
How Does Propaganda Affect Tax Compliance: An Empirical Study Based on the Theory of Planned Behavior in China

Li Zhiwei^{1,2}, Zhang Huang¹, Chen Wenjiao^{3,4,*}, Zhang Qing¹, Hao Weiqi¹

¹School of Social Development and Public Policy, Beijing Normal University, Beijing, China

²International Exchange and Cooperation Department, Guizhou University of Finances and Economics, Guiyang, China

³School of Medical and Health Management, Guizhou Medical University, Guiyang, China

⁴School of Ethnology and History, Guizhou Minzu University, Guiyang, China

Email address:

lzw_li@qq.com (Li Zhiwei), 576926085@qq.com (Chen Wenjiao)

*Corresponding author

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Abstract: Tax propaganda has always been an important task for the whole nation's financial system at all levels for all countries, although the importance of tax propaganda has been deeply recognized by tax administration authorities and previous studies, but the affecting mechanism of tax propaganda still lacks empirical study support. In order to close the gap regarding the affecting mechanism of tax propaganda on tax compliance, a questionnaire survey was conducted regarding the tax compliance intention of 304 individual industrial and commercial taxpayers in China. Based on the theory of planned behavior, the analyses reveal that tax compliance attitude, subjective norms and perceived behavioral control completely mediate the impact of tax propaganda on tax compliance intention, which shows the dominance of this mechanism. What is more, tax compliance attitude is the most important mediating variable, and the role of subjective norms is only half that of attitude, while perceived behavioral control has less than half the role of subjective norms. In addition of this, although the moderating effect is relatively small, but tax service satisfaction still negatively moderates the mediating effect of attitude and subjective norms. Through these research findings, our study has taken a step towards understanding the mechanism of tax propaganda on tax compliance.

Keywords: Tax Propaganda, Tax Compliance, Tax Service, Theory of Planned Behavior

1. Introduction

Tax evasion, tax arrears, tax resistance and other tax losses are common phenomena that have always accompanied taxation. The loss of tax revenue is also a major problem that has long plagued Chinese tax authorities. Jia calculated that from 2003 to 2013, the proportion of Chinese tax losses to the gross domestic product was between 9.99% and 13.9%[39]. Therefore, the "Reform Plan for Tax Collection and Administration System of National Tax and Local Tax" issued by the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council in July 2018 emphasized the reform goal of "improving tax compliance". There are various strategies for improving tax compliance, such as improving the tax system,

rationalizing tax relations, and strengthening tax collection and management. Among them, strengthening tax propaganda has become an increasingly important strategic countermeasure to enhance tax compliance in China.

Tax propaganda starts from the aspects of information delivery, knowledge popularization, mind changing, consciousness improvement, and creating an atmosphere of public opinion to enhance taxpayer compliance awareness, affect taxpayer compliance behavior, improve tax compliance, and reduce tax loss. Therefore, tax propaganda is not only an important part of taxation work but also the foundation of tax administration. Tax propaganda has always been an important task for tax authorities at all levels in China. In

recent years, it has become a key innovation area for tax loss control by local tax authorities. For example, the Beijing Municipal Bureau of Local Taxation has used cartoons for tax propaganda [40], and the Zhejiang Provincial Bureau of State Taxation held the "Undergraduate Tax Law Debate Competition" to conduct tax propaganda [7]. Shangqiu in Henan Province, where the data of this study were collected, has also focused on creating types of tax propaganda. It has set up not only a diversified tax propaganda platform that combines a service hall, hotlines, message platforms, newspapers, radio, TV, and the Internet but also regular taxpayer schools and question-and-answer sessions, in addition to thematic activities such as a tax theater, tax photography contests and taxpayer open days during the tax propaganda month. In 2017, 125 sessions of the taxpayer school were held, which served more than 20,000 people in Shangqiu.

Tax propaganda has been valued by tax authorities at all levels, propaganda methods have been continuously innovated, and the scale of propaganda has been continuously expanded. However, there is still a lack of empirical research on how tax propaganda affects tax compliance. Obviously, only by deeply understanding the influence mechanism of tax propaganda on taxpayer compliance behavior can taxpayers effectively strengthen and innovate tax propaganda and improve tax compliance. Considering the difficulty of measuring the taxpayer's compliance behavior, this study mainly analyzed the impact of tax propaganda on tax compliance intention.

2. Literature Review and Theoretical Framework

2.1. Tax Compliance

Tax compliance is a basic concept commonly used in tax theory and practice. This concept means that the taxpayer complies with the tax laws and policies, calculates and pays all taxes to the tax authorities correctly, and obeys the administration of the tax authorities. For taxpayers, tax compliance means a timely and accurate declaration and an on-time payment. Tax compliance can be differentiated into motivational and behavioral components [44]. Among them, tax compliance motivation is defined as the individual's intention to comply with the tax law, while tax compliance behavior refers to concrete behavioral compliance with specific tax laws. Although the motivation and behavior of tax compliance are sometimes inconsistent, many studies have concluded that there is a positive relationship between tax motivation and tax behavior [59, 31]. In addition, compared with tax motivation that can be assessed through specific questionnaires, the assessment of tax compliance behavior is inherently difficult [30]. Therefore, this article focuses on the taxpayer's tax motivation, that is, tax intention.

As one of the important sources of government finance, tax revenue plays an important role in social development

and national operation. Late payments may cause a government's budget deficit. In addition, delinquent taxpayers may become permanent tax evaders [14]. The thrust of recent tax administration reforms across countries is aimed at increasing both enforced and voluntary compliance within the context of an overarching risk-based approach [10]. "Leading tax compliance" was clearly identified as the key point of tax administration by the State Taxation Administration of China in 2001. In 2009, the State Taxation Administration further proposed the establishment of a new tax service pattern "starting from taxpayers' needs, basing on the satisfaction of taxpayers, and ending in taxpayers' compliance". Tax compliance has become an important part of the Chinese tax administration strategy.

The most important question for the study of tax compliance is as follows: what causes people to pay taxes [15]? Three kinds of theory have been developed to explain this question: expected utility theory, prospect theory, and new public management theory.

Early research on tax compliance was more limited to economics. Becker based on the assumption of rational people, proposed from the expected utility maximization model that the individual's criminal behavior is affected by both the economic return and the cost of the crime [8]. Based on this, Allingham and Sandmo proposed the expected utility maximization model of tax compliance (A-S model) [3]. Under this model, taxpayer compliance depends on risk decisions when facing tax inspection and punishment. However, the A-S model has not been fully supported in empirical research [16], and the actual tax compliance is much higher than the theoretical expectation of the A-S model [20].

