Application of Normal Prices to Trade Analysis: National Self-Sufficiency and Factors of Competition

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Abstract The Ricardo–Sraffa trade economy model is notable for the vital role it plays in determining international normal prices as well as link commodities. It has also laid a new foundation for the study of employment conditions in trade analyses. After comparing the views of Keynes ("National Self Sufficiency" in (1982) The Collected Writings of John Maynard Keynes, vol 21, Cambridge University Press, Macmillan, 1933), Parrinello (The notion of national competitiveness in a global economy In: Vint J, Metcalfe S, Kurz H, Samuelson P, Salvadori N (eds) Economic theory and economic thought : essays in honour of Ian Steedman. Routledge, London, 2009), and Shiozawa (Evol Inst Econ Rev 3(2):141–187, 2007, A final solution of Ricardo problems on international values. Iwanami-shoten, Tokyo (in Japanese), 2014) on the market mechanisms not eliminating unemployment, this study reviewed the elements regarding the long-term competitiveness of corporations and semiautonomous bodies.

Parrinello clearly shows that a bottom line of national competitiveness is established, that is, the condition that the international profit rate must be higher than the self-sufficiency profit rate during complete specialization. However, the RSte model shows that the complete specialization point does not occur in a more general international economic environment. Moreover, when full employment is not guaranteed by trade in the country, Keynes proposed spending time and carefully ascertaining the section that should be brought up in the country.

Finally, this study viewed the RSte model as a possible theoretical basis for the national self-sufficiency concept of Keynes. In this concept, Keynes indicated that some domestic industries should be preserved from a long-term viewpoint and not merely be regarded as a short-term cost consideration.

Keywords Link commodities • International normal prices • The long-term competitiveness of corporations and semi-autonomous bodies

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1 Introduction

To our knowledge, few examples of theoretical analysis persuasively illustrate the relation between trade and unemployment in the context of the global economy. A notable exception is the trade analysis model of Shiozawa (2007, 2014), which applies a Graham–Sraffa analysis (hereinafter referred to as the Ricardo–Sraffa trade economy or RSte model). This study explores whether trade and employment issues can be analyzed by extrapolating RSte to the national self-sufficiency vision put forward by Keynes (1933). This study is organized as follows. First, we explore how Ricardo and Keynes viewed trade and then describe the characteristics of Parrinello's (2009) model and the RSte model in this context. Next, we compare and contrast how Keynes (1933), Parrinello (2009), and Shiozawa (2007, 2014) viewed the issue of market mechanisms not eliminating unemployment. Third, the market does not automatically eliminate unemployment when trade commences; thus, a nation's economic competitiveness will be a key factor that influences how trade commences. In this regard, we look at examples in Japan of the long-term competitiveness of corporations and semiautonomous bodies with respect to the economic competitiveness of the nation. Here, we focus on key factors in the industrial sector's long-term development decisions that are not supported by current cost calculations. Finally, we will draw some conclusions with regard to the relevance of the RSte model in terms of trade and employment issues.

2 Ricardo and Keynes

Ricardo believed that the volume of labor inputs determines domestic product prices. In trade between Portugal and England, however, the benefits of trade from exchange prices were gained from the difference between the home country's production costs (coefficients of labor inputs) for imported goods and the home country's production costs (coefficients of labor inputs) for its exported goods. Ricardo's hypothetical example never considered the possibility that the commencement of trade would cause unemployment. This factor influenced Ricardo's view of global economic conditions. The historical context in which Ricardo was operating was that higher profitability could probably be obtained by importing cheap Portuguese agricultural goods into England because this would lower both the prices of daily necessities and the wages, thereby keeping England's economy from stagnating and its profitability from deteriorating. In addition, Ricardo himself noted that restrictions on capital movements were essential for the law of comparative advantage to function (Kurz 2015). However, Ricardo's hypothetical example later developed into a principle of neoclassical trade theory as it stated that free trade, in which labor is only a factor of production, would result in profitability for both trading partners.

