Master's Thesis Abstract

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Title:Economic analysis of international trade employing the two-sided heterogeneity Model

In modern society, free trade is considered to bring tremendous wealth to the society. Past studies on the new neo-trade theory led by Melitz (2003) and Helpman (2004) have clearly demonstrated the importance of free trade.However, in recent years, a series of trade protection actions in the world have been perceived as a shift from free trade to trade protectionism. Therefore, it is necessary to study the question of why only free trade cannot maximize the interests of countries and firms, and whether free trade or trade protection should be implemented by considering the characteristics of countries and industries. Although the new neo-trade theory is an important research instrument in international trade analysis, it is not enough for this study to analyze this question based only on Melitz (2003) model. Other factors that influence trade must be considered in the scope of the model in this study. Therefore, the current study introduces Kugler & Verhoogen (2011) 's model of product quality related research into Bernard et al. (2016) 's Two-sided heterogeneity model for theoretical study.

The study is divided into two main parts, the theoretical analysis and the empirical analysis.

In the theoretical analysis, we specify the influence of the capability of labor as a country characteristic on firm export and country-level export. Then we will demonstrate the influence of free trade on firms and countries by the process of changing. Two conclusions are drawn in the theoretical analysis section. Conclusion 1: In industries where the constant elasticity of substitution is relatively lower, the higher heterogeneity of firms brought by free trade has a negative impact on the relationship between labor capability and export value. On the contrary, in the industries with relatively high elasticity of substitution, the higher heterogeneity of firms by free trade has a positive influence on the relationship between labor capability and export value. This situation may ultimately influence the advantage of firms in international competition and make them invulnerable to competition. Conclusion 2: in country-level exports, it is particularly important for an industry to know how many labor capabilities can be converted into quality of goods that is, the conversion rate between labor capabilities and quality of goods. With a relatively higher conversion rate between labor capability and goods quality and a relatively higher constant substitution elasticity of goods, the higher level of a country's labor capability, the higher positive influence on export from free trade. On the contrary, if the conversion rate between labor capability and goods quality is relatively lower and the constant substitution elasticity of goods is relatively lower, the higher level of labor capability of a country, the higher the negative impact on export value from free trade.

In the empirical analysis, we are going to introduce Mean years of schooling to demonstrate the labor capability in country level, using the model from the theoretical to analyze the primary, secondary and tertiary industries. The OLS regression and 2SLS regression analysis leads to two conclusions. First, free trade has a positive influence on the relationship between mean years of schooling and firm export in the primary and secondary industries, whereas free trade has a negative impact on the relationship between mean years of schooling and firm export in the tertiary industry. Furthermore, free trade has a negative impact on the relationship between average years of schooling and export value in country level in the tertiary industry, whereas it is ambiguous in the primary and secondary industries, and more data are needed to validate this influence.

With this study, the impact of free trade on firms and countries export varied in different countries and different industries. A government of a country should not simply advocate free trade, rather it should determine by combining its own and industry characteristics whether to advocate free trade or trade protectionism.