In the 1970s, Kahneman and Tversky introduced psychoanalysis into the study of economic behavior and created prospect theory [42]. According to this theory, taxpayer compliance is an incomplete rational decision under risk conditions. Based on this, some "irrational behaviors" of taxpayers are effectively explained [57, 11, 18]. Prospect theory shows that the prospect of a gain leads to risk-averse choices, whereas the threat of a loss increases the willingness to take risks [34]. However, prospect theory emphasizes the individual's special behavior and only explains some special tax compliance phenomena; thus, it does not incorporate noneconomic factors of tax compliance more effectively than the A-S model. In fact, prospect theory is more about applying insights from the field of psychology to economics and still does not break away from economic patterns.

Taxation is a two-way process that includes tax collection by tax authorities and tax payment by taxpayers; therefore, it is also indispensable to understand tax compliance from the view of public administration. An important point of the new public management theory that goes beyond traditional theories is the idea of repositioning the relationship between the government and citizens, emphasizing the public service mission of the public sector. Based on this, tax authorities must provide high-quality services to promote taxpayer compliance [4, 58, 26]. Although the new public

management theory itself is deeply influenced by economics, the research on tax compliance within the new public management system goes beyond economic thinking to a certain extent and connects the research on tax compliance with tax practice more closely; this approach not only improves the theoretical explanatory power but also provides a broader possibility for behavior intervention.

Chinese research on tax compliance has basically followed the above three theoretical branches. For example, Gu extended the research based on the A-S model [32]; Liu, Huang, and Yin, Hong, Huang, Liu, and Zhang extended the research based on the perspective theory of tax compliance research [46, 36, 37]; and the research of Ma and Li, Fan and Tian, Lv and Chen, and Ren absorbed the new public management theory [48, 25, 47].

The tax compliance literature suggests that the effectiveness of the mandate depends on people's feelings towards risk and the probability of noncompliance being detected, as well as the size of the penalty [6]. Because tax compliance is a common individual behavior, behavioral theory also has a broad impact on tax compliance research, especially in combination with new public management theory, such as the impact of tax ethics on tax compliance and the impact of social norms on tax compliance [26, 61]. Among them, planned behavior theory, as the mainstream behavior theory, provides more theoretical and practical ideas

for the study of tax compliance in China.

2.2. Theory of Planned Behavior

Ajzen first proposed the theory of reasoned action (TRA) [2]. The TRA believes that individuals are rational and will not engage in any behavior until they integrate their own attitudes and subjective norms. Among them, attitude is defined as a kind of psychological intention, which is used to evaluate whether one wants to engage in a certain behavior [22]. An individual who gives a positive evaluation of a behavior is more likely to engage in it. The subjective norms refer to the perceptions of individuals, specifically as to whether an individual recognizes or disapproves of certain behaviors [50]. An individual is more likely to engage in the behavior when he believes that his behavior can be highly recognized. The TRA has the potential assumption that the individual's will can effectively control the individual's behavior. This point has been criticized because in actual social life, individual behavior is subject to many external restrictions. In response to this problem, Ajzen introduced the concept of perceived behavioral control, that is, the degree of difficulty an individual perceives in engaging in a certain behavior, and he thus proposed the theory of planned behavior (TPB) [1].

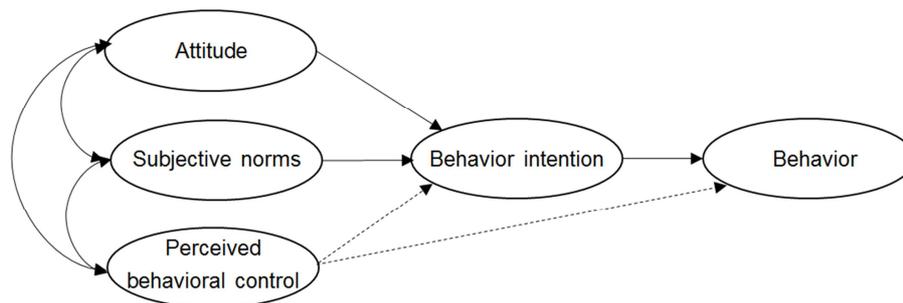


Figure 1. The Theory of Rational Behavior and Planned Behavior.

The TRA is shown in Figure 1, without the dotted arrow. The individual's attitude and subjective norms about a certain behavior determine the individual's behavior intention and then affect whether the individual engages in this behavior. After the dotted arrow is added, the TRA becomes the TPB. At this time, individual behavior and behavior intention are also affected by individual perceived behavioral control.

The TPB provides a general framework for understanding the decision-making mechanism of individual behavior and has been widely used in various types of individual behavior research, including tax compliance behavior [9, 60, 55].

2.3. Tax Propaganda

Tax propaganda refers to the activities of publicizing and disseminating the public image of tax authorities, tax-related policies, tax payment procedures and other content related to taxpayers and the public to enhance taxpayers' understanding of the laws, regulations and procedures involved in taxation

and to improve taxpayers' compliance [62]. Chinese tax authorities attach great importance to tax propaganda, which is an important public service provided by tax authorities. The "Tax Collection Management Law", which was formally promulgated and implemented in 2001, stipulates in legal form the duties and responsibilities of tax authorities in tax propaganda. In practice, since 1992, the Chinese tax administration system has been scheduled to focus on tax propaganda in April of each year, which is known as the "tax propaganda month". Every year, the State Taxation Administration formulates the guiding ideology and propaganda theme for the tax propaganda month. The local taxation administration agencies carry out various taxation propaganda activities based on actual conditions.

Researchers have generally recognized that strengthening tax propaganda can help improve taxpayer compliance. Public marketing activities promote tax compliance by propagating the legitimacy of the tax system and changing public opinion so that tax evasion and active tax avoidance

are openly regarded as immoral [30]. According to a quasi-experimental survey based in Pakistan, mass media campaigns using either TV or newspaper advertisements can improve individual attitudes towards tax compliance [19]. In addition, the perceptions of an unfair tax system (whatever their source) may be a cause of noncompliance [28]. A large number of investigations and experimental evidence has shown that tax propaganda methods such as media can increase the public's tax knowledge, improve the public's views on the fairness of the tax system, and thus enhance tax compliance [24, 43].