Meanwhile, Keynes, in his later years, doubted that free trade led to profits for both trading partners and struggled to obtain a new vision. Keynes contended that the production of goods leading to financial and domestic stability was distinct from international relations and that domestic employment could be maintained by setting up a system of limited domestic self-sufficiency (Keynes 1933). Even assuming that a decline in prices of daily necessities, as a result of division of labor, would lead to a decline in real wages, there is no appropriate proof that opening up trade would alleviate unemployment without any domestic unrest/resistance or that short-term wages decline when a country was already experiencing considerable unemployment.

3 National Competitiveness

Mainwaring (1974), Schefold (1989), and Parrinello (2009), among others, have applied Sraffa's price theory (known as normal price analysis) to the trade issues discussed above. In examining how the law of comparative advantage applies to choice-of-techniques analysis, Mainwaring (1974) showed that Ricardo's example of comparative advantage is not valid when the labor theory of value is inappropriate. While highlighting the analogy between the land factor and the labor factor in international trade, Schefold (1989) used agricultural product specialization as an example of extensive rent. He examined a technologically advanced country with a small labor force (where rents are manifested as surplus wages) and a country with a large labor force but outdated production technology (a country without rents and where wages are at the subsistence level). The subsistence-level wage country produces all goods, and the surplus-wage country produces only one good. If real wages rise in the subsistence-level wage country, that country's international profitability will decline, which will affect wages in the surplus-wage country. If countries are ranked by comparative advantage in descending order from the highest level of surplus wages, changes in profitability will alter the ranking of comparative advantage.

Although these studies were meant to highlight the limited validity of the principle of comparative advantage, they were not intended to raise the issue regarding the competitiveness of a nation in international economic circumstances. In fact, it was Paul Krugman who questioned this concept. According to Krugman (1994), countries "may be happy or unhappy with their economic performance, but they have no well-defined bottom line," and "countries do not compete with each other the way corporations do."

Unlike Krugman, Parrinello (2009) shows that a nation has a bottom line under the condition of capital free movement. Trading with countries in which the domestic self-sufficiency rate of profit is high in comparison with the trade equilibrium profit rate will result in a complete shutdown of the domestic capitalistic production process. Therefore, Parrinello contends that neoclassical trade analysis is premised on full employment, flexible wages, and a technology characterized by

substitutability between capital and labor. This is the main reason why Krugman did not place importance on the concept of national competitiveness.

4 Parrinello Model

Parrinello (2009) uses choice-of-techniques analysis to show that, under trade conditions premised on fixing real wages with free movement of capital, absolute advantage could come into play and make it impossible for capitalistic economies to sustain themselves.

In his model, it is assumed that there are two countries (i.e., England and Portugal) and two goods (i.e., corn and silk), and these goods are produced by using labor and corn. In each country, the distinct real wages are fixed in real term and capital movement is free. Moreover, no restrictions are established regarding labor supply. In these circumstances, the self-sufficiency economic conditions (under which both goods are produced in the same country) and the complete specialized international economic conditions (under which different countries produce two goods) are compared. The choice-of-techniques analysis by Sraffa is applied in these cases, and the technique that achieves the highest profit rate rules the economy at the given wage. Several arrangements of a wage–profit curve (a wage frontier) are possible, but the case when a national bottom line by Parrinello can exist is considered.

Each of the following frontiers of wages can exist. For a given value of the wage rate in England, it is the Portuguese wage rate, the self-sufficiency profit rate curve, the two curves of Portuguese wage rate, the international specialized profit rate, and the British self-sufficiency profit rate line corresponding to the fixed wage rate. When the self-sufficiency profit rate in England is too high under this setting, capital movement from Portugal to England occurs, and the production process that uses the capital can no longer be performed in Portugal. As a result, Portugal goes out of business as a capitalistic economy. In addition, since no restrictions are established about labor supply, the wage rate does not increase in England as a result of the capital movement. Thus, no equilibrating force can help lead to a uniform rate of profit, with both countries engaged in production and trade.

More specifically, applying Sraffa's choice-of-techniques analysis and assuming that capital flows freely among nations and real wages become inflexible in real terms, it is more likely that the principle of absolute advantage can prevail over the effects of comparative advantage. In this case, instead of both trading partners benefiting from the situation, the result may be that one of these capitalistic trading partners may be unable to survive.

