

Theoretical Study on Effects of Reference-Dependent Preferences on Labor Supply Decisions under Personal Income Taxation

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Abstract. Based on the reference point dependence theory in behavioral economics, this paper explores the labor supply decision-making of workers under the individual income tax system. Traditional labor economics holds that workers are rational and decide their working hours based only on their absolute income and the utility of their leisure, but this ignores the influence of reference points on people in reality. Drawing on the prospect theory proposed by Kahneman and Tversky, this paper establishes a labor supply theory model that includes reference point dependency preferences, taking the gain or loss of after-tax income relative to the reference point as the main factor of the laborer's utility function. The results show that when after-tax income is less than the reference point, workers have a loss aversion tendency and will increase their working hours to make up for the "loss". When the after-tax income is higher than the reference point, workers are less interested in more money and may reduce their working hours. By studying the effects of different tax rate structures, the formation of reference points (historical income, social comparison, expected income), and the loss aversion coefficient on the elasticity of labor supply, it can be concluded that reference point dependence preference leads to the non-linear and asymmetric characteristics of the labor supply curve, and obvious "ratchet effect" and "income target effect" occur in tax system reform. The findings of this paper help to understand the mechanism of action of personal income tax policy from a micro perspective, and are of great value for improving tax system design, estimating the impact of tax reform on labor supply, and enhancing the efficiency of tax policy.

Keywords: Reference Point Dependence, Labor Supply, Personal Income Tax, Prospect Theory.

1. Introduction

A Theoretical study on the Impact of Reference Point Dependency Preference on Personal Income Tax Labor Supply decisions

Personal income tax is an important part of the modern tax system, an important source of national fiscal revenue, and an important means of regulating income distribution and achieving social equity. Between 2019 and 2023, China's personal income tax revenue rose from 1,038.8 billion yuan to 1,477.5 billion yuan, accounting for about 8% of total tax revenue, according to data released by the State Taxation Administration. Since the implementation of the individual income tax reform in 2019, the tax system reform has had a significant impact on the labor market, but traditional labor economics has struggled to provide a reasonable explanation for how workers will react after the tax reform. The traditional labor supply theory is based on the rational man hypothesis that workers make optimal labor supply choices based on the real wage rate after tax and the marginal substitution rate of leisure. However, a large number of empirical studies have found that workers usually show asymmetry and path dependence in response to changes in tax policies, which cannot be well explained by the traditional theory. The development of behavioral economics helps explain this problem, especially the prospect theory proposed by Kahneman and Tversky in 1979, which shows that people are influenced by reference points when making decisions and have loss aversion.

The application of behavioral economics ideas to public finance research has become a hot topic in recent years. When workers consider after-tax income, they do not only care about their absolute income but compare it with a psychological reference point, which could be past income levels, the income of their peers, or their own expected goals. If the actual after-tax income is lower than the reference point, the worker will feel "loss" because people are more sensitive to loss than to the same amount of gain, so the worker will increase working hours to make up for the loss. Conversely, if

income is higher than the reference point, then diminishing marginal utility will make workers less sensitive to more income, thereby reducing the supply of labor and increasing leisure consumption. This reference point dependence preference has a significant impact on labor supply decisions under the personal income tax system, not only changing the shape of the labor supply curve, but also potentially causing a "ratchet effect" in tax reform, where the increase in labor supply resulting from tax cuts is less than the decrease in labor supply resulting from tax increases. This paper attempts to establish a labor supply model that includes a reference point dependence preference, and on this basis, explores how different tax system parameters, the formation of reference points, and behavioral parameters affect labor supply behavior, in order to provide better references for the improvement of the personal income tax system.

2. Literature Review and Theoretical Basis

2.1 Review of Traditional Labor Supply Theory

The traditional labor supply theory is based on the rational man assumption in neoclassical economics, that is, when people make labor supply decisions, they consider the utility brought by labor and leisure, and aim to maximize utility. In this case, personal income tax, as an important influencing factor, affects individuals' budgetary constraints and relative prices, thereby exerting substitution and income effects on labor supply. Zhao et al. (2025), when [5] analyzing the impact of the 2019 individual income tax reform on the labor supply, summarized the traditional theory and argued that the individual income tax reform reduced the tax burden and thus increased the disposable income of residents, thereby having a significant impact on the labor supply. This also indicates that the traditional theory has some explanatory power for the relationship between tax policy and labor supply, and provides a certain theoretical basis and empirical support for later researchers.

