

Literature Review on the Impact of Individual Income Tax Reform on Residents' Consumption

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Abstract

At present, the main reason for the insufficient consumption of Chinese residents is that the income level of residents is not high and the distribution of national income is unbalanced. So in 2018 the focus of the personal income tax reform is to improve the threshold level, adjust the tax rate structure, and to consider different tax burden of different, include multiple income in comprehensive income tax of the same standard, and the rate of increase for the first time four special deduction standard: children's education and continuing education, medical treatment of a serious illness, housing rent and interest on loans to buy homes and supporting the elderly. Theoretically, it should be able to effectively stimulate consumption and reduce the income gap of residents. This paper summarizes the domestic and foreign scholars study found that the foreign tax cuts for consumption has a significant role in promoting, domestic scholars may be because of different data sets and empirical methods, and there is no consensus of conclusion, this article also from two aspects of data sets and empirical method to research scholars at home have not unified conclusion reason is analyzed.

Keywords

Personal Income Tax Reform; Household Consumption; Literature Review.

1. Introduction

According to three psychological laws, namely the law of diminishing marginal propensity to consume, the law of diminishing marginal efficiency of capital and the flow preference of introducing speculative motive, Keynes proposed the theory of demand management: only when effective demand and effective supply reach a balance can promote the healthy and stable development of economy. according to the World Bank (WDI), China's household consumption rate stood at 37.1% in 2015. Even though the Chinese government has taken measures to stimulate household consumption in recent years, it stood at 35.8% in 2019, far lower than the consumption rate of developed countries such as the United States (68%), Germany (52%) and South Korea (49%) in the same year. the low consumption rate also shows the current situation of insufficient effective demand in China.

the Standing Committee of the National People's Congress passed the seventh amendment to the Individual Income Tax Law of the People's Republic of China (hereinafter referred to as the new Individual Income Tax Law) in August 2018. This reform in the individual income tax collection and management mode, tax withholding and other aspects have made a big breakthrough, not only raised the basic cost deduction standard, but also added special additional deduction, the introduction of comprehensive income and so on, in the tax reduction and fee reduction, adjustment of income gap, improve the efficiency of individual income tax collection and management of county has great significance. Its main contents are:

Raising the standard for deducting basic expenses

The new individual Income Tax law will raise the basic fee, or the amount of tax exemption, from 3,500 yuan a month to 5,000 yuan a month (after 60,000 yuan in annual expenses), an

increase of about 3 percent. although the increase in basic expenses is much lower than the 86.37% increase in per capita consumption expenditure of the Individual Income Tax Law, the reform directly reduces the number of tax payers and directly reduces the tax burden of middle and low income people.

Adding special additions and exceptions

When calculating annual taxable income, the new Individual Income Tax Law, in addition to deducting the original basic expenses, social security, and accumulation fund, also adds six special additional deductions for children's education, continuing free child care, medical treatment for serious diseases, housing loan interest, housing rent, and supporting the elderly. this is the first time a special additional deduction has been introduced into the personal income tax, Taxpayers can declare and deduct expenses according to their own situation. this reform flexibly takes into account the different tax capacity of taxpayers, and to a certain extent reduces the tax burden of residents with heavy family burden.

Expanding the gap between low - and middle-income tax rates

In terms of tax rate, the new Individual Income Tax Law still adopts seven excess progressive tax rates, but the distance between tax rates has been changed. After the reform, the gap between the first, second and third lower tax rates has been enlarged, and the gap between the fourth and fifth and sixth tax rates has been narrowed. In other words, the progressive tax rate remains unchanged for tax payable above 35,000 YUAN per month, but lower than 35,000 yuan per month, the lower tax rate applies to a larger ladder. Specific is: apply 3% tax rate, from the original 1500 yuan/month below raise to 3000 yuan/month below; For 10% tax rate, the original is 1500~4500 yuan a month, increased to 3000 yuan a month ~12000 yuan a month; For 20% tax rate, the original is 4500~9000 yuan a month, increased to 12000 yuan a month ~25000 yuan a month. On the whole, the tax reduction for people whose average monthly tax payable is less than 25,000 yuan a month is very strong. It can be seen that this reform focuses on reducing the tax burden of middle and low income people, and has no obvious effect on reducing the tax burden for high income people, and may even lead to the increase of the tax burden.