Chinese scholars have also discussed the positive effect of tax propaganda on improving taxpayers' compliance. Zeng (2013) stated that tax propaganda could create a healthy and good tax culture to enhance the taxpayer's awareness of tax compliance and to establish a correct view of tax payment to ensure positive tax payment behavior [63]. Chen pointed out that proactive tax law propaganda was more conducive to taxpayers' voluntary compliance with tax laws than punishment after tax evasion [12]. Tax propaganda also helps to reduce taxpayers' negative emotions and psychological costs, thus improving tax compliance [49].

However, existing studies on tax propaganda and tax compliance have not discussed the decision-making mechanism of how tax propaganda affects tax compliance. Starting from the decision-making mechanism of individual behavior, it is not only the inevitable choice for theoretical development but also conducive to more effective guidance of tax propaganda practice to research the affecting mechanism of tax propaganda on tax compliance.

2.4. Theoretical Framework and Hypotheses

The issue of tax compliance has attracted extensive attention since Allingham and Sandmo's pioneering theoretical paper. According to the above review, it can be seen that tax propaganda has a relatively important impact on tax compliance intention, but what influence mechanism tax propaganda has on behavior intention needs to be deeply explored [3]. Combining the TBP with new public management theory provides a suitable theoretical framework for studying the mechanism of tax propaganda on tax compliance intention, as shown in Figure 2.

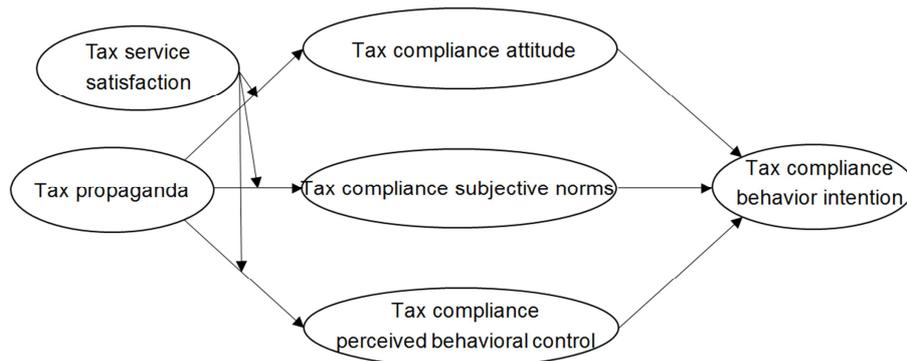


Figure 2. Mechanism of Tax Propaganda on Tax Compliance Intention.

Based on the theoretical framework shown in the figure above, the following hypotheses are proposed in this research:

H1: The affecting mechanism of tax propaganda on tax compliance intention conforms to the theory of planned behavior.

Since the theory of planned behavior holds that an individual's behavioral intention is determined by the individual's attitude, subjective norms and perceived behavioral control toward a certain behavior, this hypothesis can be decomposed into the following four further hypotheses:

H1-1: Tax compliance attitudes mediate the relationship between tax propaganda and tax compliance intentions.

H1-2: Tax compliance subjective norms mediate the relationship between tax propaganda and tax compliance intention.

H1-3: Tax compliance perceived behavioral control mediates the relationship between tax propaganda and tax compliance intention.

H1-4: Tax compliance attitude, subjective norms and perceived behavioral control completely mediate the relationship between

tax propaganda and tax compliance intention.

Starting from new public management theory, the relationship between tax collection by tax authorities and tax payment by taxpayers is a kind of public service, and this public service itself has become an important condition affecting tax compliance. Public service satisfaction is the main way to evaluate public service by taxpayers [56]. Taxpayers' satisfaction with tax services, such as the services of tax practitioners and the transparency of transactions, can affect the administrative credibility of the organization and the compliance of tax activities [38, 33]. Therefore, this study proposes the following hypothesis:

H2: Tax service satisfaction moderates the relationship between tax propaganda and tax compliance.

3. Methods

3.1. Participants and Procedures

The participants consisted of taxpayers from individual businesses in Shangqiu, which is a prefecture-level city in

Henan Province in China. In recent years, the tax authorities at all levels in Shangqiu have combined the tax system reforms, and in view of local characteristics such as tertiary industry becoming the main growth point of tax revenue, great efforts have been made to improve the tax service level, especially to strengthen tax propaganda work. In 2017, both the total tax revenue and the increase rate of Shangqiu were listed at the top of Henan Province, of which tax propaganda should play a key role. However, although Shangqiu's tax propaganda campaign is in full swing, how effective it is remains to be evaluated. Considering the nature of taxpayers, corporate taxpayers' tax compliance is greatly affected by the corporate financial system, while individual businesses have higher tax autonomy. Therefore, this research selects individual businesses taxpayers as the research sample.

The survey process was completed in March 2019, and a convenient sampling method was adopted. Individual business taxpayers were randomly intercepted by researchers in the tax hall of Shangqiu State Taxation Bureau to participate in the online survey. Finally, a total of 304 taxpayers participated and completed the survey. The basic information of the participants is shown in Table 1.

Table 1. Participants' Characteristics (N=304).

Variables		Frequency (%)
Gender	Male	139 (45.7)
	Female	165 (54.3)
Age	<20	6 (2.0)
	20-29	104 (34.2)
	30-39	104 (34.2)
	40-49	68 (22.4)
	>=50	22 (7.2)
Educational background		
	Junior high school and below	6 (2.0)
	Senior high school / Vocational school	76 (25.0)
	College / Undergraduate	182 (59.9)
	Graduate and above	40 (13.2)
Monthly Income (RMB)		
	<=2000	20 (6.6)
	2001-4000	132 (43.4)
	4001-6000	90 (29.6)
	>6000	62 (20.4)

3.2. Measures

3.2.1. Dependent Variable: Tax Compliance Intention

The measurement of tax compliance intention was adapted from the scale developed by Chen, including four items (e.g., "I will not choose to do it even if there is an opportunity for tax evasion"). All items used a seven-point Likert response scale (1 = completely disagree; 7 = completely agree) [13].

3.2.2. Independent Variable: Tax Propaganda

Tax propaganda used a self-compiled scale. Considering the characteristics of tax propaganda in China, the following measurement contents were designed. (1) Propaganda channels included three items: "Taxation propaganda by the government allows me to understand the importance of paying taxes truthfully"; "Taxation propaganda in TV (radio, newspaper, Internet) reminds me to pay taxes actively and truthfully"; "Friends (family members) remind me to pay taxes truthfully".