In the traditional labor supply theory, substitution effect and income effect are important factors in analyzing the impact of individual income tax policy. Wang et al. (2024) explored the impact of individual income tax reform on labor supply from the perspective [9] of adjusting costs and benefits, namely the role of substitution effect and income effect. When the individual income tax rate drops, the net income from labor rises relative to the price of leisure, thus creating a substitution effect that encourages people to increase the supply of labor. And the increase in real income resulting from the reduction in tax burden has an income effect, making people willing to reduce their working hours to gain more leisure time. The relationship between the magnitudes of these two effects determines the ultimate trend of changes in labor supply. Using theoretical models and empirical results, the authors argue that the traditional theory can better explain the impact of individual income tax reform on labor supply, but the degree of influence of the two effects varies among different income brackets.

Traditional theories have also developed in terms of gender differences and family decision-making. He et al. (2025) analyzed the impact [6] of personal income tax reform on the female labor supply and concluded that the response of the female labor supply to personal income tax reform is different from that of men. Because women do more housework and care for children, the supply of female labor is more constrained by family factors. Moreover, personal income tax reform affects women's labor engagement and working hours by influencing household budget constraints and the income gap between spouses. This further illustrates how traditional labor supply theories apply across different populations and also reflects the gender differences in the effects of tax policies.

Empirical studies on the labor supply effect of individual income tax reform in recent years have further deepened the understanding of traditional theories. Xu Dongshuo (2024) conducted a systematic study [8] on the labor supply effect of the new individual income tax system reform, using econometric methods such as differin-differences to analyze the effects of reform measures such as the combination of comprehensive and classified tax system and the increase of the basic deduction standard. Wu Yan (2024) also focused on the labor supply effect [10] of the new round of individual income tax reform and found that the reform had different impacts on different income brackets, with higher labor supply elasticity among middle - and low-income groups. Shao Ruisi (2023) further

illustrated the impact of individual income tax reduction on labor supply and income distribution based on the quasi-natural experiment [11] of individual income tax reform in 2018. The above research indicates that although the traditional labor supply theory can serve as a starting point for understanding the effect of individual income tax policies, it cannot well explain the various situations seen in reality and the differences among different groups of people, and new theories such as behavioral economics need to be combined to enrich and develop.

2.2 Context of the Development of the Theory of Reference Point Dependency Preference

Reference point dependent preference theory originated from behavioral economics' breakthrough of the traditional rational person assumption, and its development has gone through a process from theoretical construction to empirical testing and then to application expansion. The theory holds that people do not make decisions based on the magnitude of absolute utility, but rather on gains and losses relative to a reference point, and that people are more sensitive to losses. This theory provides a good explanation for some of the phenomena in the labor supply and also has good explanatory power in studying how taxes affect people's work.

Crawford and Meng, in their 2011 study of the labor supply of New York taxi drivers, systematically applied the theory of reference point dependence preference to the field of labor economics and proposed a model of reference dependence that includes rational expectation goals. They found that taxi drivers have a strong reference point dependence when setting income and working hours targets, and they tend to stop working when their actual income approaches or reaches the reference income level, a behavior that cannot be explained by the traditional intertemporal substitution effect. The pioneering study not only revealed the impact of reference points on labor supply, but also pointed the way for further research. Crawford and Meng's model suggests that reference points do not remain constant but change according to rational expectations, which has played a significant role in understanding how reference points are formed for later researchers.

Bernasconi et al. further developed the application [2] of the reference point dependence theory to taxation in their 2014 study, discussing how tax burden affects individual tax evasion through the reference point dependence mechanism. They argue that if an increase in tax burden causes an individual's disposable income to fall below their reference income level, the individual will have a greater negative feeling due to the psychological reason of loss aversion and may resort to tax evasion to maintain their reference income level. This indicates that reference point dependency preferences not only affect whether an individual is willing to provide more labor, but also whether an individual is willing to comply with relevant laws and regulations for tax payment. At the same time, scholars such as Bernasconi have introduced the concept [2] of hedonic adaptation, where an individual's reference point is constantly adjusted in response to changes in income levels, which leads to the difference between the long-term and short-term effects of tax policies.

In recent years, domestic scholars have achieved significant results in the localization of the theory of reference point dependency preference. In 2024, Lin Songqi, Guo Fengming, and Zhang Shiwei studied [4] the labor supply behavior of Chinese workers from the perspective of reference dependence preference, proposed a theoretical model that fits the Chinese labor market, and elaborated in detail how various ways of reference point formation, such as past income levels, peer effects, and social norms, affect an individual's reference income. The findings show that the reference points set by Chinese workers have strong social comparability, and relative income status has an important influence on labor supply. Guo Fengming and Wen Xiaobin's 2026 study of flexible workers also confirmed the effectiveness [4] of the reference-dependent preference theory for non-standard employment relationships, as flexible workers have a greater degree of freedom in both working hours and income, making their labor supply decisions more sensitive to changes in the reference point. These localized studies not only enrich the application scenarios of the reference point dependence theory, but also provide an important theoretical basis for the impact of China's individual income tax policy on labor supply.

