Local protectionism: From the point of view of social welfare

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ABSTRACT

I analyze the reason of the local protectionism from the point of view of fiscal decentralization, economical overtaking strategy, and promotions of government officials. We calculate the social welfare effects of these local protectionism by using "Harberger Triangle". Generally speaking, the local protectionism benefits the local public finance or local firms by exploiting the consumer's surplus. In case of subsidy, the local protectionism fights for the competitiveness of local business by sacrificing the social efficiency. So the local protectionism restricts the efficiency of the resource allocation, distorts the incentive mechanism and hinders the development of our economy. Based on these analysis, I propose policy suggestions to remove the local protectionism as well as develop the socialist market economy.

KEYWORDS

Local protectionism; Dead weight loss; Welfare effects.
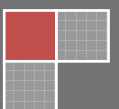
INTRODUCTION

On April 14th 2014, an article on Renmen net inspired me to think about the local protectionism. The work report of the 17th CPC National Congress pointed out that we should "promote regional harmonious development", "reduce the disparity of regional development, emphasize on the equalization of public services, and channel off the production factor across different regions." In 2008 government work report, Prime Minister Wen Jiabao pointed out that we should promote the construction of modern market system and the development of modern circulation as well as rectify the market order. A lot of research shows that the serious local protectionism does exit in China. The emergence and propagation of the local protectionism prevent the production factor from flowing freely across regions, which leads to the great losses caused by the inefficiency in the resource allocation.

Young (2000) states that the new opportunity of rent-seeking caused by the gradual reform of China created new distortions. The fiscal decentralization of the central government makes the local government implement the local protectionism to protect their own benefits, which results in the "segmented regional market" controlled by local government and distorts the resource allocation. The research group of "construction of a unified market in China" from the Development Research Center of State Council andthe related government departments of 31 provinces conducted a survey on the obstacles of economic connections across regions. The survey shows that the initial intention of the local protectionism is to promote the local economic increase, enrich and expand the local public finance. Lu Ming et.al (2004) considers the reform focusing on the decentralized public finance as well as the development of local government as the deeper reason for the local protectionism[1]. Even though the strategic behavior of those less-developed regions can benefit themselves under certain circumstances, it decreases the total output of the society and leads to the inefficiency in the resource allocation. By applying the data envelopment analysis, Liu Peiling (2005) analyzes the economic performances of 21 production sectors and points out that the local protectionism and market segmentation had exerted considerable influences on our national economy (the loss is about 48.7 billion) [2]. Under such incentive mechanism, in order to get promoted,the local government officials will localize the resource allocation and greatly support the local economic development. Tan Xiaoying et al (2005) states that some local officials intensify the localization of resource allocation and protect local market for their own benefits. These activities increases the gains of local regions by contradicting with the administrative measures of the development of market economy. Based on the imitation game theory model and empirical analysis, Liu Riuming (2006) founds out that the factious market segmentation hinders the deepening of division of labor and increase in the industry competitiveness, restraining the fast and healthy economy development[3]. Liu Ye and Qi Liangliang (2007) thinks that local protectionism and unordered tax competition among the local governments disturb the resources flow and make efficiency loss[4]. Zhou Li'an el al (2005) analyzes the promotional mechanism of Chinese local government officials by using the data on the provincial officials for the year from 1979 to 2002[5]. They find out that the local economic performance has positive effects on the promotion of these provincial officials, but had very limited effects on promotion of the provincial officials of the adjacent provinces.

There are many reasons that cause the local protectionism and all of them interact with one another, exhibiting a complex form. This article summarizes the most important foms for the local protectionism.

This article analyzes the local protectionism by using the improved "Harberger Triangle". We compare the economic consequences of competitive market and the market under the local protectionism by using consumer's surplus, producer's surplus and deadweight loss, explaining the losses caused by the local protectionism from the point of social welfare.

MODEL ANALYSIS

Harberger (1959) proposed a method to evaluate the monopolistic welfare cost, which is called the "Harberger Triangle". Some researchers improved this method and applied it in the analysis of tariff. Based on these previous findings, we extend the application of this method to the research in the local protectionism.