> Hence a meaningful bottom line for the national economy exists in a global economy. We would say that a whole capitalistic economy is not competitive if all its capital-using techniques are unprofitable at the international equilibrium prices. This result overrules the claim that "a country must always possess a comparative advantage in something." (Parrinello 2009, p. 52)

Thus, as Parrinello notes, for the rules of comparative advantage to function, the conditions must be present in which each country's reproducible rate of profit, as a protectionist economy, must be sufficiently low, compared with the international rate of profit after trade has commenced.

Parrinello's model assumes freedom of capital movement and fixed real wages in real terms. However, it is also premised on complete specialization in a two-country, two-good analysis, and it does not consider the international division of labor by E.D. Graham's "link commodities" to be the normal state of the global economy.

5 RSte Model

In this section, the RSte model is examined to shed light on the limited characteristics of Parrinello's analytical framework. In the RSte model, there are some link commodities in the general international circumstances in which the number of goods is larger than the stated number. Hence, a complete specialization point does not exist regarding the facet of production possibility set.

The RSte model is notable for how it extrapolates the qualities of the Graham–Sraffa analysis into trade analysis. This shows that to a considerable degree, trading nations independently establish international normal prices of global final demand. Each country has a different wage rate. If full employment were to be reached on a global scale, international normal prices would be largely independent of global final demand. Ricardo's law of comparative advantage very explicitly discusses the expansion of productivity through the division of labor, but it is a fact that the market mechanism will not automatically assure employment, except under extraordinary conditions. The RSte model does not merely expand on the production possibility set that assumes full employment using Sraffa's normal price analysis, which is not based on full employment. In its explicit consideration of choice of techniques, the model also verifies the existence of international normal prices, which is considerably separated from global final demand. The RSte model also implies that it is not valid to differentiate between comparative advantage and absolute advantage.

Neoclassical trade analysis relies on the market mechanism and is premised on full employment. In contrast, the RSte model presents a framework of trade analysis using normal prices and is premised on technology and income distribution. Neoclassical analysis contends that the benefits of free trade can be realized by simultaneously adjusting market prices and volumes. In the RSte model, however, sellers usually determine the prices, whereas buyers determine the volumes. Assuming that this is how companies behave, there will be the external imposition of different international and nationwide uniform mark-up rates and a production technology coefficient resulting from the physical flows in the division of labor, given a global final demand. This will limit the domain (facet of the production possibility set) of international normal prices (the normal price of each good and the wage rate specific to each country). This domain for international normal prices can

vary with changes in the composition of global final demand. However, international normal prices will not change as long as the changes in demand remain within the scope of the given facet of the production possibility set. In this sense, international normal prices are independent of global final demand. This maintains the attributes of Sraffa's normal prices in a closed economy or in an open economy after the global economy has been fully homogenized.

We next discuss the correlation with Graham's trade analysis. In the modern global economy, it is normal to have many countries producing and competing in products that have the same functions. The law of comparative advantage is a law that indicates only the benefits of having division of labor under conditions of full employment. Insofar as economics can be summed up by the premise that real wages are adequately equalized in all countries, free trade will engender goodwill among trading partners. But such clear-cut specialized illustrations are divorced from the reality of the international economic situation. Instead, the appropriate theoretical assumption is that most goods are what E.D. Graham calls "link commodities" that many countries compete to produce. In the RSte model, all countries possess at least one link commodity. It is through link commodities, in which a number of countries produce and share in global final demand, that both the disparities in the countries' real wages and the normal prices of other goods are determined. Also, the existence of link commodities ensures the uniqueness of international normal prices, except those that are constants.[1]

Furthermore, the RSte model has a special quality with respect to employment analysis. The model determines facet of the production possibility set under the condition of full employment, but this does not mean that it assumes full employment in a comprehensive trade analysis. First, let us assume the time when global final demand happens to lead to full employment. In such an event, it illustrates a gradual trend toward the convergence in market prices and normal prices under circumstances, in which changes in production technology and demand conditions, such as wage disparities among countries, occur to the extent that normal prices remain within the bounds of the relevant facet of the production possibility set over a long period of time. Here, a long period of time is defined as the period during which the relevant facet of the production possibility set does not move, regardless of changes in assumptions. Although not emphasized by the RSte model, this is a market mechanism found in the classical analysis. Post-Sraffian analyses add the condition that the market has no mechanism for adjusting employment to achieve full employment. An even more interesting and important aspect of RSte lies in the fact that unemployment increases to such an extent that markets will be unable to resolve it using price-adjustment mechanisms when global final demand does not reach the point on the relevant facet or when global effective demand falls short of reaching global full employment. The opinion that the market's coordinated adjustment of prices and volumes will rectify insufficient demand by restoring full employment indicates nothing but the possibility that goods and labor could be substitutes. Also, experience has shown that coordinating productivity with demand through technological advances and improving the efficiency of the division of labor are not very likely. Cutting wages further when unemployment