(2) Propaganda ways included four items: "Taxation propaganda lectures have given me a deeper understanding of paying taxes truthfully"; "Tax propaganda advertisements on TV are very vivid and always reminds me"; "When I see a tax propaganda poster, I am reminded to pay taxes truthfully"; "I keep a tax propaganda brochure for reference". (3) Propaganda intensity includes three items: "I always receive all kinds of tax propaganda"; "When I see tax advertisements, I skip them"; "I'm tired of tax propaganda advertisement". (4) Propaganda direction included three items: "I agree with the propaganda that paying taxes is an honor and benefits the nation and the people"; "Through tax propaganda, I know that tax evasion would be severely punished"; "I learn from tax propaganda that tax evasion would always be discovered". All items used a seven-point Likert response scale (1 = completely disagree; 7 = completely agree).

3.2.3. Mediating Variables: Tax Compliance Attitude, Subjective Norm, and Perceived Behavioral Control

The mediating variables were compiled using the suggestion of Francis et al [29]. Tax compliance attitudes included four items (e.g., "I think the timely declaration, accurate declaration and timely payment of taxes are worthy of approval"). Tax compliance subjective norms included three items (e.g., "In the same situation, my family or friends would voluntarily declare this income to the Tax Bureau"). Tax compliance perceived behavioral control included four items (e.g., "It is easy for me to declare and pay taxes on time and accurately"). All items used a seven-point Likert response scale (1 = completely disagree; 7 = completely agree).

3.2.4. Moderating Variable: Tax Service Satisfaction

Public service satisfaction used a self-compiled scale, including four items: "Satisfaction with the Taxation Bureau's tax propaganda work", "Satisfaction with the current taxation costs (including time and economic costs)", "Satisfactory attitude toward the Taxation Bureau in handling complaints", and "Satisfactory service attitude and efficiency at the tax service hall". All items used a seven-point Likert response scale (1 = completely disagree; 7 = completely agree).

3.3. Data Analysis

All hypotheses in the conceptual model were executed using linear regression analyses in IBM SPSS 24.0 and PROCESS 2.16. Gender and income were added as control variables. No issues were revealed after the assumptions for linear regression were examined. Linearity was present [27].

Mediating and moderating effects in the conceptual model were evaluated by bootstrapping because bootstrapping has higher power and controls Type I errors [35]. As recommended, we used the 95% confidence intervals (bias-corrected) and 5,000 bootstrap samples with PROCESS 2.16 for SPSS [35].

The analysis steps were as follows. On the premise of adding the control variables, first, we tested the impact of tax propaganda on tax compliance attitude, subjective norms, perceived behavioral control, and tax compliance. Second, tax compliance attitude, subjective norms and perceived

behavioral control were taken as mediating variables to determine the degree of correlation between them and tax propaganda, tax compliance behavior intention, and the change in the degree of correlation between tax propaganda and tax compliance behavior intention after they were added. Third, tax service satisfaction was added to the mediating model to measure the adjustment effect on the model.

4. Results

4.1. Descriptive Statistics

This study conducted confirmatory factor analysis on six latent variables: tax propaganda (TP), tax compliance intention (TCI), tax compliance attitude (CA), tax compliance subjective norms (SN), tax compliance perceived

behavioral control (PBC) and tax service satisfaction (SS). It was found that the four-dimensional 13 items of TP form the same factor. All six latent variables, including TP, passed the Bartlett spherical test ($p < 0.001$), and the p -values of the factor loadings of all items were less than 0.001, which indicates that the six variables are meaningful to the interpretation of the measurement items. Cronbach's α was used to analyze the internal consistency of the variables. Correlation analysis was performed after all the variable items were packaged. As shown in Table 2, the Cronbach's α value of each latent variable is greater than 0.8, which meets the requirement of internal consistency. Correlation analysis shows that all the variables are significantly positively correlated, which is also in line with the theoretical expectations.

Table 2. Variables Characteristics and Correlations (N=304).

Variables	Items	α	TP	TCI	CA	SN	PBC	Mean	Standard deviation
TP	13	0.882	1					5.700	1.021
TCI	4	0.924	0.637***	1				6.130	1.428
CA	4	0.922	0.697***	0.697***	1			6.472	1.085
SN	3	0.950	0.792***	0.654***	0.705***	1		6.095	1.321
PBC	4	0.826	0.599***	0.479***	0.467***	0.538***	1	5.695	1.438
SS	4	0.943	0.748***	0.607***	0.692***	0.779***	0.518***	5.898	1.442

*** $p < 0.001$.

4.2. Regression Analyses

Linear regression analyses were used to test hypotheses with SPSS 24.0. After preliminary analysis, gender (1 = male) and monthly income (ordinal variable) were selected as the control variables. The results are shown in Table 3. Model (1) only considers the independent variables. According to the results, TP has a significant positive impact on TCI. Models (2), (3), and (4) use the mediating variables as the dependent variables. From the results, TP has significant positive effects on CA, SN and PBC. Model (5) incorporates the mediating variables into the regression analyses. From the results, CA, SN, and PBC all have significant positive effects on TCI, while the regression coefficient of TP is no longer significant.

Combined with the results of models (2), (3), (4), and (5), it is shown that the three variables of CA, SN, and PBC may completely mediate the positive impact of TP on TCI. In model (6), the independent variables include SS and the interaction term of TP \times SS. As a result, SS has a significant positive impact on TCI, and the interaction term of TP \times SS also has a significant negative impact on TCI. This result shows that SS may have a moderating effect on the positive relationship between TP and TCI. When taxpayers are less satisfied with tax services, tax propaganda is more effective in providing tax compliance. In addition, gender is significant in models (1), (5), and (6), suggesting that women have higher TCI. However, income is not significant in all models, which is basically consistent with theoretical expectations.

Table 3. Regression Analysis Results (N=304).