Change from a classified tax system to a tax system combining classification and synthesis

The new Individual Income Tax Law introduces the concept of comprehensive income for the first time, referring to individual residents' income from wages and salaries, remuneration for labor services, author's remuneration, and royalties as comprehensive income. Individual income tax is calculated according to the tax year combined, and other individual income is calculated and paid separately. the reform raised one horizontal fairness of human income tax makes the taxpayers with the same income level bear the same tax burden, but it also puts forward new requirements for tax collection and management.

The personal income tax reform, tax cuts are the main target group of low-income people, and low-income people in Numbers and usually not only has a higher marginal propensity to consume, tax cuts is more advantageous to promote the low-income groups, raising the level of consumption, in turn, can help improve the effective demand of the whole country, in view of personal income tax reform is conducive to promoting the residents' consumption, in fact, it is also true. According to existing studies, the most important reason affecting consumption is the level of disposable income, and the low level of disposable income is an important reason for the lack of effective demand [1]. Tax policies that directly affect the level of disposable income are, in theory, the most efficient. Therefore, the impact of tax reduction on household consumption has aroused wide interest and been studied by scholars at home and abroad.

2. Literature Review

2.1. Research Status Abroad

Based on the international experience of effectively promoting household consumption, tax reduction policy is indeed the most commonly used way. according to the life cycle theory and the permanent income hypothesis, rational consumers make consumption decisions based on their lifetime income and will not increase their consumption because of temporary income increase. Similarly, according to Ricardo's equivalence theorem, in order for a government to maintain a stable deficit over an economic cycle, a tax cut in the current period must result in a tax increase in future periods. According to these theories, a rational consumer, when making a consumption decision, will not only consider current income, they will also take into account future income and the policies that affect their income, so temporary tax cuts will not lead to an increase in consumption. Take the United States for example, in 2007, affected by the subprime mortgage crisis, the U.S. government implemented tax cuts in 2008 [This tax reduction policy applies to the total tax refund of about \$100 billion for individuals, benefiting 117 million households, and most of the working people can get a tax rebate of \$600 per person (About \$100 billion of the tax breaks apply to individuals, benefiting 117 million households, with a \$600 rebate for most working people)][2], Shapiro and Slemrod (2009) conducted a questionnaire survey on this tax cut policy, and the results showed that only one-fifth of the respondents believed that this tax cut policy would improve the consumption level of most of them [3]. It is the same as the theory, but its data source is through the form of questionnaire interview, and consumers just at the time know that they will cut taxes, actually did not get tax breaks, therefore the results of this study can only reflect they know after tax cuts do not have a strong willingness to spend, does not represent the actual situation. However, according to the actual situation, consumers cannot meet the prerequisite of these assumptions, and they will always spend the part of income increased by tax cuts in a certain proportion due to various practical reasons. On May 2, 2001, the Senate passed the bush administration's 10-year tax cut plan of \$1.35 trillion, the Economic Growth and Tax Adjustment Act of 2001, which is the largest tax cut in THE history of the United States. (On May 2, 2001, the Senate passed the Bush administration's reintroduced \$1.35 trillion in 10-year tax cuts, known as the Economic Growth and Tax Adjustment Act of 2001. This is the largest tax cut in American history.) [2] Johnson (2006) et al. took this opportunity to estimate the effect of the TAX cut policy of the US government in 2001 based on the data of the consumer expenditure survey, and tested the permanent income hypothesis. The results showed that within three months after the rebate arrived, households spent 20% to 40% of the rebate on non-durable goods consumption. about two-thirds of the rebates were spent during this period and in the three months that followed [4]. this shows that even temporary tax cuts can significantly stimulate consumption, especially for non-durable goods, and that the permanent income hypothesis cannot satisfy the conditions for its existence in reality. Similar to this conclusion, Keen et al. (2002) and Kaplanoglu (2004) believe that any adjustment of the tax system will have an impact on income distribution and thus affect household consumption expenditure, but the effect is different [5][6]. Similarly, based on the credit card data of Singapore, Agarwal and Qian (2013) found that the average resident spent 90% of the tax reduction received. Browning and Collado (2001) found that tax reduction policies in Spain had a significant effect on stimulating consumption [7][8]. In order to solve the difference between reality and theoretical hypothesis, the liquidity constraint, precautionary saving and myopic theory were put forward one after another. Although the hypotheses based on different, these three hypotheses all provided a theoretical basis for the stimulus effect of tax cut on household consumption.