is already high will only inflame domestic unrest. If unemployment cannot be eliminated using the market's price-adjustment mechanisms, then measures to deal with the unemployment need to be taken by corporations, regional administrations, semiautonomous bodies that are neither corporate nor governmental, nonprofit organizations (NPOs), nongovernmental organizations (NGOs), and even each country's central government. This does not imply an either/or view of the global economy, in which the only alternative is free trade or protectionism. It simply means that we need to take a new approach to examining global economic situations.

6 Keynes's Vision of National Self-Sufficiency

In his final years, Keynes believed that the benefits of free trade are limited to situations of full employment. In such cases, the commencement of trade could lead to falling wages and potentially benefit from the international divisions of labor. Unless a given economy has already achieved full employment, it will not be able to deal with further wage cuts when trade commences, and as a result, it will not receive any benefits from trade. Therefore, an economy should already have achieved full employment if it is to reap any benefits from free trade. As a consequence, the governmental bodies of high-wage nations may sometimes need to deal with the possibility of serious domestic unemployment when they are trading with nations that have low wages and are competitive. In addition, low-wage nations do not necessarily reap unconditional trade benefits from the fact that their wages are relatively low.

Keynes clarified the limitations of reaping benefits from free trade and began to seek a new vision for the global economy that could adopt and alter the free trade paradigm. This was his vision of national self-sufficiency (Keynes 1933). Keynes's essay, "National Self-Sufficiency," while discussing whether he was a continuous or discontinuous proponent of free trade or protectionism, is a search for a vision that is neither one of free trade nor of protectionism. According to his vision of national self-sufficiency, trade specialization occurs as a result of wide differences in factors such as climate, natural resources, and population density, and is a situation in which many countries can competitively produce the same product, as considered the norm for the global economy. He also held the view that economic activities such as agriculture need to remain domestic to ensure the stability of a nation's autonomy. For instance, he contended that countries should take whatever steps they deem necessary to preserve their autonomy, even if it seems that such areas are serving as cost centers in the national accounts at a point in time. In this case, he asserted that it is the duty of governments to behave not like corporations, but as entities that protect the domestic arts. Furthermore, Keynes believed that the British economy should maintain its domestic automobile industry and certain other domestic industries.

However, this is where objections arise. Looking at the spread of automobiles in today's global economy, automobiles are considered goods that should be produced competitively in a number of countries through organizations that set

up production and assembly lines overseas and consider those countries' cultural expectations. In any event, the Keynesian vision of national self-sufficiency (while containing many details that warrant reconsideration) is an effective viewpoint on trade that comprises a value judgment because this vision reflects each country's circumstances and is not an either/or choice between free trade and protectionism. In addition, the RSte model can be interpreted as an extrapolation of this vision. In particular, the model does not place much importance on Ricardo's easily misunderstood trade specialization. Furthermore, its perception of the international economic situation of Keynes's time aligns with the theory (which is the normal state of affairs for today's global economy) that agreement between global final demand and productivity accidentally occurs as well as the point that Graham's link commodities can be incorporated into trade analyses.

7 National Competitiveness Reconsidered

According to Keynes (1933), one should not take hasty protectionism. Taking into account the domestic employment situation, it is important to carefully assess and select which goods are suitable for domestic production. Moreover, this point should be reinterpreted as Keynes's national competitiveness, since it leads to the development of such competitiveness.

Parrinello's concept of national competitiveness depends on the comparison of the self-sufficiency profit rate and the international equilibrium profit rate during complete specialization. The RSte model, however, shows that a perfect specialization point does not normally appear in the facet of the production possibility set. Moreover, it does not appear in the general international economic environment in which the number of the goods exceeds the national number, as in the two-country, three-good case. As a result, a comparison by the profit rate, which implies state operation abeyance, may be impossible.