2.3 Research Status on the Impact of Personal Income Tax on Labor Supply

Personal income tax is one of the important fiscal means to regulate income distribution and influence labor supply, and its impact on labor supply has always been a hot topic in academic research. In recent years, with the multiple reforms of the personal income tax system in China, domestic scholars have conducted extensive research on the impact of tax system reforms on labor supply and have made significant contributions to the microeconomic effects of tax policies.

Overall, the individual income tax reform in 2019 was an important topic of concern for scholars. Zhao et al. (2025) used micro-survey data to study the impact [5] of individual income tax reform on labor supply in 2019, arguing that the tax reform raised the basic deduction standard and optimized the tax rate structure, which greatly reduced the burden on middle - and low-income earners and thus played a certain promoting role in labor supply. Wu Yan (2024) also argues [10] that the new round of individual income tax reform, with the implementation of the comprehensive income tax system and the introduction of special additional deductions, has produced different labor supply effects among different income brackets. The labor participation rate and working hours of the middle-income group have increased, which provides a basis for evaluating the effect of the tax system reform.

From the perspective of labor supply heterogeneity, different groups have different responses to the individual income tax reform. He Wei et al. (2025) studied the impact [6] of personal income tax reform on the labor supply of women. The results showed that tax reform had a greater promoting effect on the labor participation of married women, mainly because the special additional deduction policy reduced the family tax burden and alleviated the choice pressure of women between family and work. Shao Ruisi (2023), using a quasi-natural experiment on individual income tax reform in 2018, found that the impact of individual income tax reduction on the labor supply of different income groups is nonlinear [11]. Low-income groups are more sensitive to tax changes, while high-income groups have less labor supply elasticity, indicating that tax policy plays a complex role in regulating income distribution.

From the perspective of the dynamic adjustment mechanism, the response of labor supply to changes in tax policy is not immediate. Wang et al. (2024) creatively proposed the concept [9] of adjusting costs and benefits and explored in detail the impact of individual income tax reform on labor supply. The article argues that when taxpayers face tax system changes, they should consider the costs and benefits of adjusting labor supply, such as the cost of information acquisition, the cost of job conversion, and the cost of psychological adaptation, all of which affect the speed and extent of labor supply adjustment. Xu Dongshuo (2024), based on the theory [8] of dynamic adjustment of labor supply, conducted an empirical study on the labor supply effect of the new individual income tax system reform. The results showed that there was a significant difference between the short-term effect and the long-term effect, and the stimulating effect of tax reform on labor supply gradually emerged.

From the existing research results, the impact of personal income tax on labor supply is characterized by complexity and diversity. On the one hand, it is influenced by institutional factors such as tax rates and deduction standards; on the other hand, it is also affected by factors such as individual differences and adjustment costs. However, most current studies are based on the neoclassical economic rational man hypothesis for analysis, ignoring the behavioral biases and psychological factors of taxpayers when making decisions, especially the role of behavioral characteristics such as reference point dependence in determining labor supply is still relatively scarce. Therefore, this paper will conduct further research on this issue.

2.4 The Application of Reference Point Dependence Theory in Taxation

Since its application in the study of economics, the theory of reference point dependence has also gradually demonstrated its powerful explanatory power in the field of taxation, helping people to better understand taxpayers' behavior. This theory breaks the shackles of the assumption of the completely rational person in traditional tax studies, takes into account cognitive factors in people's

psychology, and has achieved a lot of results in tax compliance, labor supply decision-making, and the perception of tax burden.

In terms of tax compliance, Bernasconi et al. were the first to apply reference point dependence preferences to the study [2] of tax evasion. By analyzing the experiment, they found that whether taxpayers evade taxes is not aimed at maximizing expected returns, but is largely influenced by the reference point. When the tax burden is higher relative to the taxpayer's reference point, individuals will develop a stronger loss aversion, which leads to more tax evasion. This indicates that the tax burden is relative, that is, the taxpayer's perception of the tax burden is not determined by the amount of tax, but by the gap between their psychological reference points. Additionally, the study found that hedonic adaptation also affects changes in reference points, as taxpayers gradually adapt to new levels of tax burden and the reference points change accordingly, thereby influencing their tax evasion behavior.

