

Analysis of Individual Income Tax Compliance in China from the Perspective of Behavioral Economics

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Abstract

As an essential theory for studying the decision-making of “actors,” behavior economics can effectively analyze the problem of individual income tax compliance from the perspective of taxpayers’ psychology, which is of great theoretical significance for improving taxpayers’ willingness to comply. From the prospect theory, endowment effect, and mental accounting, the 2018 individual income tax reform can help enhance the level of voluntary personal income tax compliance and strengthen the tax compliance level; maintaining tax publicity helps to increase habitual individual income tax compliance level, optimizing tax service helps to increase the level of cooperative individual income tax compliance. In the future, we can further optimize the design of individual income tax policies, intensify tax publicity, and improve the quality of tax services. In the future, we can further optimize the design of individual income tax policies, increase tax publicity, and improve the quality of tax services to increase individual income tax compliance.

KEYWORDS: Behavioral Economics; Tax Appliance; Prospect Theory

1 Introduction

As an essential part of China’s direct tax, improving tax compliance can help increase the proportion of direct tax revenue. As an essential theory to study the decision-making of “actors,” behavioral economics theory can effectively analyze the problem of individual tax compliance from the perspective of taxpayers’ psychology, which is of great theoretical significance to improving taxpayers’ tax compliance.

Behavioral economics is an interdisciplinary field covering economics, sociology, psychology (mainly cognitive and social psychology), and neuroscience. Behavioral economics argues that the “Hypothesis of Economic Man” in traditional economics ignores the influence of psychological and social environment on the economic decision-making of actors and should be based on psychology, from the psychological traits and behavioral characteristics of actors, and with the help of experimental economics methodology (laboratory experiments and field experiments) to revise the assumptions of traditional economic theories, to establish a unique individual decision-making model to analyze specific tax compliance. Establish a unique individual decision-making model to analyze specific economic behaviors and phenomena, thus complementing and expanding traditional economics. Prospect Theory (Kahneman et al., 1979)^[1], as the core theory of behavioral economics, not only makes up for the shortcomings of the traditional A-S model of tax compliance (Allingham et al., 1972)^[2] but also marks the birth of behavioral economics.

Subsequently, numerous economists conducted research based on the Prospect Theory. They achieved a series of research results, such as the Endowment Effect (Thaler, 1980)^[3], the Efficiency Wage Theory (Akerlof, 1982)^[4], Mental Accounting (Thaler, 1985)^[5], the Social Preference Theory (Kahneman et al., 1986)^[6], and the theory of Intertemporal Choice (Laibson, 1997)^[7], further enhancing the theoretical framework of behavioral economics.

With the gradual acceptance of behavioral economics, McCaffery and Slemrod (2006)^[8] took the lead in introducing the concept of behavioral public finance. They divided the research content of behavioral finance into three aspects. First, they affirm the limited rationality of taxpayers rather than complete rationality and explore the vital content of public finance in constructing the tax system, the mechanism of public goods provision, and the role of limited rationality. Second, they abandon the certainty criterion of taxpayers’ decision-making to explore how taxpayers’ choice preferences are affected by factors such as the decision-making environment and decision-making procedures and to analyze the specific changes in choice preferences in different periods and situations. Third, they focus on tax compliance, studying whether taxpayers are willing to pay taxes when the state has specific tax regulations and laws and examining the factors that influence and restrict tax compliance.

Based on existing research achievements, this paper first analyzes the necessity of analyzing individual income tax compliance from the behavioral economics perspective. Then, it explores individual income tax compliance from the perspective of Prospect Theory, Endowment Effect,

and Mental Accounting. Finally, it puts forward the policy suggestions to promote individual income tax compliance from the behavioral economics perspective.

2 The Necessity of Research on Individual Income Tax from the Perspective of Behavioral Economics

Research of individual income tax from the perspective of behavioral economics helps to break through the traditional “Economic Man” research paradigm of economics and better discover the influence of the tax system on taxpayers’ psychology and tax payment behaviors to enhance taxpayers’ tax compliance with a more optimal individual income tax system. A higher level of tax compliance and a more scientific individual income tax system will help to achieve a more desirable income redistribution effect. A more scientific individual income tax system will help to achieve a more desirable income redistribution effect. Individual income tax is essential to China’s tax reform and structural optimization. However, compared with most taxes in the modern tax system, individual income tax’s decision-making process has certain peculiarities. On one hand, the main body of taxpayers is natural persons, and the tax burden is borne by natural persons, which makes the sense of “tax pain” relatively strong. On the other hand, the tax decision mainly depends on individuals, and the decision-making chain is relatively short, which makes it challenging to form internal supervision and control like that of the corporate taxpayers. Research on individual income tax from the perspective of behavioral economics can provide a deeper understanding of taxpayer behavior and help design tax systems that better guide the tax compliance behavior of individuals.

