UNIVERSITY OF MACAU
FACULTY OF SOCIAL SCIENCES AND HUMANITIES
DEPARTMALET OF ECONOMICS

The effects of higher individual income tax threshold on labor supply in China

Si Tingting (M-B1-5647-4)
Supervisor: Dr. Liu, Chun Wah

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Social Sciences at the University of Macau

Oct 2013

Abstract

Abstract of thesis entitled "The effects of higher individual income tax threshold on labor supply in China", submitted by Si Tingting (M-B1-5647-4) for the degree of Master of Social Sciences of Economics at the University of Macau in July 2013.

In this paper, I used the individual income tax reform of China in 2005 as a case study. Based on the work-leisure choice model, I study the effect of tax threshold on labor supply by using Difference in Difference method. I find that a higher tax threshold has statistically and significantly affected individual's work hour. With higher tax threshold, all individuals increased their work hours. And with higher wage rates, urban workers choose to work less than rural workers.

Keywords: tax threshold, wage rate, work hour, labor supply.

Declaration

I declare that this thesis represents my own work, except where due acknowledgement is made, and that is has not been previously included in a thesis, dissertation or report submitted to this University or to any other institution for a degree, diploma or other qualification.

Signed _____

UNIVERSIDADE DE MACAU
仁義禮知信
澳門大學

Acknowledgements

During the whole thesis writing, my respect supervisor, Dr. Liu has given me many suggestions and instructions. He taught me how to read related paper, collect data and analyze the regression result. At the same time, he told me how to face the difficulty in my life, and got stronger when I lost myself. I really very thanks to him, without his patient guide and help, I cannot finish this thesis and cannot get brave. He is my forever teacher, and there are so many things I need to learn from him in my future ways.

Also, I am very grateful for my committee chairperson Prof. Ho, Wai Hong Patrick and my examiner, Prof. Dang, Vinh. Thank you for their kindly inspiration and encouragement as well as putting forward useful suggestions to help me get a better understanding of my research area and improve my thesis.

I thank the English Writing and Communication Centre (EWCC) for improving my English writing. All remaining errors are solely my responsibility.

Last but not least, thanks very much to my parents. It was their endless love and supports that help me finish my thesis.

Contents

Abstract 2
Declaration 3
Acknowledgemalets 4
Chapter 1 Introduction 8
Chapter 2 Literature Review 11
Chapter 3 Institutional Background 14
3.1 Individual income tax reform in the world 14
3.2 Individual income tax reform in China 16
3.2.1 Building in 1950s 16
3.2.2 Reform in the 1980s and 1990s 17
3.2.3 Reform in the 21st century 18
3.3 Problems of the individual income tax system in China 20
Chapter 4 Theory 22
4.1 The effect of the increased tax free threshold on income 22
4.2 The effect of after-tax income on the after-tax wage rate 28
4.3 Work-leisure choice model 29
4.3.1 Income effect and substitution effect 30
4.3.2 Total wage effect arised from tax free threshold increase 31
4.4 How rise in tax free threshold affect work hours 33
Chapter 5 Data and methodology 34
5.1 Data 34
5.2 Methodology 39
5.2.1 Difference-in-Difference method 39
5.2.2 Model 42
Chapter 6 Results 46
6.1 Change of work hours 46
6.2 DID regression results of male and female 47
6.2.1 Regression result of male 47
6.2.2 Regression result of female 52
6.2.3 Regression result of all the individuals 54
6.3 Further study with five models 55
6.4 Summary of results 59
Chapter 7 Concluding remarks and policy recommendation 61
References 63

List of Tables

Table 1 Nine bracket progressive tax rate in excess of specific amount 19

Table 2 Seven bracket progressive tax rate in excess of specific amount 20

Table 3 After-tax income and gross income 24

Table 4 After-tax income and gross income when the tax free threshold increased 26

Table 5 Marginal tax rates on income and wage before and after the tax threshold rise 29

Table 6 Mean value of key variables 35

Table 7 Definition of all the variables 39

Table 8 Work hours of the treatment group and control group 43

Table 9 Work hours change after tax threshold increased in 2006 46

Table 10 DID regression results for male, female and all individuals 48

Table 11-1 DID regression results from five models of urban residents 57

List of Figures

Figure 1 After-tax income and gross income ---------- 23

Figure 2 Increase of work hours with wage changes ---------- 29

Figure 3 Decrease of work hours with wage changes ---------- 30

Figure 4&5 Different Individuals labor supply curve ---------- 33

UNIVERSIDADE DE MACAU
仁義禮知信
澳門大學