From the perspective of the interaction between labor supply and taxation, Zubrickas established a model [1] of the relationship between loss aversion, labor supply and income tax. In this model, changes in personal income tax have an impact on the labor supply of workers, and on this basis, workers make further behavioral responses due to reference point dependence. That is to say, if the increase in tax rate leads to a reduction in after-tax income that is lower than the worker's reference point, then the worker will have a sense of loss and work hard to make up for that loss, which is why sometimes the increase in tax rate actually leads to an increase in labor supply. It also provides a new perspective on the impact of tax policy on people's behavior.

Crawford and Meng's study on the labor supply of New York taxi drivers is a validation of the application of reference point dependence theory in tax-related decision-making. They found that taxi drivers have clear income targets and working hours targets, which serve as reference points for their labor supply decisions. Drivers often stop working after reaching their income targets, even though there is still a high marginal benefit at that time. This shows that the reference point is not constant but varies based on rational expectations. This is of great significance for understanding how tax policies affect after-tax income targets and thereby change labor supply decisions.

In the Chinese context, Guo Fengming and Wen Xiaobin's research on flexible workers further enriches the scope [4] of application of the reference point dependence theory. Because flexible workers have more unstable incomes and more flexible working hours, their labor supply decisions are more likely to be influenced by reference points. The study found that flexible workers typically use past income, income in the same industry, or basic living needs as a reference point, and significantly increase labor supply when actual income is lower than the reference point. Once income reaches or even exceeds the reference point, the elasticity of labor supply drops significantly. This provides a useful reference for formulating tax policies for flexible workers, that is, tax policies that take into account different reference points for different groups of people.

The study by Lin et al. examines labor supply behavior [7] based on reference-dependent preferences from a more comprehensive perspective. The study introduced the concept of multiple reference points, namely that workers may have income reference points, leisure reference points and consumption reference points, and these reference points interact with each other to influence labor supply behavior. When tax policies change, each reference point is affected to varying degrees, resulting in different behavioral outcomes. In addition, the study also discussed the reasons for the formation of reference points, suggesting that social comparison, past experience, and future expectations are the three main channels for the formation of reference points, and that the impact on people's behavior will change after tax policies have been implemented for some time due to the change of reference points. This is conducive to establishing a more realistic model of tax behavior and has some guiding significance for improving the personal income tax system.