Models	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable	TCI	CA	SN	PBC	TCI	TCI
Independent variable						
TP	0.840***	0.723***	0.903***	0.877***	0.134	0.427***
Mediating variable						
CA					0.541***	
SN					0.217**	
PBC					0.112*	
Moderating variable						
SS						0.207**
TP \times SS						-0.103**
Control variable						
Gender	-0.298*	-0.117	-0.069	0.118	-0.233*	-0.286*
Income	-0.090	-0.026	-0.072	0.121	-0.074	-0.114
Constant	1.714	2.473	0.598	0.321	0.210	6.676
R ²	0.420	0.490	0.630	0.366	0.562	0.478
F	72.532***	96.054***	170.348***	57.783***	63.579***	54.546***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

4.3. Mediating Effect Analysis

SPSS 24.0 and Process2.16 were used to analyze the mediating effect. We used the recommended 95% confidence intervals (bias-corrected) and 5,000 bootstrap samples. Table 4 lists the mediating effects. Among them, the total indirect effect is significant, accounting for 84.17% of the total effect, and the

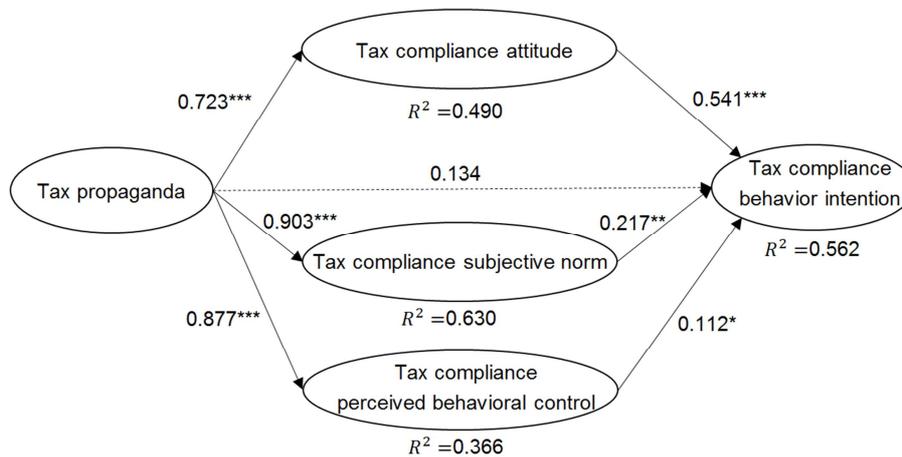
mediating effects of three mediating variables are also significant. This result supports H1-1, H1-2, and H1-3. At the same time, the direct effects are not significant, which indicates that the three mediating variables completely mediate the positive effect of TP on TCI, thereby supporting H1-4. Combining the above results, the mediating analysis supports H1.

Table 4. Mediating Effect.

	Mediating Effect	Standard error	t	95% confidence interval	
				LLCI	ULCI
Total effect	0.840	0.064	13.104***	0.714	0.967
Direct effect	0.134	0.098	1.363	-0.060	0.327
Total indirect effect	0.707	0.102	6.926***	0.521	0.920
CA	0.391	0.086	4.571***	0.224	0.559
SN	0.217	0.098	2.209*	0.039	0.437
PBC	0.098	0.051	1.903*	0.013	0.212

*p <.05, **p <.01, ***p <.001.

Figure 3 illustrates the complete mediating mechanism of the impact of TP on TCI and lists the regression results under the role of complete mediation. This result further supports H1.



Note: *p <.05, **p <.01, ***p <.001.

Figure 3. Complete Mediating Mechanism of Tax Propaganda to Tax Compliance Intention.

4.4. Moderating Effect Analysis

SPSS 24.0 and Process2.16 were also used to analyze the moderating effect with recommended 95% confidence intervals (bias-corrected) and 5,000 bootstrap samples [35]. Considering the complete mediating mechanism of TP on TCI, we tested whether SS moderated the effect of TP on three mediating variables, and we tested the effect of three mediating variables on TCI. Table 5 lists the moderating effects. SS has a significant

moderating effect on the positive relationship between TP, CA, and SN, and the moderating effect is negative. That is, for people with low satisfaction with tax services, the role of CA and SN is greater, while for people with high satisfaction with tax services, the mediating effect of the two variables is smaller. The moderating effect of SS on other relationships in the model is not significant. The above results support H2. However, overall, the moderating effect is relatively small.

Table 5. Moderating Effect of Tax Service Satisfaction.

X	Y	Moderating effect	Standard error	t	Significance	95% confidence interval	
						LLCI	ULCI
TP	CA	-0.095	0.023	-4.135	***	-0.138	-0.047
	SN	-0.016	0.010	-1.638	*	-0.039	-0.002
	PBC	0.005	0.005	0.891		-0.003	0.018
CA	TCI	-0.0578	0.039	-1.50		-0.112	0.043
SN		0.043	0.056	0.760		-0.111	0.116
PBC		0.021	0.033	0.628		-0.034	0.098

*p <.05, **p <.01, ***p <.001.

5. Discussion

In July 2018, the General Office of the Central Committee of the Communist Party of China and the General Office of the State Council issued the "Reform Plan for Tax Collection and Administration System". Some of the main goals of this reform are to adhere to the convenience of the people, to benefit the people and to build a service-oriented tax authority that the people are satisfied with. By providing more high-quality, efficient and convenient services, the aim is to improve tax compliance and social satisfaction, and thus strengthen tax administration capabilities. However, the fundamental reform of the tax collection and administration system and the specific content of service upgrades and optimizations need to be disseminated to taxpayers faster, more widely and more deeply through tax propaganda. At the same time, propaganda is obviously a "necessary instrument for the State and the authorities" [23], and tax propaganda itself is also an important part of tax service optimization. In this context, it is important to have a deep understanding of the mechanism of tax propaganda on tax compliance.

Although the importance of tax propaganda has been deeply recognized by tax collection and administration practitioners and scholars, the affecting mechanism of tax propaganda still lacks empirical study support. This study makes an important contribution to this area.

First, the TPB can well explain the effect of tax propaganda on taxpayer compliance. The empirical results of this study show that the TPB as a whole explains 55% of the variance in tax compliance intention, which exceeds the level of 39% of the explained behavioral intention variance obtained from the meta-analysis of the TPB [17]. This result shows that TPB has a very strong explanatory power for the mechanism of tax propaganda on tax compliance. The TPB is currently the most successful theory of behavior mechanisms, as supported by most research results. It is not surprising that the affecting mechanism of tax propaganda conforms to the TPB and is also consistent with the results of empirical research in other areas [9, 60, 55]. Similar to the results of this article, a survey of 236 accounting professionals from Paraíba and Santa Catarina showed that attitudes, subjective norms and the perception of control were statistically significant in relation to behavioral intentions and that they presented as strong predictors of behavior in relation to tax compliance, which demonstrates the theoretical validity of the TPB [53]. The TPB can be used not only to explain and predict behavior but also to intervene in behavior. Therefore, the tax compliance mechanism established in this study has important practical value for tax propaganda.

