revenue data, this article will examine the years 2015 to 2020, a total of 5 years. Descriptive statistics of relevant variables are shown in Table 1.

Variable	N	Mean	p50	SD	Min	Max
tr	212	-0.00100	0.00900	0.400	-0.769	1.550
dig	305	5.204	5.408	0.679	2.786	6.068
tl	677	1.086	0.903	0.596	0.494	5.297
ur	677	0.508	0.505	0.162	0.139	0.896
shxf	677	8.037	8.179	1.340	3.759	10.70
save	677	9.167	9.100	0.521	7.887	10.78
hj	670	0.443	0.350	0.389	0.00100	3.099
open	677	0.292	0.130	0.361	0.00800	1.721

Table 1. Descriptive statistics of relevant variables

To avoid large differences in data among various variables and to mitigate the impact of heteroscedasticity on regression results, this study employed a logarithmic transformation on certain variables. Descriptive statistics reveal significant variations in inter-regional tax transfers, with substantial differences between the minimum and maximum values. Similarly, for the key explanatory variable - digital economy, there are considerable differences between the minimum and maximum values, indicating significant variations in digital economic development across regions.

4.3. Empirical Analysis

4.3.1. Relevance Analysis

From Table 2, it can be seen that there is a positive correlation between the development of the digital economy and interregional tax transfers, and this correlation is significant. The level of development of the digital economy in a region affects the extent of tax transfers in that region. The higher the level of digital economic development, the higher the degree of tax transfers; conversely, the lower the degree of tax transfers, the lower the level of digital economic development, which is in line with the hypothesis of this study.

Variables	(tr)	(dig)	(tl)	(ur)	(shxf)	(save)	(hj)	(open)
tr	1.000							
dig	0.269***	1.000						
tl	0.476***	0.373***	1.000					
ur	0.602***	0.423***	0.429***	1.000				
shxf	-0.088	0.343***	0.080**	0.567***	1.000			
save 0.662*** 0.175*** 0.410*** 0.756*** 0.503*** 1.000								
hj	0.098	-0.148**	-0.219***	-0.254***	-0.467***	-0.244***	1.000	
open	0.701***	0.084	0.310***	0.495***	0.268***	0.781***	-0.171***	1.000
*** p<0.01. ** p<0.05. * p<0.1								

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4.3.2. Baseline Regression

Table 3. Benchmark regression results

	(1)
VARIABLES	tr
dig	0.499***
	(4.722)
tl	-0.063*
	(-1.677)
ur	-1.667***
	(-2.733)
shxf	-0.233**
	(-2.249)
save	-0.130
	(-1.478)
hj	0.042
	(1.629)
open	-0.425**
	(-2.562)
Constant	1.667**
	(2.024)
Observations	180
Number of id	31
R-squared	0.184
IN	FE

This paper constructs the following regression models, with an R-squared value of 0.184 indicating the fitness of the model, which passes the test at a significance level of 1%. Based on

the coefficients and significance, it can be concluded that digital economic development significantly affects interregional tax transfers. The higher the level of digital economic development, the greater the interregional tax transfers, leading to more tax transfers into the region and exacerbating horizontal imbalances in interregional tax revenue. From the perspective of control variables, in fixed effects regression, the level of urbanization, social consumption, and degree of openness to the outside world significantly influence interregional tax transfers, while the impact of economic development and environmental regulations on interregional tax transfers is not significant.

4.3.3. Robustness Check

Given endogeneity concerns, this paper employs the instrumental variable method and conducts an endogeneity test using the two-stage least squares method. The lagged explanatory variable dig is used as the instrumental variable. As shown in column (2) of Table 4, the explanatory variable dig has a significant positive effect on the explained variable tr, passing the significance test at the 1% level. Robustness checks are performed by excluding samples from the epidemic years. Due to the economic downturn and recession in the e-commerce industry during the epidemic period, samples beyond the year 2020 are excluded in the robustness test. The results indicate that the explanatory variable dig still has a significant positive impact on the explained variable tr, passing the significance test at the 1% level. This consistency with the previous findings demonstrates robustness through the robustness check.

	least squares method	Exclusion of outbreak samples
VARIABLES	tr	tr
dig	0.684***	0.687***
	(3.224)	(4.997)
tl	-0.094**	-0.035
	(-2.466)	(-0.802)
ur	-2.272**	-2.169**
	(-2.166)	(-2.412)
shxf	-0.321***	-0.411*
	(-3.051)	(-1.946)
save	-0.115*	-0.149
	(-1.685)	(-1.440)
hj	0.052***	0.033
	(2.630)	(1.214)
open	-0.423	-0.860***
	(-1.444)	(-4.089)
Constant	3.637***	2.747**
	(4.205)	(2.561)
Observations	178	150
R-squared	0.979	0.290
IN	FE	FE
Number of id		31

4.3.4. Heterogeneity Analysis

My country has a vast territory, with significant differences in economic development among regions and variations in policy environment. There are regional differences in the impact of digital economy on inter-regional fiscal transfers, thus necessitating regional heterogeneity analysis. By dividing the provinces into eastern, central, and western regions for heterogeneity

analysis, we can evaluate the influence of horizontal regional digital economic development levels on inter-regional fiscal transfers. Analyzing columns (2)-(4) in Table 5 reveals that in the eastern region, the explanatory variable "dig" has a significant positive effect on the explained variable "tr" at a 10% significance level; in the western region, the variable "dig" has a significant positive effect on "tr" at a 1% significance level, while it does not pass the significance test in the central region. This indicates that the promotional effect of the explanatory variable "dig" on the explained variable "tr" is more pronounced in the horizontal regions of the eastern and western regions.