2.2. Domestic Research Status

The income gap of Chinese residents. Hu Hua (2021) used the 2015 China General Social Survey (CGSS) data to measure the APK ranking effect of the 2011 personal income tax reform, and compared with the APK ranking effect of the personal income tax reform from 1980 to now, and found that although the APK ranking effect of the 2011 personal income tax reform was reduced, But the APK ordering effect still exists[10]. This means that the negative effect of the personal income tax reform, that is, from the perspective of horizontal fairness, the personal income tax reform is still unfair. In other words, personal income tax is not conducive to narrowing the income gap. Yang Fang, He Dongming and Bi Xiaoyun (2018) examined the adjustment effect of the three personal income tax reforms on residents' income gap from 2006 to 2011 through the macro data of eight provinces, and found that the three reforms were not ideal [11]. Han Xiulan and Chen Xinglin (2020) used the 2010-2014 China Health and Nutrition Survey (CHNS) data and found that the personal income tax reform with the increase of tax exemption further worsened the income gap of residents[12]. Jin Shuanghua and Yi Ling Hui (2020) used the CFPS database to make a simple calculation and calculated the Gini coefficient and MT index, and found that the function of adjusting income distribution was not fully played, but the income gap was slightly widened, indicating that the policy implementation had a weak regulating effect on residents' income distribution[13]. Wang Yu, Tian Zhiwei and Wang Zaitang (2019) used CHIP data in 2018 to show that the adjustment of tax rate bracket, the adjustment of tax exemption and the increase of special additional deduction all worsened the income distribution among Chinese residents[14].

At present, there are not many studies on the impact of personal income tax reform on consumption by Chinese scholars, and they may not reach a consistent conclusion due to different data and empirical methods. Some scholars believe that the personal income tax reform has no significant impact on consumption. Wu Yanmin and Zhang Yuan (2011) used the 1978-2009 data of China Statistical Yearbook and the error correction model (VEC) to study the forcing effect of fiscal expenditure and fiscal revenue on residents' consumption. The results showed that in the long run, 1% increase rate of personal income tax would bring 0.06% increase rate of residents' consumption. It shows that individual income tax has a crowding in effect on consumption, but in the short term, the change of fiscal revenue including the proportion of individual income tax has no significant impact on residents' consumption [15]. Liao Chuhui and Wei Guihe (2013) analyzed the relationship between individual income tax and the income and consumption of urban residents by using the group co-integration test based on my data on the growth rate of per capita consumption expenditure of urban residents, per capita disposable income of urban residents and the total amount of national individual income tax from 1991 to 2011. The research results show that the individual income tax and urban per capita consumer spending to be less significant negative correlation, the relationship between personal income tax, a 1% increase, urban per capita consumer spending will be decreased by 0.028%, and over time, the increase of personal income tax impact on consumer spending per person will be smaller[16]. Zhang Tao and Liu Jie (2015) made use of the annual panel data of 28 provinces from 2004 to 2013 in China Statistical Yearbook, and used the method of difference in Difference model and dummy variable setting to examine the impact of China's individual income tax reform on urban residents' consumption in 2006 and 2011 respectively. The study found that China's personal income tax reform did not play a significant role in improving residents' consumption. The personal income tax reform in 2006 did not significantly promote urban residents' consumption. Although the personal income tax reform in 2011 increased the overall marginal propensity to consumption of residents, it had a very limited impact on urban residents' consumption [17]. More empirical studies of scholars believe that personal income tax has a significant impact on consumption. Wang Xin and Wu Binzhen (2011) made use of the quarterly panel data of 36 large and medium-sized cities from