Second, tax compliance attitude, subjective norms and perceived behavioral control completely mediate the impact of tax propaganda on tax compliance intention, which shows the dominance of this mechanism; that is, the impact of tax propaganda is achieved through three channels on taxpayer intention. The first channel is attitude. Propaganda primarily affects the attitude of taxpayers and enhances taxpayers'

awareness of taxation. Taxpayers must not only recognize taxation as valuable and useful from an instrumental perspective but also accept taxation emotionally and be proud and pleased to pay taxes in accordance with the law. By testing the importance of tax and welfare rules based on cultural attitudes and institutional structures, scholars have found that attitudes towards tax acceptance or non-acceptance will affect tax compliance, which is similar to the results of this study [54]. The more positive a taxpayer's attitude towards paying tax and working with the tax authorities, the greater their willingness to pay taxes [51]. The second channel is subjective norms. Tax propaganda should also create a social atmosphere for tax compliance and promote the formation of a high-compliance culture, as well as social pressures to punish tax violations. Taxpayers' judgment of the compliance of others has a strong impact on their intention to pay taxes; that is, citizens seem more willing to comply as long as they believe that compliance is widespread and, thus, an accepted social norm [5]. Based on self-categorization theory, people are more likely to be influenced by others and internalize others' viewpoints and behavioral tendencies into their true personal convictions [60]. The third channel is perceived behavioral control. Having a voice and an accountability system are perceived grounds for tax compliance or nontax compliance [52]. Therefore, tax propaganda should be closely combined with tax services and consultations; it should focus on taxpayers' concerns, difficulties and doubts, increase taxpayers' sense of participation in the tax collection process, protect taxpayers' voice and accountability rights, and encourage taxpayers to build confidence in tax compliance and be vigilant against tax evasion. In short, as the formats can be continuously innovated, tax propaganda should be targeted as being not only for propaganda; rather, the purpose and content of the propaganda should be focused on three aspects: tax attitudes, subjective norms and perceived behavioral control.

Third, tax compliance attitudes, subjective norms and perceived behavioral control are not equally important. The results of the mediating analysis in this study showed that the mediating effects of attitude, subjective norms and perceived behavioral control accounted for 46.55%, 25.83%, and 11.67% of the total effect, respectively. Therefore, tax compliance attitude is the most important mediating variable. The role of subjective norms is only half that of attitude, while perceived behavioral control has less than half the role of subjective norms. This outcome is not only related to TPB, which is a theory developed from the relationship between attitude and behavior, but it is also related to taxation behavior because it involves direct benefits and losses and depends more on individual rational decision-making. In addition, empirical evidence has shown that the combination of coercive - based and legitimacy - based interventions can reduce the negative effects of pure coercive - based interventions [30]. Therefore, the emphasis of tax propaganda is attitude, and its core is tax morality, that is, the intrinsic motivation of taxpayers to pay taxes at the psychological level. From this point of view, there

are three levels of emphasis on tax propaganda. The first level is the administration of taxes in good faith, which includes both taxpayers' good faith taxation and government and tax authorities' good faith tax collection. This is the basis for tax propaganda. The second level is that taxpayers should pay taxes according to law. Tax laws and policies have always been the central content of tax propaganda. The third level is the shame of illegal tax evasion, tax arrears and tax resistance. Thus, tax propaganda must be both advocacy and condemnation.

Fourth, this study attaches importance to tax services. Although tax propaganda is also a service in a broad sense, tax services place more emphasis on directly providing a good tax service experience for taxpayers. The results of the moderating analysis of this study show that tax service satisfaction negatively moderates the mediating effect of attitude and subjective norms. Although the moderating effect is relatively small, it cannot be ignored. For groups with low satisfaction with tax services, the mediating role of attitude and subjective norms is greater, while for groups with high satisfaction with tax services, the role of attitude and subjective norms is smaller. The mutual harmony between the taxpayer and the tax authorities can be helpful in improving the level of tax compliance of the taxpayer [26]. Previous studies have also shown that if taxpayers are satisfied with the cost and efficiency of government work when paying related taxes, it will be helpful to the implementation of tax policies [38]. Therefore, it can be considered that doing a good job in tax services can make taxpayers more satisfied, which can more effectively improve the effects of tax propaganda.

6. Conclusion

Our research has taken a step towards understanding the mechanism of tax propaganda on tax compliance. Based on the theory of planned behavior, this research shows that tax compliance attitude, subjective norms and perceived behavioral control mediate the relationship between tax propaganda and tax compliance behavior intention, while tax service satisfaction plays a moderating role. From a theoretical point of view, this study helps to close the gap regarding the affecting mechanism of tax propaganda on tax compliance. It proposes and preliminarily verifies the affecting mechanism of tax propaganda, which shows that tax propaganda has a certain complexity and is helpful in expanding the deep and comprehensive understanding of how tax propaganda affects tax compliance. From a practical point of view, this study focuses more on the public administration of tax compliance rather than an economic perspective, which has a more direct practical value for promoting tax administration reform in China.

There are still some limitations of this study. First, this study uses tax compliance intention to predict tax compliance. Accurate and real data on tax compliance behavior can only be obtained from tax authorities [30]. Due to limited conditions, this study only measures tax compliance behavior intention. Although there is a high correlation between

intention and behavior, it is generally believed that there is still considerable behavioral variance that cannot be explained by intention [21]. Thus, it is necessary for future studies to extend further toward tax compliance behavior. Second, the measurement of tax propaganda in this study was not divided into four dimensions as expected but was presented as the same measurement variable. Further research is needed on tax propaganda measures. Third, the sample of this study consists of individual business taxpayers, and it is necessary to be cautious about extending the conclusions to other types of taxpayers.

Based on the limitations of this article, there are several possible directions that need further study. First, future research could further explore the impact of tax propaganda on tax compliance behavior. In fact, due to complex tax laws, taxpayers themselves often do not know whether they are honest or dishonest [45]. Some people think they are honest but actually evade taxes, while others report that they evade taxes but are actually honest [30]. Therefore, to study tax compliance, a variety of data collection methods, such as experiments and qualitative methods, could be used to understand the motivation and behavior of self-reporting. Second, we could research and develop the measurement scale of tax propaganda locally. As early as World War II, to expand the income tax from a class tax to a mass tax, the US Treasury and other agencies used many propaganda methods to persuade new US taxpayers to believe in the legitimacy of their own burdens and improve tax compliance [41]. However, there are few widely used scales to measure tax propaganda. Therefore, it is necessary to comprehensively measure tax propaganda from multiple perspectives and determine a scale that is in line with China's national conditions. Third, enterprises are important taxpayers, and tax evasion by enterprises is a common phenomenon in the world [48]. However, this article only measures individual industrial and commercial taxpayers, not other taxpayers. Consequently, the research scope could be expanded to further verify and promote the research results of this study.