By vertical regional division into southern and northern regions, we conduct heterogeneity tests. Analysis of columns (5)-(6) in Table 5 shows that in the southern region, the variable "dig" has a significant positive effect on "tr" at a 5% significance level; in the northern region, the variable "dig" has a significant positive effect on "tr" at a 1% significance level. This implies that the enhancement of digital economy in the northern region is more effective in promoting fiscal transfers.

	transversal area			vertical area		
	Eastern	Central	Western	south	North	
VARIABLES	tr	tr	tr	tr	tr	
dig	0.395*	0.185	0.451***	0.585**	0.307***	
	(1.788)	(0.779)	(3.211)	(2.572)	(3.597)	
tl	-0.038	-0.079	-0.053	0.013	-0.018	
	(-0.454)	(-1.367)	(-1.225)	(0.137)	(-0.631)	
ur	-2.063	1.998	-1.489*	-1.440	-1.249**	
	(-1.269)	(1.274)	(-1.914)	(-1.071)	(-2.430)	
shxf	0.203	-0.567***	-0.258***	-0.460*	-0.028	
	(0.717)	(-3.925)	(-2.848)	(-1.922)	(-0.351)	
save	-0.277	0.072	-0.215**	-0.175	0.043	
	(-1.095)	(0.607)	(-2.320)	(-0.714)	(0.642)	
hj	0.148	0.132	0.013	0.141	0.022	
	(1.565)	(1.441)	(0.718)	(1.466)	(1.321)	
open	-0.370	0.145	0.342	-0.821***	0.301*	
	(-1.170)	(0.192)	(1.203)	(-2.707)	(1.870)	
Constant	0.489	2.146*	2.353***	3.681*	-1.125	
	(0.190)	(1.807)	(2.821)	(1.726)	(-1.594)	
Observations	61	48	71	86	94	
R-squared	0.295	0.385	0.399	0.285	0.325	
Number of id	11	8	12	15	16	
IN	FE	FE	FE	FE	FE	

Table 5	Heterogeneity	regression	results
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5. Main Conclusions and Policy Recommendations

Through panel data from 31 provinces in China between 2015 and 2020, utilizing a fixed effects model to examine the impact of the digital economy on interregional tax revenue transfers. The main conclusions drawn are as follows: the digital economy significantly impacts interregional tax transfers. The degree of digital economic development in a region affects the extent of tax transfers between regions. The higher the level of digital economic development, the higher the degree of tax transfer; conversely, the lower the degree of tax transfer. Value-added tax, as the largest tax category in China, plays an extremely important role in the financial income of the

central and local governments. The deviation of value-added tax revenue from tax sources is related to interprovincial interest distribution and can affect local economic growth and livelihoods. To promote fair and coordinated development among provinces, it is necessary to reform the tax system in conjunction with the digital economy, promote economic development, achieve fair and reasonable tax distribution, and alleviate the contradiction of deviation between value-added tax revenue and tax sources. Based on this, the paper proposes the following recommendations:

5.1. Standardize the Management of Digital Economy

While encouraging the development of the digital economy, one should also be vigilant about the negative impacts it may bring and control its adverse effects. Therefore, in the process of developing the digital economy, provincial governments should try to enhance interactions between regions, reduce the development gap in the digital economy between provinces, without neglecting the development of tangible industries. The main economic form that deviates from value-added tax revenue and tax sources under the background of the digital economy is cross-regional sales. Regulations should be put in place for digital platforms, leveraging their intermediary role in tax distribution under the context of the digital economy, ensuring a fair and reasonable distribution of tax revenue.

5.2. Constructing a Principle-based Allocation Mechanism for Consumption Destinations

Value-added tax is a kind of turnover tax, the tax burden of which is borne by the final consumer. As it is necessary to provide public goods for the public, the government where the consumer is located has the right to levy this part of the tax. Therefore, levying value-added tax based on the principle of consumption destination is legitimate. The principle of consumption destination closely links value-added tax revenue with local consumption, pointing towards further improving the value-added tax system. This aligns with the goal of high-quality economic development in the new era of our country and can also enhance the enthusiasm of local residents to consume, shifting the focus from serving enterprises to serving residents.

5.3. Improving the Level of Digital Tax Administration

After establishing a mechanism for distributing consumption at the destination, the level of tax administration should keep pace with the reform. Nowadays, most transactions rely on online platforms, where a single entity may act as both a producer and a consumer. Economic activities are dispersed across various provinces, making it very convenient and discreet, with tax elements difficult to determine. Faced with such a trend, tax administration departments in each province should strive to enhance their own technological capabilities, intensify efforts to train tax office staff in using data analysis and other technical tools proficiently. By leveraging digital tax administration methods, utilizing big data, and strengthening supervision and management of taxpayers, tax authorities can improve the level of digital tax administration. When enhancing the level of digital tax administration, emphasis should be placed on promoting data sharing with third-party platforms to access more taxpayer information, enhance the efficiency of tax administration, and ensure the collection of tax sources.

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