2004 to 2007 to investigate the impact of the increase of personal income tax threshold on residents' consumption behavior in 2006 and concluded that individual income tax reduction significantly promoted residents' consumption. The marginal propensity to consume of disposable income increased by the personal income tax deduction is about 1.40-1.66[18]. Xu Run and Chen Binkai (2015) made a detailed analysis of the impact of China's personal income tax reform in 2011 on consumption using the micro-panel data, and found that the tax cut significantly increased the consumption demand of the working class. If the personal income tax was reduced by 100 yuan, the consumption expenditure of residents would increase by 138 yuan [9]. Huang Xiaohong (2018) used CHIP micro data to analyze the personal income tax reform in 2011, and used the PSM method to study the impact of personal income tax reform on consumption and its redistribution effect on consumption structure. The results show that increasing the exemption amount can promote residents' consumption[19]. Wang Xiuyan, Dong Changrui and Jin Weidong (2019), based on CFPS micro-data, analyzed the impact of individual income tax reform in 2011 on residents' consumption by using the method of PSM-DID, and found that individual income tax reduction had a significant stimulus effect on residents' consumption behavior[20]. The above conclusions are drawn by Chinese scholars based on previous personal income tax practices. For the individual income tax reform in 2018, Peng Jinqing and Xiao Yinfei (2019) analyzed the impact of the special additional deduction of individual income tax on households' consumption willingness by mainly using the questionnaire survey data of 417 households in Changsha, Hunan Province. After the respondents were informed of the amount of special additional deductions for individual income tax that could be reduced, the average willingness to consume of residents decreased significantly. At the same time, the amount of individual income tax deduction has a threshold effect on residents' willingness to consume. When the amount of individual income tax deduction is lower than 278 yuan, the increase of the amount of tax deduction will actually reduce residents' willingness to consume; when the amount of individual income tax deduction is higher than 278 yuan, the increase of the amount of tax deduction can increase residents' willingness to consume. This shows that the special additional deduction policy of individual income tax has limited ability to improve household consumption [21].

2.3. Literature Evaluation

Through the literature analysis, foreign tax policies are usually temporary, and the situation is different in our country, our country's personal income tax reform is a long-term, therefore, foreign related conclusion is not necessarily conforming to the actual situation of our country, but empirical experience from abroad, tax breaks for long-term consumption still has a strong role in promoting. In China, most of the research on the personal income tax reform is to evaluate whether it can narrow the income gap between residents, and the research on consumption starts relatively late. For the existing research analysis, the reason why Chinese scholars get inconsistent conclusions may be that they use different data types and empirical methods. From the perspective of data types, most of the empirical analysis studies using macro data conclude that personal income tax reform cannot significantly promote consumption, but generally speaking, Consumers make consumption decisions at the micro level, such as households or individuals, and the macro consumption is not simply the accumulation of micro decision-making subjects. Therefore, the conclusions drawn by using macro data cannot well reflect the impact of personal income tax reform on consumption. However, most of the studies using micro data for empirical analysis conclude that the personal income tax reform can significantly promote consumption. Similarly, micro data can more truly reflect the changes in the consumption level of Chinese residents, so we are more willing to believe the latter conclusion. In terms of empirical methods, there are three mainstream methods of existing research. First, the macro data is used to test whether there is a co-integration relationship between the change rate of personal income tax and the change rate of consumption, and then

the error correction model is built according to the co-integration equation to analyze the long-term and short-term relationship between the change of personal income tax and the change of consumption. However, as mentioned before, the macro data is not additive, and generally speaking, the co-integration analysis pays more attention to the long-term relationship between variables, while the personal income tax reform usually wants to achieve a short-term effect. Therefore, this method cannot well reflect the changes of residents' consumption level. It is the Times difference method is adopted for the empirical analysis, times is the theory of differential method by building the experimental group and the control group with the same condition of exogenous, impose a policy impact on the experimental group, and then through the experimental group and control group differences to assess policy effect, but this method the endogenous choice, it has led to the deviation of the results will be. This method can effectively reduce the influence of endogenous selection problems on the regression results. The main principle is to construct the control group by the method of matching propensity score, to construct the counterfactual results, and then make difference with the factual results to find the influence of policy effects. It is also the most popular method for policy evaluation at present. Therefore, THE method of PSM-DID is the most effective empirical method at present, but the data used in the research method of PSM-DID in the existing literature are microscopic simulation data and some other non-realistic data, so the conclusions obtained by the method of PSM-DID may not conform to the actual situation.