Nevertheless, this study provides a possible direction for the propaganda focus and the core of tax authorities. We hope that we can inspire future work and further study the influencing factors and mechanisms of promoting tax compliance.

References

- [1] Ajzen, I. 1991. "The Theory of Planned Behavior." *Organizational Behavior and Human Decision Processes* 50: 179-211.
- [2] Ajzen, I., and M. Fishbein. 1980. *Understanding Attitudes and Predicting Social Behavior*. Upper Saddle River, USA: Prentice-Hall Press.
- [3] Allingham, M. G., and A. Sandmo. 1972. "Income Tax Evasion: A Theoretical Analysis." *Journal of Public Economics* 1: 323-38.
- [4] Alm, J., B. R. Jackson, and M. McKee. 1993. "Fiscal Exchange, Collective Decision Institutions, and Tax Compliance." *Journal of Economic Behavior & Organization* 22: 285-303.

- [5] Alm, J., J. Martinez-Vazque, and B. Torgler. 2016. "Russian Attitudes Toward Paying Taxes-Before, During, and after the Transition." *International Journal of Social Economics* 33: 832-57.
- [6] Auerbach, D., J. Holtzblatt, P. Jacobs, A. Minicozzi, P. Moomau, and C. White. 2010. "Will Health Insurance Mandates Increase Coverage? Synthesizing Perspectives from Health, Tax, and Behavioral Economics." *National Tax Journal* 63: 659-80.
- [7] Bai Feifei, Zhang Chaoyang, and Zhang Nina, "Xiangyang Innovative Tax Propaganda Forms Use Animation to Introduce Taxpayers' Business Tax to Increase", Jingchu Network, April 5, 2016. <http://news.cnhubei.com/xw/hb/xy/201604/t3586874.shtml>, from July 25, 2018.
- [8] Becker, G. S. 1995. *Economic Analysis of Human Behavior-new Edition*. Shanghai, China: Sanlian Bookstore Shanghai Branch.
- [9] Bobek, D. D., and R. C. Hatfield. 2003. "An Investigation of the Theory of Planned Behavior and the Role of Moral Obligation in Tax Compliance." *Behavioral Research in Accounting* 15: 13-38.
- [10] Brown, L., and S. Oronde. 2020. "Taxpayer Service Provision and Tax Compliance: Evidence for Large Taxpayers in Jamaica." *Public Finance Review* 48: 250-77.
- [11] Chang, O. H., and J. J. Schultz. 1990. "The Income Tax Withholding Phenomenon: Evidence from TCMF Data." *Journal of the American Taxation Association* 12: 88-93.
- [12] Chen, J. 2002. "Exploring Ways to Strengthen Tax Collection and Management from the Choice of Taxpayers." *Chongqing Administration: Public Forum* 2: 65-7.
- [13] Chen, J. 2016. "The Connotation, Measurement and Characteristics of Citizens' Awareness of Tax Compliance." *Tax and Economic Research* 2: 16-21.
- [14] Chirico, M., R. Inman, C. Loeffler, J. MacDonald, and H. Sieg. 2019. "Deterring Property Tax Delinquency in Philadelphia: An Experimental Evaluation of Nudge Strategies." *National Tax Journal* 72: 479-506.
- [15] Chorvat, T. 2007. "Tax Compliance and the Neuroeconomics of Intertemporal Substitution." *National Tax Journal* 60: 577-88.
- [16] Clotfelter, C. T. 1983. "Tax Evasion and Tax Rates: An Analysis of Individual Returns." *The Review of Economics and Statistics* 65: 363-73.
- [17] Conner, M., and P. Sparks. 2005. "Theory of Planned Behaviour and Health Behaviour." *Predicting Health Behaviour* 2: 121-62.
- [18] Copeland, P. V., and A. D. Cuccia. 2002. "Multiple Determinants of Framing Referents in Tax Reporting and Compliance." *Organizational Behavior and Human Decision Processes* 88: 499-526.
- [19] Cyan, M. R., A. M. Koumpias, and J. Martinez-Vazquez. 2017. "The Effects of Mass Media Campaigns on Individual Attitudes Towards Tax Compliance; Quasi-experimental Evidence from Survey Data in Pakistan." *Journal of Behavioral and Experimental Economics* 70: 10-22.
- [20] Dhimi, S., and A. Al-Nowaihi. 2007. "Why Do People Pay Taxes? Prospect Theory Versus Expected Utility Theory." *Journal of Economic Behavior & Organization* 64: 171-92.
- [21] Duan, W., and G. Jiang. 2008. "A Review of the Theory of Planned Behavior." *Advances in Psychological Science* 16: 315-20.
- [22] Eagly, A. H., and S. Chaiken. 1993. *The Psychology of Attitudes*. New York, USA: Harcourt Brace Jovanovich College Publishers.
- [23] Ellul, J. 1973. *Propaganda: The Formation of Men's Attitudes*. New York, USA: Vintage Books.
- [24] Eriksen, K., and L. Fallan. 1996. "Tax Knowledge and Attitudes Towards Taxation; A Report on a Quasi-experiment." *Journal of Economic Psychology* 17: 387-402.
- [25] Fan, Z., and B. Tian. 2013. "Tax Competition, Tax Enforcement and Tax Avoidance." *Economic Research Journal* 6: 99-111.
- [26] Feld, L. P., and B. S. Frey. 2007. "Tax Compliance as the Result of a Psychological Tax Contract: The Role of Incentives and Responsive Regulation." *Law & Policy* 29: 102-20.
- [27] Field, A. 2013. *Discovering Statistics Using IBM SPSS Statistics*. London, England: Sage.
- [28] Forest, A., and S. M. Sheffrin. 2002. "Complexity and Compliance: An Empirical Investigation." *National Tax Journal* 55: 75-88.
- [29] Francis, J., M. P. Eccles, M. Johnston, A. E. Walker, J. Grimshaw, and F. Robbie. 2004. *Constructing Questionnaires Based on the Theory of Planned Behaviour: A Manual for Health Services Researchers*. University of Newcastle Upon Tyne, England: Centre for Health Services Research.
- [30] Gangl, K., and B. Torgler. 2020. "How to Achieve Tax Compliance by the Wealthy: A Review of the Literature and Agenda for Policy." *Social Issues and Policy Review* online.
- [31] Gangl, K., E. Hofmann, and E. Kirchler. 2015. "Tax Authorities' Interaction with Taxpayers: A Conception of Compliance in Social Dilemmas by Power and Trust." *New Ideas in Psychology* 37: 13-23.
- [32] Gu, C. 2009. "Theories of Tax Compliance and its Implication-Based on Allingham-Sandmo Model." *Finance & Trade Economics* 3: 67-71.
- [33] Gupta, R. 2015. "Relational Impact of Tax Practitioners' Behavioural Interaction and Service Satisfaction: Evidence from New Zealand." *Ejournal of Tax Research* 13: 76-107.
- [34] Hartl, B., K. Erich, and M. Stephan. 2017. "Mental Accounting and Tax Compliance." *Public Finance Review* 45: 118-39.
- [35] Hayes, J. R. 2013. *The Complete Problem Solver*. London, England: Routledge.
- [36] Hong, L. 2017. "The Impact of Taxpayer Risk Preference on Compliance Decisions: An Empirical Study Based on Prospect Theory." *Tax Research* 1: 99-103.
- [37] Huang, F., W. Liu, and R. Zhang. 2017. "Research on the Impact of Prepayment System of Personal Income Tax on Tax Compliance-Analysis of Psychological Effect Based on Prospect Theory." *Modern Economic Science* 39: 88-95.