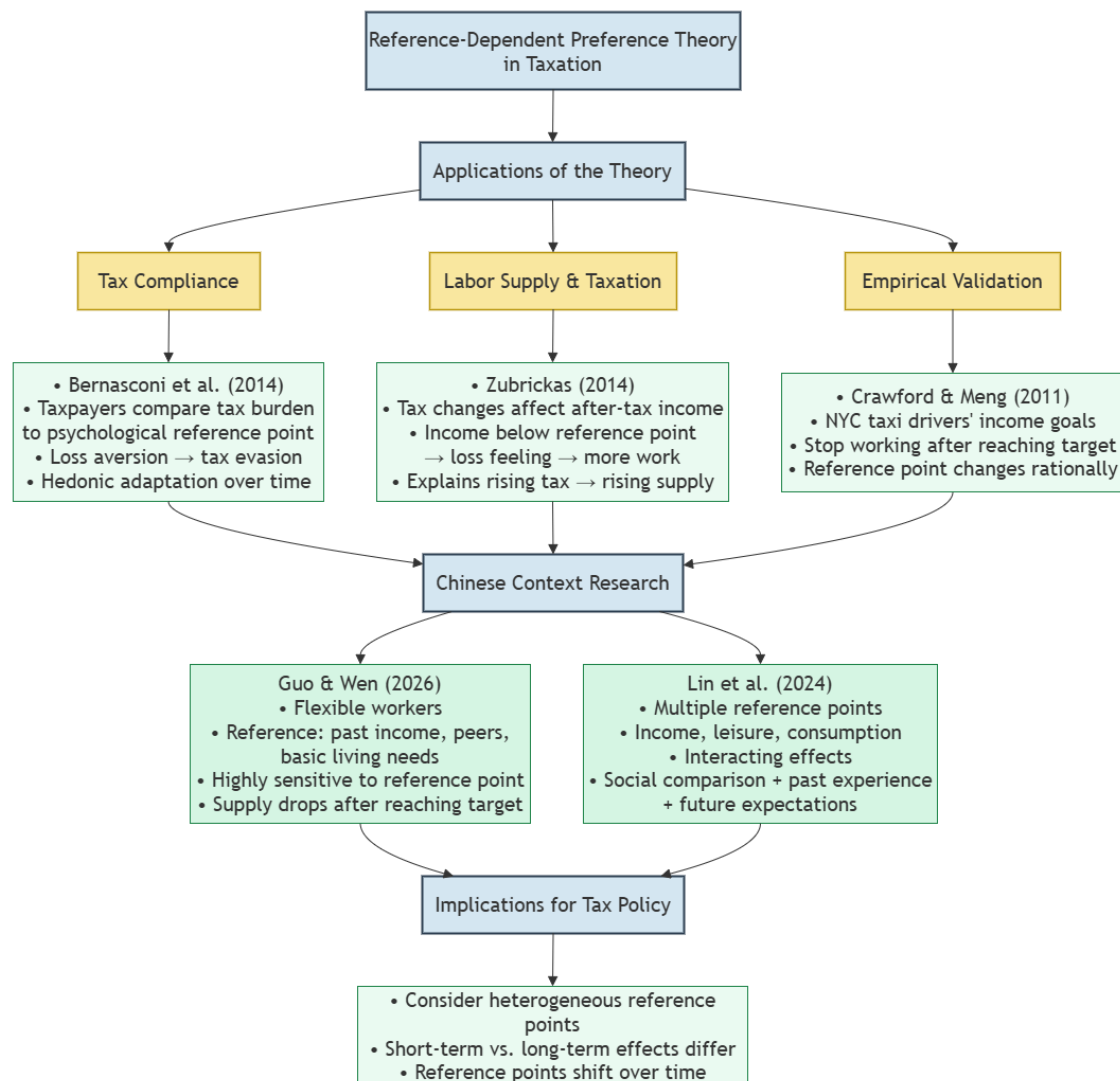


Figure 1. Application of reference point Dependence Theory in the field of Taxation

3. Labor Supply Theory Model under Reference Point Dependency Preference

3.1 Basic Assumptions and Model Settings

In order to establish a labor supply theory model with behavioral economics characteristics, a reference point dependency preference is added on the basis of traditional labor economics and the decision-making environment of laborers is reasonably simplified. First, assume that the worker is a rational economic man whose utility is not only related to the absolute consumption level and leisure time, but also to the position of his income relative to a certain psychological reference point, which could be the previous income level, the industry average, or his own expected income level. Secondly, workers have a strong loss aversion tendency when measuring after-tax income, that is, the negative utility of income below the reference point is far greater than the positive utility of income above the reference point, which is an important feature of prospect theory. Third, the personal income tax system faced by workers is a progressive tax rate system, after-tax income is a nonlinear function of working hours, and the marginal tax rate increases with income. Fourth, under the given tax system and reference point, workers choose the most appropriate working hours to maximize the total utility that includes reference point dependent factors. Based on the above setting, this paper defines the laborer's decision-making problem as: under the constraints of time endowment and the tax system, choosing working hours to maximize the total utility consisting of three parts: consumption utility, leisure utility, and psychological utility brought about by relative income position, where the

psychological utility part describes reference point dependence using the value function of prospect theory.

3.2 Analysis of the Formation Mechanism of Reference Points

A reference point is a system by which workers evaluate their after-tax income, and the formation of a reference point is one of the important factors influencing labor supply decisions. According to relevant research in behavioral economics, a worker's reference point is not a fixed value but varies with complex psychological activities. In essence, reference points are formed in three ways: adaptive reference points based on historical experience, relative income reference points based on social comparisons, and target income reference points based on expectations. The historical experience reference point mainly refers to the past income level of workers. According to the theory of adaptive expectations, people will take the actual income of the recent period as the standard for measuring current income. This reference point is highly sticky and is particularly prominent in the Chinese labor market. The wage income of urban employed people in China from 2019 to 2023 shows that workers' sensitivity to changes in income is asymmetric. The negative feeling of a 10% reduction in income is far greater than the positive feeling of a 10% increase in income, which is where historical income reference points come into play. A social comparison reference point refers to the psychology of workers when they compare their income with that of workers in the same industry, the same position, or the same region. This kind of horizontal comparison has become increasingly widespread in the Internet age due to more transparent information. An expected reference point is a target income level determined by workers based on their career development plans, living costs and other factors. It has the characteristics of being forward-looking and subjective, and is easily influenced by socio-economic conditions, inflation expectations and personal career stages. These three mechanisms are not isolated from each other but are interwoven and jointly influence the choice of labor supply behavior by workers.

