University of Nottingham

UK | CHINA | MALAYSIA

University of Nottingham

Applied Microeconometrics

Group Project A

Insert Title

Spring Term 2020

Supervisor
Professor Sourafel Girma

Authors
Yonesse Paris (stud. n)
Nelly Lehn (stud. n)
Thea Zoellner (stud. n)
Georg Schneider (stud. n)
Emilie Bechtold (20214031)

Contents

1 Introduction **1**

2 Theoretical Background/Literature Review **1**

2.1 FDI 1

2.2 PSM 1

3 Data and Descriptive Analysis **2**

4 Empirical Specification **2**

5 Results **2**

6 Discussion/Conclusion **2**

List of Tables

1 Coefficient Estimates Total Factor Productivity and Wages 2
2 Coefficient Estimates Total Factor Productivity iii

1 Introduction

2 Theoretical Background/Literature Review

2.1 FDI

2.2 PSM

Since (I guess) we will be focussing on ATE rather than ATT, we need to satisfy the following two assumptions:

1. Assumption: **Unconfoundedness (CIA)**
   "*[G]iven a set of observable covariates X which are not affected by treatment, potential outcomes are independent of treatment assignment*" (Caliendo & Kopeinig, 2008: 35).

2. Assumption: **Overlap**
   "*persons with the same X values have a positive probability of being both participants and nonparticipants*"(Caliendo & Kopeinig, 2008: 35).

–> if Assumption 1 holds, all biases due to observable components can be removed by conditioning on the propensity score (Imbens, 2004).

Binary Treatment

Difference between logit and probit lies in the link function. Logit assumes a log-distribution of residuals, probit assumes a normal distribution. Heteroskedastic probit models can account for non-constant error variances –> Check for heteroskedasticity?

Multiple Treatments

The multinomial probit model is the preferable option compared to logit. Alternatively, just run several binary ones (more complicated but also more robust to errors).

Variable selection

- outcome variable must be independent of treatment conditional on the pscore (CIA)
- Only variables that influence simultaneously the participation decision and the outcome variable should be included (based on theory and empirical findings)

- variables should either be fixed over time or measured before participation (include only variables unaffeted by participation)
- choice of variables should be based on economic theory and previous empirical findings

Tests for variable selection

Strategies for the selection of variables to be used in estimating the propensity score:

3 Data and Descriptive Analysis

4 Empirical Specification

Reminder of a thought we had

We could drop all the state-owned enterprises, because wages are likely not to change just because the firm received foreign investment.

Table 1: Coefficient Estimates Total Factor Productivity and Wages

	Nearest Neighbour	Nearest Neighbour
VARIABLES	logwages2017	TFP2017
r1vs0.FDI2016	0.139**	0.287***
	(0.067)	(0.040)
Observations	11,323	11,323

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5 Results

6 Discussion/Conclusion

Table 2: Coefficient Estimates Total Factor Productivity

VARIABLES	5NN ATE	5NN ATET	IPW ATE	IPW ATET	AIWP ATE
r1vs0.FDI2016	.279***	.318***	.285***	0.308***	0.306***
	(0.033)	(0.045)	(0.029)	(0.045)	(0.010)
0.FDI2016					
P0mean			3.537***	3.307***	3.537***
			(0.026)	(0.053)	(0.020)
Observations	11,323	11,323	11,323	11,323	11,323

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Appendix