Conversely, according to Keynes (1933), when there is a possibility of an increase in unemployment in the country through trade, it is necessary to restrict free movement of capital and carefully ascertain which goods should be domestically produced. In his opinion, the latter must become a priority among policy objectives. In other words, when domestic employment is not guaranteed by free trade, it is important to maintain national competitiveness, while carefully observing domestic employment circumstances.

If such measures are taken, then domestic employment is protected from sudden changes, and national competitiveness is maintained or even improved. Overall, the conditions for national competitiveness by Keynes are regarded as those that complement Parrinello's concept of national competitiveness. And the Japanese cases concerned with upbringing of the section which may not be supported by current cost calculations are taken up at below.

8 Fostering the Competitiveness of Corporations and Semiautonomous Bodies for the Short and Long Periods

Sraffa's theory states that the uniform rate of profits is inversely related to the wage rate. The uniform rate of profits implies that the right profit opportunity has been sought and enough time has elapsed for capital to move. This rate is usually regarded as an element in a long-period analysis. The RSte model, however, regards the rate of profit as a mark-up rate and uses it in short-term analysis.[2] Shiozawa has placed importance on short-term analysis. Yet, the RSte model can be extended to the long-period analysis. A long period is more than just an artificial concept. This example may be a bit odd; however, as discussed by Ricardo, Keynes, and Sraffa, a succession of day trades in the equity market, which are short-term transactions, does not turn into a long-period equity transaction. A long-period equity transaction in this case is premised on the expectation that the equity price will change in the following ways.

First, computing the theoretical value of a company through various means, such as using the company's financial statements, will indicate the path whereby the actual and theoretical equity prices will converge over a long period. Also, the company builds a track record of performance, and its theoretical value accordingly moves. In this situation, the psychology of participants in the equity market, which is akin to a beauty contest, will move around the path. Long-period equity transactions are transactions that are based on such company's track record of performance and expectations on it. In his youth, Keynes was an investor who preferred short-term trading in the futures and currency markets, but over time, he evolved to become a long-period equity investor (Wasik 2014). Of course, one can profit by concentrating on short-term equity trades. Still, the routine beauty contest-like market psychology basically has nothing to do with the outcome of long-period equity transactions. In short, a long-period cause–effect relationship can exist apart from the short-term elements in the analysis of economic phenomena. Of course, profits can be made by concentrating on short-term trading. Thus, making a profit, despite taking a different action principle, can complicate equity market analyses.

Sraffa standardized economic profitability. In the absence of any particular entry barrier, an industry that is earning excessive profits will be subject to an influx of capital; hence, its profits will eventually approach the mean. Therefore, the conventional thinking is that assuming a uniform rate of profit will allow for this type of capital movement over the long term. Shiozawa, on the other hand, views the rate of profit as a nationwide mark-up rate in the short run. In the following discussion, which is premised on the framework of trade analysis pioneered by Shiozawa, we will consider corporate competitiveness as we reinterpret it based on Sraffa's long-period analysis. In this study, the meaning of "long period" can vary, depending on the characteristics of the subject being analyzed. When trade issues are being analyzed, "long period" refers to the period of time during which the relevant facet of the production possibility set remains unchanged, despite changes

in the production technology coefficient and other conditions, so that international normal prices remain unchanged as well. Each facet of the production possibility set incorporates a pattern for the international division of labor. If the pattern of the international division of labor changes dramatically over the course of five or ten years, then this period of 5 or 10 years will be deemed a "long period" when trade issues are the focus. Also, in the case of the aforementioned long-period equity transactions, a "long period" could be 3–5 years and sometimes even more than 5 years.