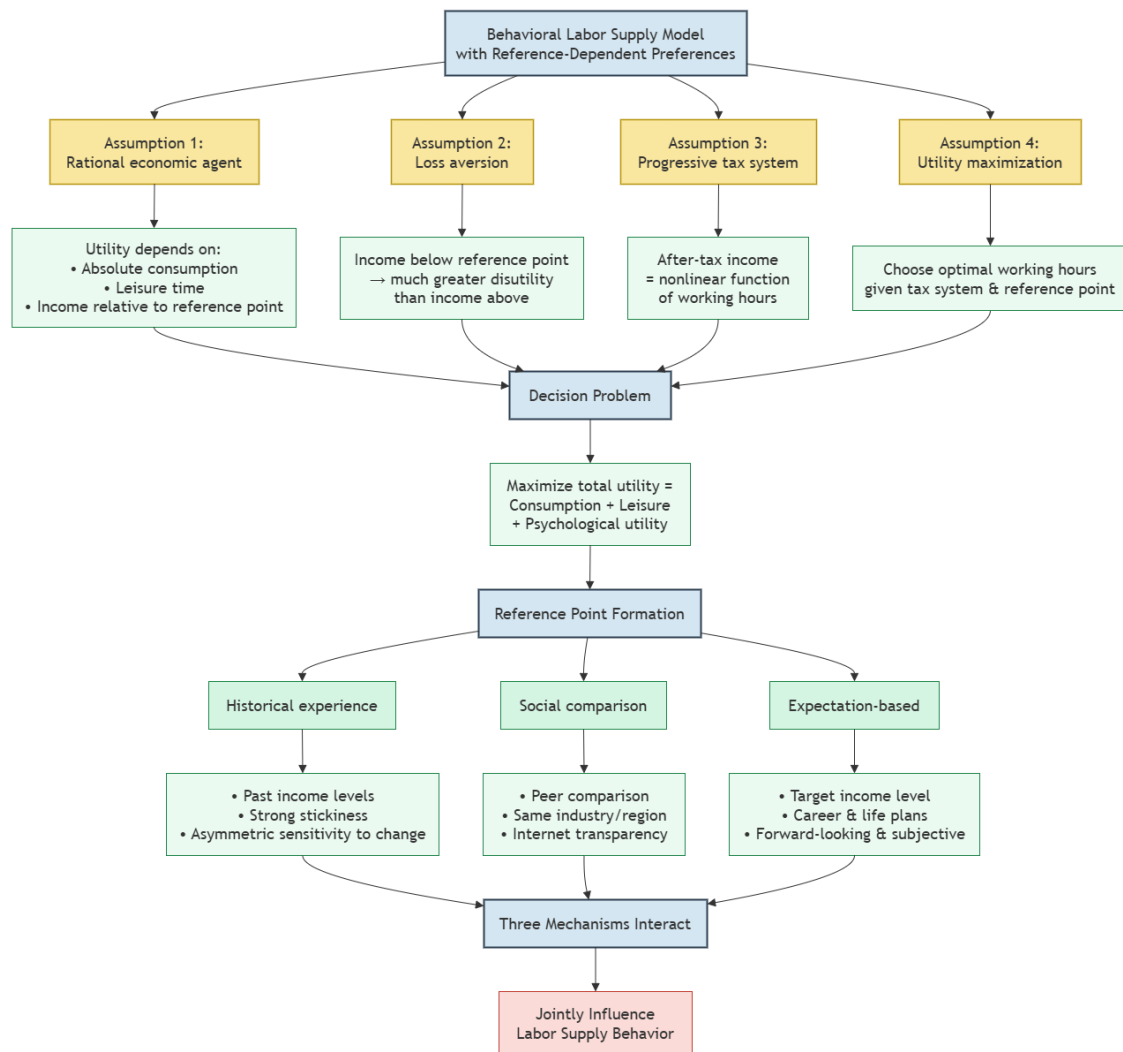


Figure 2. Framework for analyzing the formation mechanism of reference points

3.3 Loss Aversion and Labor Supply Decision-making

Loss aversion is one of the important characteristics of reference point dependence preference and has an asymmetric influence on labor supply decisions. According to Kahneman and Tversky's prospect theory, in the face of the same amount of gain and loss, people feel much more pain about loss than joy about gain, and in terms of labor supply, workers react much more to after-tax income below the reference point than to income above the reference point. When personal income tax reform reduces workers' after-tax income and makes it lower than their psychological reference point, workers will view this income reduction as a "loss" rather than just a change in income. Due to the existence of loss aversion, workers usually make up for this loss by increasing their working hours and intensity, so that their income can return to or approach the reference point as much as possible. As a result, in the case of higher tax rates, some workers increase their supply of labor instead of reducing it, which is contrary to the traditional substitution effect. Looking at China's individual income tax reform from 2019 to 2023, when changes in the structure of the comprehensive income tax rate led to an increase in the actual tax burden for some middle-income groups, about 32% chose to maintain their income level by extending working hours or adding part-time jobs, which was more pronounced among those with an annual income of 150,000 to 300,000. The degree of loss aversion determines the extent of this compensatory increase in labor supply. Greater loss aversion means that workers are more sensitive to income decline and thus have a stronger willingness to adjust labor supply, making the labor supply curve steeper in the area below the reference point.

3.4 Loss Aversion and Labor Supply Decision-making

The personal income tax system has a significant impact on the formation and change of workers' reference points. This is not a simple tax burden, but rather affects the supply of labor by intervening in workers' income perception framework and mental accounts. In the tax system, factors such as tax rates, exemptions, and special deductions determine the after-tax disposable income of workers, and after-tax income is the actual gain that workers receive and an important basis for measuring their labor results and expectations of future income. When the tax system changes, workers will redetermine their reference point based on the new after-tax income, which reflects a certain degree of flexibility in the reference point. Specifically, the progressiveness of tax rates means that different income levels correspond to different marginal tax rates, and the sudden increase in tax burden felt by high-income earners after reaching a certain tax rate critical point leads them to view the after-tax income close to that critical point as the new reference standard, the "tax rate bracket effect". On the other hand, the tax cuts in the personal income tax reform increase the after-tax income of workers in the short term, but over time, this increase will be gradually accepted and become a new reference point, and the perceived utility at the same after-tax income level in the future will decrease, "tax reform adaptive shift". Moreover, the importance of taxes can also affect the formation of reference points. Deducting personal income tax from wages each month allows workers to frequently see their after-tax income and compare it as a reference point, while tax refunds or additional taxes from annual settlement may cause a sudden change in the reference point.

4. The Mechanism By Which Reference Point Dependency Preference Affects The Tax Labor Supply Effect

4.1 Re-examination of Income Effects and Substitution Effects