Because of the deadweight loss, local protectionism makes the summation of the consumer's surplus and producer's surplus suffer a loss. The protection behavior from the local government puts limitations on the suppliers and depresses the quantity supplied in the market. From Figure 1, we see that the market supply decreases from Q_e to Q_1. Decreased supply lifts up the market price faced by consumers, and crowd out some of the consumers whose willingness to pay is less than the distorted market price.

Generally speaking, the local protectionism results in a deficit in the supply in the market as well as a distorted higher market price. From the point of view of social welfare, consumer's surplus decreases by B+C from A+B+C to A. If there are administrative charges from the government, B+D is the administrative charges and we consider it as the government income. The producer's surplus decreases from D+G+F to F while the government income increases from 0 to B+D. If there is no administrative charges, B+D becomes the producer's revenue. In such a situation, the new producer's surplus is B+D+F. No matter who owns B+D, the total surplus under the local protectionism is always A+B+D+F, decreasing by C+D compared with the competitive market with no local protectionism. C+D is the deadweight loss.
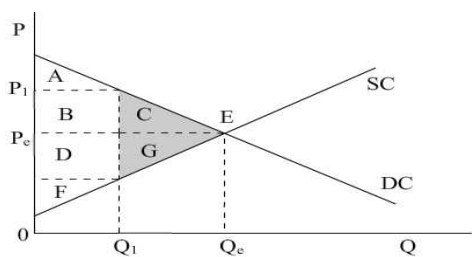
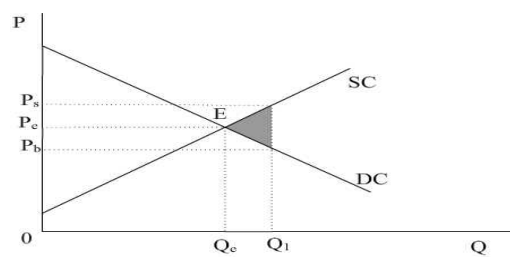**Figure 1 : Deadweight loss from local protectionism**　　**Figure 2 Deadweight loss from subsidy**

Moreover, the local government subsidies the local firms in order to maintain and protect their competitiveness, which will also incur the deadweight loss. Figure 2 shows the case. The local government subsidies the local enterprises in order to promote their mass production. If we assume the amount of subsidies for one unit of good is P_s-P_h, then the market demand for this good increases from Q_e to Q_1. Under such circumstances, the production cost is higher than the competitive market price, leading to the inefficiency in the production. Compared to the perfect competitive market, the area of the shaded triangle in Figure 2 represents the deadweight loss caused by the local government subsidies. The deadweight loss in Figure 2 is a result of both the distortion in the resource allocation efficiency and the fact that the size of the firm exceeds the optimal size. The implementation of preferred policies for the local firms by the local government will bring the similar effects.

WELFARE ANALYSIS OF LOCAL PROTECTIONISM POLICIES

The market economy is an economic system mainly depends on the market to achieve the efficient resource allocation. It transfers people's egoism behavior to altruistic behavior by applying the price mechanism as well as the competitive mechanism. The market economy automatically adjusts the market demand and supply and makes the economy achieve the Viola equilibrium and the Pareto optimum of the resource allocation. However, the market mechanism is not universal and it has insurmountable defects, such as the supply of public goods and externalities. So the market needs the proper intervention and guidance from the government. But excessive intervention of government into the market can also results in many problems. China is experiencing the period of transformation. Different regions has relatively independent economic considerations because of the fiscal decentralization, which separated the public finance of central government and local government. In pursuit of the exclusive use of the local resources and monopolistic status in the local market as well as the preferred policies for the local firms enhances the local protectionism by making it more and more serious.