3 Analysis of Individual Income Tax Compliance

3.1 Analysis Based on Prospect Theory

Prospect Theory proposes that actors will be influenced by the certainty effect (the certainty effect means that actors will tend to prefer choices with the certainty of return), the reflection effect (people focus on the change in wealth relative to a specific reference point rather than the value of the expected return of the final wealth; the reference point is the actor’s expectation of something).

From the perspective of Prospect Theory, China’s 2018 individual income tax reform, which raised the basic standard for deductions, introduced special additional deductions, established a tax model combining composite and categorical, and adjusted the tax rate structure, is

reflected as the certainty effect and the reflection effect of prospect theory, which enhances taxpayers’ positive expectations of the individual income tax reform, and is conducive to improving the level of individual income tax compliance.

First, this reform raised the basic deduction standard from 3,500 yuan/month to 60,000 yuan/year (5,000 yuan/month) and added six special additional deductions for children’s education, continuing education, medical treatment for major illnesses, interest on housing loans, housing rent, and support for the elderly, which are reflected in the deterministic effect of prospect theory. That is, all taxpayers with individual incomes above 3,500 yuan/month before the reform can benefit from this reform of increasing the basic deduction deduction standard; all taxpayers eligible for special additional deductions can benefit from the increase of these deductions. These deterministic contribute to higher levels of voluntary individual income tax compliance.

Second, this reform introduces the concept of “comprehensive income” and includes four types of income, including wages and salaries, remuneration for labor, and remuneration for articles and royalties, in the scope of individual income taxation, which is also reflected in the deterministic effect of prospect theory. For example, for those who use income from remuneration for labor as a single source of income, according to the original regulations, the expense deduction for income from remuneration for the labor of less than RMB 4,000 is only RMB 800 per occasion. The income from remuneration for labor can be deducted by 20% each time it is above RMB 4,000. Still, after it is included in the consolidated income, the expense deduction can be RMB 60,000/year, just like wages and salaries. It can be entitled to a special deduction, special additional deduction treatment and the applicable tax rate has been changed from 20%, 30%, and 40% in the past to a 7-tier super progressive tax rate, which increases the disposable income of taxpayers and brings them the certainty of gain. Third, this reform expanded the 3%, 10%, and 20% tax brackets and narrowed the 25% tax bracket, which reduced taxpayers’ tax burden and increased taxpayers’ disposable incomes and is similarly reflected in the certainty effect of prospect theory. For example, for taxpayers with monthly taxable income (after the deduction of “five insurance and one pension” and only considering the linkage between the increase of the basic expense deduction standard and the tax rate adjustment) of 5,000 to 8,000 yuan before the reform, the original tax rate of 10% applies, and the applicable tax rate is 3%; for taxpayers with monthly taxable income of 8,000 to 12,500 yuan before the reform, the original tax rate

of 20% applies, and the applicable tax rate is 20%. The applicable tax rate is 3%. Taxpayers with monthly taxable income of RMB 12,500 to 17,000 before the reform were subject to 25% tax rate, and now the applicable tax rate is 10%; taxpayers with monthly taxable income of RMB 17,000 to 30,000 before the reform were subject to 25% tax rate, and now the applicable tax rate is 20%; taxpayers with monthly taxable income of RMB 30,000 to 40,000 before the reform were subject to 30% tax rate, and now the applicable tax rate is 20%. For taxpayers with monthly taxable income of RMB 30,000 to 40,000 before the reform, the original tax rate of 30% applies, and now the applicable tax rate is 25%; for taxpayers with monthly taxable income of RMB 58,500 to 60,000 before the reform, the original tax rate of 35% applies, and now the applicable tax rate is 30%; for taxpayers with monthly taxable income of RMB 62,000 to 85,000 before the reform, the original tax rate of 45% applies, and now the applicable tax rate is 35%. Taxpayers have reduced their tax burden and increased their disposable income from the reduced level of applicable tax rates on pre-tax income. These increases in deterministic income due to the tax rate adjustments contribute to higher levels of voluntary tax compliance.