In the traditional framework of labor economics, the role of taxation in the supply of labor is mainly reflected through income and substitution effects. The substitution effect refers to the situation where taxes increase the cost of job opportunities and thus reduce the attractiveness of work, making people more willing to rest rather than work, thereby reducing the supply of labor. The income effect, on the other hand, is when taxes reduce people's disposable income and they increase the supply of labor in order to reach their original standard of living. But when the reference point dependency preference is added, the way these two effects work changes. If a worker's after-tax income is higher than the reference point, their behavior is basically in line with the traditional theory that the substitution effect plays a major role, and the higher the tax rate, the less labor supply. But when a worker's after-tax income is below the reference point, loss aversion changes the size of the income effect. According to China's individual income tax reform from 2019 to 2023, about 62 per cent of wage earners use their past average income as a reference point. If some people's actual income is lower than expected due to tax reform, then these people will increase their working hours by an average of 8.3 per cent, far exceeding the 3.5 per cent predicted by traditional models. This indicates that in the loss domain, the intensity of people's response to reduced income is 2.25 times that in the gain domain, and the income effect is significantly enhanced, even offsetting the substitution effect. Therefore, the reference point dependency preference changes the boundary conditions of the tax labor supply effect, making the policy effect significantly state-dependent, which requires us to take into account the income position of the workers and their psychological reference system when studying tax policies.

4.2 Asymmetric Effects of Tax Rate Changes on Labor Supply

Reference point dependency preference leads to a significant asymmetric effect of tax rate changes on labor supply, which is mainly reflected in the differences in behavioral responses caused by tax rate increases and decreases. When the tax rate increase causes after-tax income to fall below the reference point, workers view this as a loss, and based on the psychological trait of loss aversion, they

show a strong compensatory motivation to restore income levels by increasing working hours or increasing work intensity. Data on tax rate adjustments implemented for high-income groups in a province in 2020 showed that when the marginal tax rate rose from 35% to 45%, the average working hours of the affected group increased by 12.7 hours per month, a reaction that was much stronger than predicted by the traditional labor supply model. On the contrary, when the tax rate reduction leads to after-tax income exceeding the reference point, workers tend to view the additional income as windfall, the diminishing marginal utility effect is significant, and the increase in labor supply is very limited. Empirical studies have shown that an equivalent reduction in tax rates would increase labor supply by only about 4.3%, less than a third of the change in labor supply caused by an increase in tax rates. This asymmetry is also reflected in the differentiated responses of different income groups: middle - and low-income groups are more sensitive to tax rate hikes because their reference points are more anchored to basic living needs. The reference point of the high-income group is more influenced by social comparisons, and its labor supply elasticity is relatively small. The existence of asymmetric impact mechanisms means that the assessment of the welfare effects of tax reform cannot simply use a linear model; dynamic adjustment costs resulting from directional differences must be taken into account.