When we define the local protectionism, we adopt the definition from the paper <the causes, the harm and the countermeasures of local protectionism> byTan Xiaoying, YuKongjun and Zhang Tai (2005): the local protectionism refers to the situation that the local government or its affiliated departments, in order to protect the regional economic benefits or political benefits, violate the laws and regulations of state and abuse their administrative power to intervene the market, manipulate the market, set up the market barriers, destroy market mechanism and restrict the products and services of nonlocal firms from the fair competition[6]. The nature of the local protectionism is the abuse of administrative power in the local government management by only emphasizing the local interests and ignoring the state welfare[7].

Based on the previous research, we summarize the local protectionism into six categories:
(1) Set up the market barriers and prevent the entrance of nonlocal products and services to the local market. The market barriers can maintain the competitiveness of local products in local market and increase the achievements of local firms by raising the operational cost of nonlocal products.
(2) Increase the discriminatory charges. Set up the discriminatory prices for the nonlocal products and services or collect discriminatory charges to weaken their competitiveness in the local market.
(3) Allow the nonlocal products to enter into the local market but restrict their market sales. Permit and analogous permit belong to this category of local protectionism.
(4) Implement the policies which prefer the local firms or subsidize the local firms to strengthen the competitiveness of local firms by maintaining their advantages.
(5) Require explicitly or implicitly the local firms, institutions and people can only operate, purchase and use local products and accept the services provided by only local firms, institutions and persons or implement the industry monopoly by taking advantage of the monopolistic positions in the local market of the local administrative department.
(6) Directly intervene in the work of administration of justice and the law enforcement.

Is it true that the local protectionism can really increase the local social welfare, benefit the local economic development and increase the revenue of both local government and local firms?

The following paragraphs are the neo-classical welfare analysis of different forms of local protectionism. The changes of welfare are evaluated through the variation in consumer's surplus and producer's surplus while the improvement and deterioration in the total welfare are evaluated by the total surplus[8].

First, we analyze the first form of local protectionism, which has two main patterns: 1) increase the threshold for the nonlocal products and services to enter the local market. 2) Set up higher technical requirements for the nonlocal products

and services to enter the local market or prevent them from entering by repeating inspections and repeating authentication which increase the entering cost. Figure 3 shows the welfare changes of such a situation. SC represents the supply curve while DC represents the demand curve. Point E is the competitive market equilibrium. Point E_1 is the equilibrium point with local protectionism. When the local protectionism does not exist, the price of local market is P_e and the quantity demanded is Q_e. When the local protectionism is implemented to prevent nonlocal products from entering the local market, the price increase to P_1 and equilibrium quantity decreases to Q_1. So the consumer's surplus is C and the producer's surplus is A+B+L. When there is local protectionism, the consumer's surplus and producer's surplus become A and B+C respectively. By comparing these two situations, we find out that the consumer's surplus decreases by B+L and the producer's surplus increases by only B if the local protectionism presents. In another words, the total surplus decreases the shaded area L, which is also the deadweight loss. The deadweight loss here includes the losses caused both by the overproduction and the insufficient consumption.
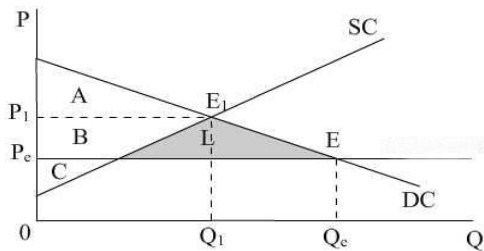

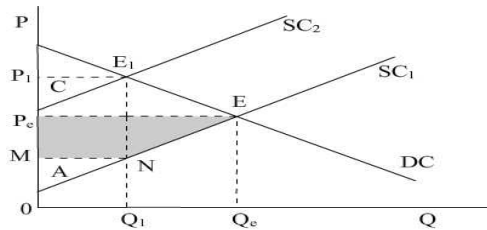**Figure 3 welfare analysis: policies restrict the nonlocal products entering**