Fourthly, from a general perspective, the higher standard of deduction for basic deductions, the new special additional deductions, the change from the categorized taxation model to the categorized and individual income taxation model, and the structural adjustment of tax rates have effectively reduced the burden on taxpayers and increased their disposable income, so that taxpayers can enjoy the visible dividends of tax cuts, which also reflects prospect theory. These tax cuts are also reflected in the reflection effect of prospect theory. That is, under the prospect of benefit certainty, taxpayers take the original individual income tax burden as the “reference point” and regard the “tax cut” brought by this reform as the “benefit,” which enhances the positive expectation and helps to increase the tax burden. This enhances the positive expectation of the individual income tax reform and helps increase voluntary tax compliance.

In addition, Huang Fengyu (2022)^[9] established a tax compliance model based on prospect theory, choosing the point-in-time income of taxpayers after prepayment of taxes rather than their total pre-tax income as the “reference point” to judge the relative gains or losses of taxpayers with or without a prepayment system and at different levels of prepayment. The study shows that without a prepayment system, taxpayers’ non-compliance behavior can benefit them more; as the number of prepayments increases, the level of taxpayers’ compliance increases until the prepayment is higher than the statutory

taxable amount and taxpayers get a tax refund at the time of remittance when taxpayers’ economic gains and psychological satisfaction are at their highest. They show full tax compliance in their tax behavior. Therefore, the optimal tax prepayment system should make their prepayment slightly higher than their taxable amount. Voluntary tax compliance means that taxpayers voluntarily fulfill their individual income tax obligations and obey the management behavior of tax authorities and tax officials in line with legal norms.

3.2 Analysis Based on Endowment Effect

The endowment effect refers to the fact that once an actor possesses a certain item, he evaluates it much higher than before he possessed it. With the in-depth study of the endowment effect, Samuelson et al. (1988)^[10] found that it leads individuals to engage in habitual thinking, preferring to adhere to their existing mental frameworks and making decisions based on the current state of affairs, exhibiting reluctance to make changes. Habitual individual income tax compliance means that taxpayers naturally develop the awareness and habit of complying with the tax law, which provides spiritual motivation for taxpayers’ tax compliance behavior. Publicity strengthens awareness and develops habits. This reform was assisted by promotional efforts to enhance taxpayers’ knowledge, understanding, and commitment to adhering to tax laws, thus increasing taxpayers’ emphasis on honest taxpaying. These efforts aimed to cultivate habitual thinking in taxpayers through information dissemination, leading to habitual compliance with tax obligations and generating the endowment effect. On the one hand, the tax department publicizes the 2018 individual income tax reform policy through the tax authorities’ websites, electronic tax service halls, WeChat public accounts, and other channels to help taxpayers understand the content of this tax reform promptly and master the principles of individual income tax calculation, to make it easy for the taxpayers to understand the terminology, to think through the basic principles, and to calculate the tax payable, and to make it easy for taxpayers to understand the process of knowledge related to individual income tax, to make clear their tax obligations and to develop an endowment effect on the tax payable. In understanding the knowledge related to individual income tax, the taxpayers will be clear about their tax obligations and develop the concept and habit of individual income tax compliance, forming the endowment effect, thus promoting the taxpayers’ tax compliance and improving the level of chronic tax compliance. On the other hand, the tax bureau has increased the publicity of individual income tax, making full use of the advantages of modern media such as newspapers, radio, television, and the

Internet, which have a wide dissemination surface and intuitive image, guiding social forces to participate widely and forming the publicity synergy of the whole society, and relying on the streets, communities, and neighborhood committees, to do a good job in the publicity and guidance of the 2018 individual income tax reform, to raise the awareness of the whole society's honesty and integrity, and to form a good culture of reverence for honesty and integrity. The effective implementation of these measures has fully mobilized the strength of the whole society in its efforts to strengthen the publicity of paying taxes in good faith by the law, encouraged and guided taxpayers to pay more attention to paying taxes in good faith, so that taxpayers' awareness of paying taxes in good faith has been further enhanced, and boosted the taxpayers in the process of strengthening their awareness of paying taxes in good faith to develop good tax payment habits, forming an endowment effect and promoting habitual tax compliance.