9 Elements of Corporate Competitiveness: Part 1

The task of maintaining employment while wielding the authority to allocate labor should not be relegated to the market. It is essential to have a setup in which the government, an affiliated body, someone in a corporate leadership position, or someone in a corporate division is responsible for preserving jobs while watching the market movements. In other words, employment must be preserved not only through corporate competitiveness but also through government policies. Corporate competitiveness comprises several elements.[3]

The following discussion focuses on several forms of corporate competitiveness and trade secrets, with particular reference to the competitiveness of Japanese corporations. We first examine cases where the well-being of employees is an element in competitiveness. In one study, a questionnaire survey was conducted in 1991. In response to whether to place priority on paying shareholder dividends or on preserving jobs during a recession, Japanese corporate managements responded that they would place more importance on jobs, which is contrary to Anglo-Saxon corporate managements, who prioritized dividends (Yoshimori 1993). Japan's economy was subsequently under pressure from a long-term recession, and for a while, it was fashionable for Japanese corporations to "Westernize." However, as we examined a report released a few years ago that gave examples of thriving Japanese small- and medium-sized enterprises, we found that many of these companies have adopted the strategy of not producing enough to meet surplus demand as a way of prioritizing jobs in the long term (Sakamoto 2008). This is because if the company were to expand its production capacity in response to a temporary surge in demand, it would be forced to cut jobs later on when that demand moderated. The outcome of such strategic hiring shows that these companies have been able to sustain steady growth over an extended period. Referring to effective demand at the corporate level, in contrast to the neoclassical corporate principle of "selling as much as the market will bear," Shiozawa (2014) referred to the principle of corporative behavior of "producing as much as the market will bear" as the "Sraffa principle." Taking this further, the previously mentioned companies are viewed as having competitive strategies that take a long-term viewpoint and responding to demand by merely producing what they can with their normal production systems. If most companies

were to adopt such a strategy, it would only be a coincidence that the labor force would be completely absorbed by the production systems in an autonomous market.

10 Elements of Corporate Competitiveness: Part 2

The next symbol of Japanese corporate competitiveness is the so-called customization or responding to customers' needs. For example, more than 80% of Japan's computer software industry is involved in developing proprietary software or customizing basic software for corporate clients (Koike 2015). Offering such painstaking customization increases the likelihood of repeated business. Here is another example from a survey conducted by the author. This case concerns a medium-sized enterprise in Toyama Prefecture that is mainly involved in manufacturing equipment for automating automobile production lines. Each piece of equipment costs between 200 million and 500 million yen. The company, of course, designs each piece of equipment after finding out what each client's plant needs, but there are also times when the company further revises its design during the assembly process to incorporate feedback from the production manager. This company was originally a subcontractor for a large corporation, but it groomed young design engineers so that it would be able to supply products of its own, and it is now delivering its equipment to automobile plants around the world. Such a setup is common in Japan. Building a framework that can respond to customers' detailed needs becomes the foundation for a company's competitiveness.

The true worth of competitiveness in this regard comes into question; that is, what the customer communicates during discussions is not what the customer actually needs. When this happens, an attempt at deciphering the customer's true desires from what the customer states will have an effect on long-term relations with the customer. This brings to mind a product development anecdote that involves Steve Jobs, the cofounder of Apple Inc. Jobs said that he paid close attention to user feedback on his company's products, but at the same time, he also believed that users had no idea what the next-generation product would be. If Japanese corporations are to remain competitive in the future, they will need to be like Jobs and listen to what their customers want not only at the design stage but also in their production lines, on the assembly floor, and even when the sales force gets complaints and then demonstrate their talent for ingenuity. In other words, to enhance national competitiveness, it is necessary not only to raise productivity but to respond to the specific needs of customers.

11 Developing Regional Competitiveness

The third element is the aspect of food and agriculture, which Keynes feared would threaten the global competitive environment. Japan has long been concerned about its low rate of food self-sufficiency, and the status quo is somehow being maintained

because agricultural chemicals have made it possible to supply large, stable volumes of agricultural products in the same way as the supply of industrial products. As is well known, developing countries are currently imposing extremely strict standards on the level of residual agrochemicals. Japan's standards on residual agrochemical levels are sometimes stricter than, if not as strict as, those in Western countries. For agrochemicals that are clearly harmful, regularly eating foods containing these residual chemicals will cause them to accumulate within the human body, even if strict residual agrochemical standards have been established. Some people believe that pollution will be less of a problem if such harmful substances are diluted by dumping them into rivers and oceans. However, the continual discharge of pollutants will cause them to build up in fish and other marine life; these will eventually be consumed by human society.