Figure 4 welfare loss of the whole industry

Under such protectionism, the producer's surplus of local firms does increases by B. However, it does not mean that the producer's surplus of the whole industry increases. On the contrary, the producer's surplus of the industry actually decreases under local protectionism. From the perspective of meso economics, we assume that all regions implement the local protectionism[9]. Then the cost for every firm of entering the market increases, which leads to an increased production cost for the whole industry. Figure 4 shows such a case. When the entering cost for every firm increases, the operational cost of the whole industry also increases. If we keep other conditions fixed, the supply will be brought down, making the supply curve shift upward from SC_1 to SC_2 and move the equilibrium point from E to E_1. Under competitive market, the producer's surplus of the whole industry is the shade area plus A. When the local protectionism presents, the producer's surplus of the whole industry becomes C. Because the area of A equals that of C, the decrease in the producer's surplus of the industry is equal to the shade area of MNP_eE. The reasons for the decrease in the producer's surplus and deadweight loss are the protections for the local incompetent firms from the local government or the overexpansion of the local firms, which results in inefficiency as well as distortion in the allocation of the scarce resources and the incentive mechanism.

The second form of the local protectionism is increasing the discriminatory charges. In order to weaken the competitiveness of nonlocal firms, the local government sets up discriminatory prices or collects discriminatory charges from nonlocal firms. There are two obvious benefits to collect discriminatory charges: increase the government revenue and increase the producer's surplus of local firms.

In Figure 5, E_2 is the equilibrium point when the local government restricts the nonlocal firms entering into the local market. But the local government cannot completely prevent the nonlocal firms from entering the local market, it can only collects discriminatory charges which equals to P_1-P_e, making the local market price P_1 higher than the competitive price P_e. Before the collection of discriminatory charges, the local consumer's surplus is A+B+C+D+F+H and the local producer's surplus is G. When the discriminatory charges is imposed, the local consumer's surplus becomes A+B while the local producer's surplus is C+G. The local consumer's surplus decreases by C+D+F+H, local producer's surplus increases by C and the local government revenue increases by H. The shaded area in figure 5 D+F is the deadweight loss caused by discriminatory charges.
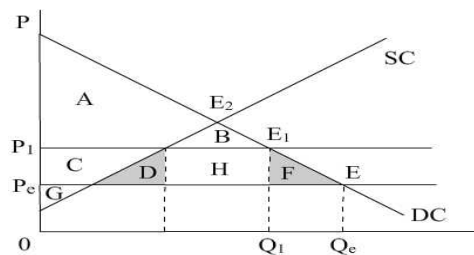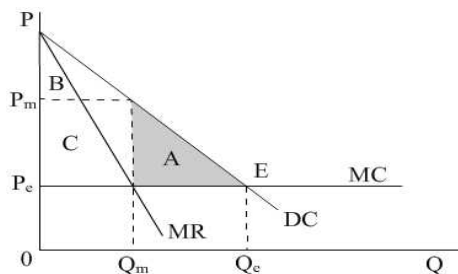

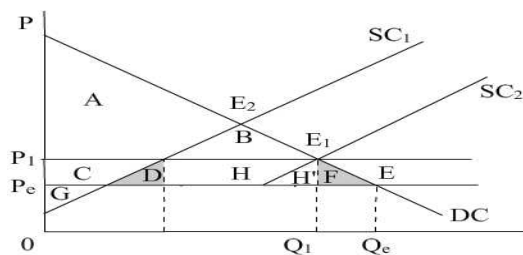**Figure 5 : Welfare loss caused by the discriminatory charges**

Figure 6 : Welfare loss caused by the restrictions on the sales of nonlocal firms.

