

A Measurement on the Impact of Jeju Pork by KOR-USA FTA

Chung-hyeon Kim¹, Bae-sung Kim², Seong-Bo Ko³,

¹Department of agricultural Economics, Graduate School in Jeju National University

^{2,3}Department of Applied Economics, College of Applied Life Sciences in
Jeju National University
E-mail: bbskim@jejunu.ac.kr

Abstract. The aim of this study is to measure the impact on KORUS FTA in Jeju pork related industry. For the purpose, the supply-demand Simulation model is developed. And the baseline projection (2016-2020) and simulation results are introduced. The model is built dynamic recursive simulation model form to facilitate the analysis of changes in government policies, and each behavioral equation of this model is estimated by ordinary least squares method of econometric techniques. The result of analysis on impact of Jeju pork using the model is predicted to be 51.2 billion for 5 years.

Keywords: Impact on FTA, Jeju Pork, Partial Equilibrium Model, MAPE

1 Introduction

Nowadays, livestock in Korea has occupied considerably high percentage of agriculture sector. However, the problem of food hygiene and safety such as FMD, PED, etc causes stockbreeding farmer suffered.

In this circumstance, from 2004, Korea has signed FTA with 52 countries such as, Chile, EU, ASEAN, China, etc and 11 of them has implicated. Especially, KORUS-FTA which implemented lowering bounded tariffs about 98% of agricultural products seems to cause negative effect on agricultural sector in Korea and in Jeju. Imported quantity of agricultural products from USA is approximately 39.2%. It also shows KORUS FTA affects in pork industry.

Korea government presented an impact of KORUS-FTA on Jeju pork industry predicted has represented an annual 9 billion, (for 15 year, 135 billion accumulated). It also predicted to effect Jeju pork industry which is occupied significantly high portion of Jeju except citrus industry. Therefore, this paper introduce supply-demand model of Jeju pork and introduce result of analysis on impact KORUS-FTA. This study is expected to be different from other advanced analysis in method. Unfortunately, there is no the related previous research on the impact by KORUS FTA in Jeju pork industry. So, this study has a signification in Jeju pork related research provision.

2 Structure of Outlook Model

Supply-demand outlook model of Jeju pork is developed PE(partial equilibrium model)form and dynamic recursive simulation form which enables to conduct scenario analyses for the impact of trade policy as well as changes in the national and international situations. And each behavioural equation is estimated ordinary linear square estimation method of econometric techniques. Function of feed price is estimated by international corn, soybean price and function of the number of hogs for breeding is estimated by expected farmer price. Those two endogenous variables will be exogenous variables in function of the number of slaughtered hogs. To estimate quantity of production, the number of slaughtered hogs multiplies with the dressed meat. And this production will be same to domestic supply. Consumption will be determined by excluding export and ending stock from quantity of pork supply. Consumption per capita is determined with consumption with population. The wholesale price is determined with imported price which is reflected tariff change, disposable income per capita. Farmer price is determined by wholesale price multiplying with rate of difference between wholesale price and farmer price[2,4,5].

3 Scenario and Analysis

For the FTA scenario, fresh pork belly of import items is chosen which will be abolished tariff gradually for 10 years. Tariff is eliminated 2.2%p or 2.3%p every year. Base scenario is assumed that tariff of pork belly will be continued same as previous implementation KORUS-FTA.

The impact of KORUS FTA on Jeju pork is predicted by comparing estimation under baseline projection with under KORUS FTA scenario. The result of analysis on impact on the number of hogs for breeding is decrease respectively 1.46, 1.32, 1.30 percent in 2016, 2018 and 2020 year. The farmer price is also predicted to lower 2.57, 2.24, 2.27 percent respectively in 2016, 2018, 2020. This result shows us an impact of KORUS FTA on Jeju pork predicted approximately an annual 8.5 billion KRW(accumulated 51.2 billion KRW)[1,3,4,5].

4 Conclusion

This study developed the supply-demand outlook model to simulate KORUS FTA, and the loss of gross income of Jeju pork industry is predicted an annual 8.5 billion KRW(accumulated 51.2 billion KRW). This result show KORUS FTA cause negative effect on Jeju pork industry. Therefore, Korea government support famers and this paper will be utilized when developing policies. Because the model was developed

with time series data by 2014, it needs to be updated to enable show precision of value of estimation.

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