- [38] Hwang, J. 2016. "The Introducing of Electronic Tax Invoice System as a Factor to User Satisfaction and Tax Payment Compliance." *Journal of CEO and Management Studies* 19: 267-88.
- [39] Jia, S. 2016. "Measurement and Analysis of Tax Loss in China and Discussion on Governance Countermeasures." *Friends of Accounting* 13: 2-9.
- [40] Jin Hui, Shi Dongdong, Jia Xiaolei, "Popularizing the Law of" Cartoon "Tax in" Selling Meng "is Popular", The Beijing News, December 12, 2017. <http://finance.sina.com.cn/roll/2017-12-12/doc-ifypnqvn3302434.shtml>, from July 25, 2018.
- [41] Jones, C. C. 1989. "Class Tax to Mass Tax: The Role of Propaganda in the Expansion of the Income Tax During World War II." *Buffalo Law Review* 37: 685-737.
- [42] Kahneman, D. and A. Tversky. 1979. "On the Interpretation of Intuitive Probability: A Reply to Jonathan Cohen." *Cognition* 7: 409-11.
- [43] Kasper, M., C. Kogler, and E. Kirchler. 2015. "Tax Policy and the News: An Empirical Analysis of Taxpayers' Perceptions of Tax-related Media Coverage and its Impact on Tax Compliance." *Journal of Behavioral and Experimental Economics* 54: 58-63.
- [44] Kirchler, E. 2007. *The Economic Psychology of Tax Behaviour*. Cambridge, England: Cambridge University Press.
- [45] Kirchler, E., A. Niemirowski, and A. Wearing. 2006. "Shared Subjective Views, Intent to Cooperate and Tax Compliance: Similarities between Australian Taxpayers and Tax Officers." *Journal of Economic Psychology* 27: 502-17.
- [46] Liu, H., Y. Huang, and K. Yin. 2011. "Research on the Frame Effect of Individual Tax Compliance Decision in China." *Tax Research* 1: 89-92.
- [47] Lv, W., and H. Chen. 2015. "Tax Reduction Also Needs Fees Reduction: The Impact of Non-tax Burden on Corporate Tax Compliance." *Economic Perspectives* 6: 45-55.
- [48] Ma, G., and L. Li. 2012. "Government Size, Local Governance and Corporate Tax Evasion." *The Journal of World Economy* 6: 93-114.
- [49] Ma, Y. 2002. "Tax-payer's Compliance Theory and its Referential Significance." *Journal of Zhejiang Shuren University (Humanities and Social Sciences)* 2: 28-31.
- [50] Montano, D. E., and D. Kasprzyk. 2015. "Theory of Reasoned Action, Theory of Planned Behavior, and the Integrated Behavioral Model." *Health Behavior: Theory, Research and Practice* 70: 231.
- [51] Musimenta, D., S. Naigaga, J. Bananuka, and M. S. Najjuma. 2019. "Tax Compliance of Financial Services Firms: A Developing Economy Perspective." *Journal of Money Laundering Control* 22: 14-31.
- [52] Nkundabanyanga, S. Korutaro, P. Mvura, D. Nyamuyonjo, J. Opiso, and Z. Nakabuye. 2017. "Tax Compliance in a Developing Country: Understanding Taxpayers' Compliance Decision by their Perceptions." *Journal of Economic Studies* 44: 931-57.
- [53] Nobrega, C., P. Roberto, D. Bomfim, E. Truta, M. L. Filho, and P. Amilton. 2018. "Tax Compliance and Taxpayer Behavior: An Analysis of Factors Explaining Tax Observance in the Light of the Planned Behavior Theory." *Revista De Contabilidade & Controladoria* 10: 54-70.
- [54] Pampel, F., G. Andrighetto, and S. Steinmo. 2018. "How Institutions and Attitudes Shape Tax Compliance: A Cross-national Experiment and Survey." *Social Forces* 97: 1337-64.
- [55] Ramayah, T., Y. M. Yusoff, N. Jamaludin, and A. Ibrahim. 2009. "Applying the Theory of Planned Behavior (TPB) to Predict Internet Tax Filing Intentions." *International Journal of Management* 26: 272.
- [56] Ren X. 2013. "Public Service Satisfaction, Tax Equity and Tax Compliance-Evidence from China." *Economy and Management* 27: 5-12.
- [57] Schadewald, M. S. 1989. "Reference Point Effects in Taxpayer Decision Making." *The Journal of the American Taxation Association* 10: 68-84.
- [58] Torgler, B. 2005. "Tax Morale and Direct Democracy." *European Journal of Political Economy* 21: 525-31.
- [59] Torgler, B. 2007. *Tax Compliance and Tax Morale: A Theoretical and Empirical Analysis*. Cheltenham, England: Edward Elgar.
- [60] Wenzel, M. 2004. "An Analysis of Norm Processes in Tax Compliance." *Journal of Economic Psychology* 25: 213-28.
- [61] Wenzel, M. 2005. "Motivation or Rationalisation? Causal Relations between Ethics, Norms and Tax Compliance." *Journal of Economic Psychology* 26: 491-508.
- [62] Yang J. 2012. "Problems in Tax Propaganda in China and Countermeasures for Improvement." *Northern Economic* 12: 28-9.
- [63] Zeng Y. 2013. "On the Impact of Chinese Tax Culture on Tax Compliance." *Business Conditions* 32: 16.