The third form of local protectionism is the restriction on the sales of nonlocal firms, which usually in the forms of permit and exclusive rights to sell. It is very hard for nonlocal firms to obtain the exclusive rights to sell or become permit holders. In Figure 6 we can see that point E_2 is the equilibrium points when the nonlocal products are excluded from the local market completely. In a perfect competitive market, the price is P_e and market sales is Q_e. When such restrictions are imposed, the market sales is Q_1 and price increases to P_1. Under perfect competitive market, the local consumer's surplus is A+B+C+D+F+H+H' while local producer's surplus is G. The total surplus is A+B+C+D+F+G+H+H'. When the restrictions are imposed, the local consumer's surplus is A+B, the local producer's surplus is C+G, and license or permit issuer's surplus is H+H'. The total surplus is A+B+C+G+H+H'. When we compare these two situations, the local consumer's surplus is brought down by C+D+F+H+H', the producer's surplus increases by C and the surplus of license issuer increased from 0 to H+H'. The total surplus decreases by D+F and it is the deadweight loss.

Comparing to the situation that the nonlocal products are excluded from market completely, setting restrictions on the sales of nonlocal products moves the equilibrium point from E to E_1 and improves the total social welfare[10]. However, it still brings down the social welfare compared to that of a perfect competitive market. Such kind of local protectionism can protect the local less developed firms. At same time, it can also increase the government revenue. Still, we need to notice that it goes against the basic principles of normal operation of socialist market economy and leads to the deadweight loss. However, the permit system has positive effects in regulating and controlling of pollutions.

The forth form of local protectionism is the preferred policies and subsidies for the local firms. Its negative effects on the social welfare has been mentioned in the beginning of the paper and I will not repeat here.

The fifth sixth form of local protectionism makes the local firms, to some degrees, become the monopolistic firms in the market. I take an example of the beer industry in Kaifeng. Bianjing beer is the only beer brand that can be sold in the night market. So Bianjing beer becomes the monopoly in the night market. Figure 7 analyzes the welfare of it. Local monopolistic firm can produce at the constant price P_e. If it were in a perfect competitive market, this firm will set the price equal to the marginal cost so that the equilibrium price and quantity are P_e and Q_e respectively. But the local government intervention makes the monopolistic firmsnever price their products according to the marginal cost. Instead, the monopolistic firm charges a higher price P_m, which results in losses because the higher prices crowd out those consumers whose willingness to pay is higher than the marginal cost but lower that the monopolistic price. So the economy ends up with a deadweight loss.

Figure 7 welfare loss from monopoly

With a perfect competitive market, the local consumer's surplus is A+B+C. When monopoly is fostered in local market, the consumer's surplus was exploited and only B left. The rectangular area of C becomes producer's surplus. Shaded area A is the deadweight loss.

These two forms monopoly has obvious effects on individual consumptions. When it comes to groups of consumers, we need to consider other factors such as the transportation cost of nonlocal products. The size of the market is another important factor that can influence the monopolistic power because the market is not only crucial for the survival of individual firms, but also for the whole industry. When the market is large enough, the cost for the local protectionism will increase. It will be more attractive for nonlocal firms to enter into the local market.

CONCLUDING REMARKS

This paper analyzes the deadweight loss caused by the local protectionism through the calculation of social welfare. I first discuss the reasons for the local protectionism. I analyze the welfare effects of six forms of local protectionism by using the "Harberger Triangle" and conclude that the local protectionism brings down the social welfare.

Gordon Tullock states in his paper "The Transitional Gains Gap" that"when the government grants priority to certain groups, it can only benefit temporarily. The heirs of the initial beneficiaries usually cannot get the excessive benefits. On the contrary, they will be harmed when the priority is abolished." The local government cannot promote the long term economics development and progress through the local protectionism. It destroys the market efficiency in the resource allocation and creates deadweight loss.

In order to eliminate the local protectionism and set up the perfect socialist market economy system, I propose the following suggestions. First of all, the government should set up new system, which is a long term overall mechanism, to evaluate officials performance. At the same time, the government also severely punishes the local protectionism, lifting up its

opportunity cost. Secondly, further deepening the fiscal reform and improving the fiscal transferpayment system and public finance system. Consummating the system of tax distribution and making harmonious relationship regarding public finance between the central and local government. Thirdly, strengthening the construction of legal system by focusing on making the regulations that are against local protectionism. The government should constitute the practical laws for current economic situation, cutting the root of local protectionism.

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