Agricultural products that are produced using as few agricultural chemicals as possible are labor-intensive and more expensive. The more affluent classes can choose to purchase organic agricultural products; however, people who are living at a subsistence level tend to be unconcerned about agricultural chemicals. It will not be possible to provide cheap organic agricultural products to a broad range of consumers if the matter is left up to market forces. Most practicing farmers do not have the luxury to think about how they can carefully farm without using agricultural chemicals. A company operating in Yamaguchi Prefecture supplies low-chemical agricultural products to the appropriate distribution networks. The company does not take a cut from the distribution networks, as do corporate executives (see the listing for Akikawa Foods & Farms Co., Ltd., in any edition of the Japan Company Handbook (Toyo Keizai ed.). Many farmers who have reduced their use of agricultural chemicals are setting up joint stock companies. Regional associations and associations made up of neighbors, families, and related groups are issuing shares.

Japan's remote regions, where the birth rate is low and the population is aging, are being further plagued by the problem of depopulation. An example of the depopulation problem being tackled while promoting local agricultural products is Ehime Prefecture's Muchachaen—an organization that engages in both low-chemical mandarin orange cultivation and home health care (according to an interview survey). Ehime Prefecture has a warm climate and has long been engaged in mandarin orange cultivation. The area has been hit hard by low birth rate and an aging population. In depopulated areas, many areas that used to be farmland have been abandoned. However, just because the land is no longer being cultivated does not mean that the current owners will give it away. Muchachaen leases an abandoned farmland, and if the landowner wants to farm, the company subleases the land to young people from other areas for the collective production of low-chemical mandarin oranges. The company has also set up a home health-care system for elderly people in the community as a way of responding to local needs and stabilizing the local economy.

These examples illustrate the process of creating competitiveness in the food and agriculture industry, which Keynes believed should be performed domestically

and not be subject to international competition. If international competition places too much pressure on current costs, then there is the danger that such start-ups may fail before they even get off the ground. Although Japanese residual agrochemical standards are currently being met, agricultural products that are not chemical-free still occupy the aisles of supermarkets, and safe agricultural products are not widely available at affordable prices. Moreover, relying on market forces does not automatically improve the situation. Therefore, steps should be taken to intervene at various levels, along with long-term value judgments regarding the future of society.

12 Conclusion

The RSte model is notable for the vital role it plays in determining international normal prices as well as link commodities. It has also laid a new foundation for the study of employment conditions in trade analyses. Therefore, this study reviewed the elements regarding the long-term competitiveness of corporations and semiautonomous bodies.

Parrinello clearly shows that a bottom line of national competitiveness is established, that is, the condition that the international profit rate must be higher than the self-sufficiency profit rate during complete specialization. However, the RSte model shows that the complete specialization point does not occur in a more general international economic environment. Moreover, when full employment is not guaranteed by trade in the country, Keynes proposed spending time and carefully ascertaining the section that should be brought up in the country. Thus, it is necessary to examine these elements in detail to enhance the analytical explanation of national competitiveness.

Finally, this study viewed the RSte model as a possible theoretical basis for the national self-sufficiency concept of Keynes. In this concept, Keynes indicated that some domestic industries should be preserved from a long-term viewpoint and not merely be regarded as a short-term cost consideration. For instance, in Japan, promoting organic agricultural products nationwide may not seem to be worth it from a cost perspective. However, Japan is in a special situation of having a low rate of food self-sufficiency. Spending a little more money to halt any further deterioration of its people's health should thus be regarded as a necessary long-term investment. It is a business that the nation should be involved in and in a form of the socialization of investment envisioned by Keynes. Shiozawa's new theory of international values notes that it can only be coincidental if market forces alone bring full employment to the global economy; it could become the theoretical basis for supporting policy proposals of this kind.

> ... the new economic modes, towards which we are blundering, are, in the essence of their nature, experiments. We have no clear idea laid up our minds beforehand of exactly what we want. We shall discover it as we move along, and we shall have to mould our material in accordance with our experience. J.M. Keynes (1933, 1982, p. 246)

Notes

1. However, it is not clear whether or not the domain (productivity facet) of international normal prices gradually diminishes as the number of goods and countries increases.
2. See Shiozawa (2016) for a discussion of his mark-up rate.
3. See Fujimoto and Shiozawa (2011–2012) for a more comprehensive and detailed discussion of the concept of competition.

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