3. Conclusion

Our country has experienced seven times adjustment of individual income tax, individual income tax in 2018 compared with the past personal income tax reform will be a variety of income for the first time into the comprehensive collection scope, but also increased the special expense deduction standard, for the first time more humane to consider the different tax burden, more can reflect the lateral of tax fairness. But may be due to the lack of personal income tax reform for 2018 years after the actual data, the domestic scholar has not yet published about 2018 personal income tax reform an empirical analysis of the impact on consumption, even though some scholars have used the microscopic simulation data, also cannot really reflect the reality, therefore, Special expense deduction standard whether can significantly promote the growth of residents' consumption, or add special expense deduction is higher than that of pure personal income tax threshold and tax rate structure can more effectively promote the growth of residents' consumption is also problem worthy of studying, it clearly is of great significance to the direction of personal income tax reform.

References

- [1] Zhou Q. Evaluation of the effect of individual income tax reform on residents' consumption and the improvement path [J]. *Tax & Economy*, 2020(01):78-83.
- [2] Li Shikai. The Bush Administration's Tax Cut Policy and THE U.S. Economic Growth [J]. *China Finance*, 2008(17):60-61.
- [3] Shapiro M.D., Slemrod J. Did the 2008 Tax Rebates Stimulate Spendin? [R]. NBER Working Paper No. 14753, 2009.
- [4] David S Johnson, Jonathan A Parker, Nicholas S Souleles. Household Expenditure and the Income Tax Rebates of 2001 [J]. *American Economic Review*, 2006, 96(5).
- [5] Annette McWilliams F. Stephen Lam F. Tax Principles and Tax Harmonization under Imperfect Competition: A Cautionary Example [J]. *European Economic Review*, 2002, 46(8):1559-1568.
- [6] Kaplanoglou G. Household Consumption Patterns, Indirect Tax Structures and Implications for Indirect Tax Harmonisation: A Three Country Perspective [J]. *Economic & Social Review*, 2004, 35 (1):83-107.

- [7] Agarwal S and Qian W.2013.“Consumption and Debt Response to Fiscal Stimuli: Evidence from a Large Panel of Consumers in Singapore”, Available at SSRN 2245351.
- [8] Browning M., and Collado M D.2001.“The Response of Expenditures to Anticipated Income Changes: Panel Data Estimates”, *American Economic Review*,91(3):681–692.
- [9] Xu Run, Chen Binkai. Can individual income tax reform stimulate residents' consumption? -- Evidence from 2011 income tax Reform [J]. *Financial Research*,2015, (11):80-97.
- [10] Hu Hua. Research on APK Ranking Effect of Individual Income Tax in China [J]. *Journal of Central University of Finance and Economics*,2021 (02): 18 to 30.
- [11] Yang Fang, He Dongming, BI Xiaoyun. [J].*Price Theory & Practice*,2018(07):103-106.
- [12] Han Xiulan, Chen Xinglin. Research on income redistribution effect of new personal income tax in China [J]. *Statistics and decision*,2020,36(09):134-137.
- [13] Jin Shuanghua, YI Linghui. Research on the effect of individual income tax special additional deduction [J]. *Local Finance Research*,2020(01):58-64.
- [14] Wang Y, Tian Z W, Wang Z T. The effect of individual income tax reform on income redistribution in 2018 [J]. *Journal of Finance and Economics*,2019(08):31-38.
- [15] Wu Yanmin, Zhang Yuan. Empirical analysis of Fiscal and tax policies and Residents' consumption in China [J]. *Tax Research*,2011(02):24-29.
- [16] Liao Chuhui, Wei Guihe. The Influence of individual income tax on urban Residents' income and consumption in China [J]. *Tax Research*,2013(09):59-61.
- [17] Zhang Tao, Liu Jie. The Impact of China's Personal income tax reform on Urban Residents' consumption [J]. *Heilongjiang Social Sciences*,2015(06):53-59+2.
- [18] Wang Xin, Wu Binzhen. The impact of personal income tax threshold change on residents' consumption [J]. *World economy*,2011,34(08):66-86.
- [19] Huang Xiaohong. Personal income tax reform, consumption stimulus and redistribution effect: Based on PSM method [J].
- [20] Wang Xiuyan, Dong Changrui, Jin Weidong. *Management review*,2019,31(02):36-48.
- [21] Peng Jinqing, Xiao Yinfei. Research on the impact of special individual income tax deduction reform on households' consumption willingness -- based on the analysis of survey data before tax reform is implemented [J]. *Consumption economy*. 2019,35(03):62-68.