

The Patriot Effect and National Branding of Regional Agricultural Goods  
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Abstract

This paper proposes a spatial economic model to show how central and local governments make rural policies to brand regional agricultural goods by effective use of the patriot effect.

The patriot effect refers to the fact that many residents are willing to pay extra for their local goods in their home country. It is also known as the home-biased expenditure in trade theory. For example, Wagyu beef, or aroma beef, is very popular in the world. More and more people like to enjoy Sukiyaki and Syabu-syabu in Japanese-style restaurants since 2013 when Japan's Washoku, or Japanese cuisine, was added to the UNESCO Intangible Heritage of Humanity list. Although Wagyu originated from the Japanese production process of beef, it is now produced in many countries. In fact, Australia and U.S. Wagyu beef, and other Wagyu-like beefs from other countries of the world have a large market share in the world. However, in spite of the expensive prices, in Japan there exists a strong preference for Japanese original Wagyu beef, such as Kobe beef of Hyogo prefecture, Matsuzaka beef of Mie prefecture, and Yonezawa beef of Yamagata prefecture. The top 3 beef brands have a great natural and historical background which people appreciate. In addition to the Wagyu beef, Japan has the top rice brands such as Koshihikari rice of Nigata prefecture and new Tsuyahime rice of Yamagata prefecture. Some local governments make efforts to create new regional rice brands. They try to explain the quality of rice, and introduce the regional nature, history and culture. In this way, the stronger home-biased preferences are observed for various kind of agricultural goods over manufacturing goods such as cars and electric devices. Japan has protected local agricultural markets for Japanese farmers to have sustainable and inclusive strategies through rural development, even though Japan is an industrialized country. Japanese government has reformed various problems of agricultural industry. Local farmers are expected to improve the quality of traditional rice brands, and then try to create higher national brands to keep their market advantages in an increasing competitive domestic market in a globalizing world. Bearing the patriot effect in mind, local governments are encouraged to increase natural, historical, and cultural values of their region.

The motivation of this paper is to establish a small-open economy model to analyze the patriot effect for agricultural goods. We attempt to further help local governments to brand their regional agricultural goods. The domestic and imported agricultural goods are differentiated and modeled as in Armington (1969) and Krugman (1980). The home-biased expenditure on manufactured goods are explored by Brulhart and Trionfetti (2009) while Erikson (2011) explains home-bias effects or patriot effects for agricultural goods. However, none of them discuss the national branding of products. Focusing on the competition between domestic and imported agricultural goods, our spatial economic model considers a small and open economy. This is based on a general equilibrium model including the behavior of consumers, and the agricultural and composite goods sectors in rural and urban areas. We also include the central and local governments as decision makers. This simple general equilibrium model explains the trade patterns of patriot effects according to two important factors: preferences and varieties between domestic and imported agricultural goods. In addition, we focus on national branding and trade balance between domestic and imported agricultural goods. It is important for us to not only improve infrastructure but also the place branding of regions producing higher valuable local goods. There is much research on stated preference models for various agricultural goods. There are few spatial economic models about the effects of national branding on trade patterns using a simple general equilibrium model of small open economy which considers national branding instead of trade cost.

This spatial economic model of national branding is constructed based on these assumptions: 1) A small open economic model is modeled to express behaviors of consumers, agricultural industry, composite goods industry and government. prices of agricultural and composite goods are decided by these international prices. 2) National consumers are formulated in the original consumer's minds: interests of eating, preference for domestic brands and the variety of domestic and international foods. 3) Central and local governments make higher national brandings of nature, history and culture considering social welfare. 4) People appreciate nature, history, culture of their home country and local area, and this leads to the consumption of domestic agricultural goods. 5) Consumers get utility from the consumptions of domestic and imported agricultural goods, and composite goods subject to the constraint of disposable income. The consumers have a willingness to pay extra for domestic agricultural goods depending on the degree of the patriot mind. 6) Households supply labor services and get income from them. Households pay a lump-sum tax. 7) Laborers are of the same quality, and can work in agricultural and composite industries, and governments for national and local branding. 8) Agricultural and composite goods industries are in rural and urban areas. Only one factor of production is labor. 9) Rural industries supply agricultural goods to domestic consumers, and urban industries supply composite goods to domestic and foreign consumers. 10) The national government does not consider import and export taxes. Trade is balanced by imported agricultural goods and exported composite goods. 11) The productivity of the agricultural industries is generally lower than those of the composite goods industries. Artificial Intelligence (AI) and Internet of things (IoT) increases the productivity of agricultural industries. 12) National and local governments perform national and local branding of rural areas in the nation to promote the consumption of domestic local agricultural goods. They get a lump-sum tax revenue from households.

Finally, we summarize some important results in the paper.

- 1) It is important for central and local governments to keep the higher national brand image of nature, history and culture. The consumptions of regional agricultural goods bring a more awareness of nature, history and food culture of the home country, and brings satisfaction increases.
- 2) National branding of nature, history and art form a patriot effect to promote the consumption of traditional or local foods and agricultural goods.
- 3) The original Armington model (1969) simply explains that preferences for place of production generates international trade. We introduce a simpler consumer behavior model to express home-bias effects and national branding. Extending the Armington model, we constructed a simpler general equilibrium model of small open economy including national branding of central and local governments.
- 4) The strong preferences of people for domestic foods can be interpreted as home bias in preference or a patriot effect. We tend to consume more domestic foods which remind us of nature, history and culture in the place or home country where we are born.
- 5) We define and introduce the agglomeration economies of rural areas based on place branding. Since the industrial revolution in the world, we have observed the concentration of manufacture and service industries in Central Business Districts (CBD), and focus on only the localization and urbanization economies. In this paper, we introduce sustainably both a combinational agglomeration of urban and rural areas.
- 6) The agglomeration economies of rural areas are generated from the behaviors of consumers and farmers and place branding of governments. Place brandings of national and local governments promotes nature, history, and the culture of rural areas in the home country, and maximizes social welfare of people. Consumers form meaningful home-bias images of nature, history and culture, and appreciate agricultural goods of specific rural areas in their respective home country. And they consume more domestic agricultural goods to share their enthusiasm for areas in their home country.