3.3 Analysis Based on Mental Accounting

Mental accounting is how individuals encode, categorize, and evaluate wealth, consumption, and savings based on subjective perceptions. With further research on mental accounting, Li Aimei et al. (2007)^[11] found that, in addition to wealth, consumption, and savings, actors will include the feeling of satisfying their needs into the mental account of the unconventional extra income, and it has an incentive effect on the actors' decision-making. Optimizing individual income tax services can improve taxpayers' satisfaction and convenience, which will be incorporated into the unconventional extra income of their mental accounts, helping taxpayers to improve their tax compliance ability and level of tax compliance, thus reducing the collection and management costs of the tax authorities, and forming a win-win mechanism of mutual assistance between taxpayers and taxpayers. Therefore, optimizing tax services can help promote tax compliance. Tax authorities have vigorously promoted non-contact tax handling and enhanced the degree of tax handling facilitation to promote the smooth landing of the reform. For example, it has fully realized the e-Tax Bureau and individual income tax app for individual comprehensive income special deduction filing, special additional deduction filing, annual remittance declaration, as well as monthly or quarterly prepayment declaration of operating income and annual remittance declaration, etc., which has effectively shortened the time for tax handling, simplified the tax handling process and facilitated taxpayers' handling of individual income tax declarations and other related businesses; applied "Internet + Taxation," through the service platform, provides taxpayers with

services such as tax consultation, tax-related inquiry, individual income tax lecture, online interaction, etc., and solves the problems of taxpayers' lack of understanding of the policies and difficulties in operation, etc. These tax services effectively reduce the burden of individual income tax self-assessment. These tax services effectively reduce the cost of learning and time for compliance brought about by the self-declaration mode of individual income tax, meet taxpayers' psychological needs for more convenient tax declarations, more timely operational counseling, and more professional answers to difficulties, and improve taxpayers' satisfaction and convenience. These feelings will be included in the unconventional extra income of the mental account. They will create positive incentives for taxpayers' behaviors, guiding them to actively, truthfully, and completely fill in related information, thus improving tax compliance.

4 Policy Recommendations

4.1 Optimizing Individual Income Tax Policy

On the one hand, the scope of the current individual income tax includes only income from wages and salaries, labor remuneration, articles and royalties. In contrast, income from interest, dividends, and bonuses, income from the leasing of property and income from property transfer are not included, and are still levied at 20 percent per tax. This paper suggests that interest, dividend, bonus income, property leasing income, and property transfer income should be included in the scope of comprehensive income taxation. On the other hand, this paper suggests that the top marginal tax rate for comprehensive income be reduced to 35 percent, the same as the top marginal tax rate for business income. Based on the existing deductions, lowering the current top marginal tax rate by ten percentage points can add more gains to the reference point for high-income taxpayers and expand the scope of individual income tax while building a more certain benefit for taxpayers with diversified sources of income. It can also build a more certain benefit prospect for taxpayers with diversified sources of income while expanding the scope of individual income tax, thus further improving the level of individual tax compliance.

4.2 Increase Tax Awareness

The Chinese government should continue to expand the publicity and influence of individual income tax reform. New media advantages can be further used to expand the publicity and influence of the individual tax reform to enhance taxpayers' awareness of tax payment and improve chronic personal tax compliance. For example, under the premise of ensuring the authority and accuracy

of the policy, the State Administration of Taxation can authorize short-video media companies with a strong influence to popularize the new policy on individual income tax by forwarding official videos, self-produced knowledge classrooms and small videos of scenarios, etc., and publicize the features of individual income tax and the specific implementation of special additional deductions, to enhance taxpayers' sense of gain. At the same time, platforms such as the official Sina Weibo and WeChat public accounts can forward the authorized companies' homemade knowledge classes and small videos of situational dramas and drive the forwarding and promotion of the relevant Weibo accounts and WeChat public accounts to expand the publicity of the individual income tax policy and to help taxpayers to deepen their understanding and knowledge of the individual income tax system subtly, thereby strengthening their tax consciousness and habitual compliance.

4.3 Enhance the Quality of Tax Services

The tax authorities should carry out regular surveys on the satisfaction and convenience of individual income tax payment services, through paper questionnaires and online questionnaires, to understand the obstacles encountered by taxpayers in the process of paying taxes, to solicit taxpayers' opinions and suggestions on tax payment services, and to find out the focus point of improving the tax payment services, to enhance the quality of tax payment services, and to further improve the level of tax compliance.

5 Conclusion

Individual income tax compliance is not only related to the certainty of benefits felt by individuals from the changes in the tax system but also to the individual's knowledge and understanding of the individual income tax, as well as the convenience of paying the individual income tax. The 2018 individual income tax reform has made taxpayers feel the certainty of benefits through the increase in the standard of expense deductions and the increase in special additional deductions, promoting voluntary individual income tax compliance. Under the tax bureau's vigorous publicity, taxpayers have a fuller understanding of individual income tax, which promotes

chronic individual income tax compliance. At the same time, the tax department's use of new technology and the provision of in-place tax services have increased the unconventional extra income in taxpayers' mental accounts, which promotes cooperative individual income tax compliance. In the future, we should continue optimizing individual income tax design, increasing tax publicity, and improving the quality of tax services.

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