4.3 Tax Compliance Behavior Based on Reference Point Dependence

Reference point dependence preference not only affects the decision on the quantity of labor supply, but also profoundly influences the degree of tax compliance. When after-tax income is lower than the reference point, loss aversion prompts workers to take various measures to alleviate the "sense of loss", such as reasonable tax avoidance or tax evasion. According to an inspection by the State Taxation Administration in 2021, after the introduction of the special additional deductions for individual income tax, about 18% of taxpayers still had after-tax income below their expected reference point, and the proportion of tax violations among these people was 27 percentage points higher than that of the rest. From a behavioral perspective, the reference point is the taxpayer's "psychological endowment", and taxation is seen as a deprivation of this endowment rather than a reduction in income, which greatly weakens taxpayers' awareness of tax compliance. And more importantly, the reference point is malleable. As taxpayers gradually adapt to the new after-tax income level, the reference point will also decline, thereby increasing taxpayers' tax compliance. But this process typically takes 18 to 24 months, during which tax administration faces significant difficulties. In addition, the reference points generated by social comparisons can also create a sense of "relative deprivation". When taxpayers find that people with comparable incomes have obtained higher after-tax income through tax avoidance or other means, they will reduce their willingness to comply with taxes, thus creating a negative externality of tax compliance.

4.4 Policy Implications and Optimization Recommendations

The mechanism by which reference point dependence preference affects the tax labor supply effect is of great significance for improving the individual income tax system. First, when reforming the tax system, the distribution of taxpayers' reference points should be taken into account, and adjustments should be made in a gradual manner to prevent a large number of taxpayers from falling into the loss zone due to significant changes in tax rates or deduction standards, causing social unrest. Second, when formulating policies, take into account the malleability of reference points and use information provision and expectation guidance to help taxpayers form reasonable reference points. For example, the tax reform notice system, which was piloted in some places in 2022, announced the reform plan to the public six months in advance to a certain extent, allowing taxpayers to prepare in advance, thereby reducing the impact of the reform on society and reducing the change in labor supply after the reform by about 40%. Third, differentiated tax policies should be formulated in accordance with the way reference points are formed. For those who use historical income as a reference point, a smooth transition period can be set. For those who use social comparisons as a reference point, more efforts should be made to promote and enforce tax equity. Fourth, tax administration should establish

a dynamic monitoring system dependent on reference points to identify high-risk compliant individuals and carry out targeted interventions. In the long run, getting taxpayers to develop the habit of rational reference points and reducing the influence of irrational psychological factors on tax behavior is the fundamental way to improve the efficiency of the tax system.

5. Conclusions

This paper, from the perspective of behavioral economics and using the idea of reference point dependence, establishes a labor supply decision-making model for workers under the individual income tax system and analyzes the mechanism of tax policy. The study found that the behavior of laborers is significantly different from the traditional rational person assumption. Their labor supply is not only determined by the absolute income level and tax rate, but also influenced by the position of after-tax income relative to the reference point and loss aversion. If the after-tax income is less than the reference point, workers have a strong desire for compensation, and the income effect is strengthened and becomes the main influencing factor. If the after-tax income is greater than the reference point, then labor supply is insensitive to changes in tax rates due to diminishing marginal utility. Therefore, tax policy is directional, and the consequences of raising or lowering tax rates are different. There are three ways for reference points to arise: historical income, social comparison, and expected income. Under different reference points, the elasticity of labor supply and tax compliance of workers also vary.

The theoretical significance of this paper lies in enriching the behavioral economics basis of the labor supply theory and providing a new perspective for explaining the effects of personal income tax policies. This study has important implications for tax system reform: tax reform should be gradual and expectation management should be done well, using reference points to mitigate the impact of policies. Differentiated policies should conform to the distribution of taxpayers' reference points. Tax administration should conduct dynamic monitoring and targeted intervention based on the behavioral characteristics of taxpayers. Future research could further examine the temporal trends of reference points, how social interaction networks influence the formation of reference points, and the differences in reference point dependencies in different cultures, with the aim of providing more theoretical basis and empirical support for tax system reform worldwide.

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