A Geographic Approach to International Economics: "Strategic Trade Policy"?

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April 1995

ABSTRACT: This paper introduces a trade cost asymmetry into the Core-periphery model to investigate the location effects of protection. Trade costs arise from the active choice of governments. In the case of a country that can decide the level of barriers to imports without retaliation by the other country, unilateral protection is shown to attract firms and to increase the welfare of residents. Since all countries face a rational incentive to unilateral protection, non-cooperative behaviour may lead to an inefficient equilibrium with too much protection.

J.E.L. Classification: F12, F13, R1.

[*] I am grateful to Richard Baldwin, Ronald Findlay, Henryk Kierzkowski, Federico Trionfetti and seminar participants at the Annual Meeting of the Swiss Society of Statistics and Economics 1995 for helpful comments. They are not responsible for any error.

Recent years have seen the start of a new research project in international economics aiming at recasting “at least some of the theory of international trade as simply an aspect of the field of economic geography -- a field in which transportation costs play a crucial role” (KRUGMAN (1993)). Such a project relies heavily on the analytical framework developed by the “new international trade theory” to model increasing returns to scale (HELPMAN e KRUGMAN (1985)) thus giving solid analytical structure to some old ideas of location theory (KRUGMAN (1991a, 1992), FUJITA and KRUGMAN (1994)).

Economic activities show an overall tendency towards spatial agglomeration. Such a tendency can be explained in terms of the interaction between increasing returns to scale and transport costs (CHRISTALLER (1933), LÖSCH (1940)). Because of increasing returns to scale firms have an incentive to concentrate production at few sites. Because of transport costs the choice of location is crucial. Firms will prefer to locate at sites offering both stronger backward linkages in terms of larger local markets, and stronger forward linkages in terms of local supplies of inputs (HIRSCHMAN (1958)). These linkages generate agglomeration economies (CHISHOLM (1966)). Such economies are reinforced by factor mobility and increasing returns in transportation (KRUGMAN (1991b), KRUGMAN (1993)).

This paper argues that KRUGMAN’s idea of recasting some of the theory of international trade as simply an aspect of the field of economic geography, is far reaching and capable to add a completely new dimension to the debate on trade policy. BALDWIN, both alone (1994) and together with VENABLES (1994), classifies the economic effects of trade agreements into three wide categories: static allocation effects, accumulation effects and location effects. While trade theory has offered a rich support to the analysis of the first and, more recently, the second category, only during the last five years the third category of effects has been the object of deeper study. The general result is that, in the presence of trade costs, a region that is bigger in terms of local markets and factor supply, offers a better location to increasing returns sectors. Trade costs make world markets smaller. However world markets are smaller when supplied from the smaller location, since a bigger share of world demand can be supplied only incurring a trade cost.

Consider, for example, two countries, 1 and 2. The market size of 1, as measured by the value of local sales, is V1=80. Country 2 is bigger and its market is v2=100. Trade costs are symmetric: in both directions only t=90% of the value of goods shipped arrives. An interesting way to measure the overall size of world markets when supplied from one country is the “market potential” (HARRIS (1954), KRUGMAN (1992)) defined as the weighted sum of the sizes of reachable markets with each country market size weighted by trade costs. Then the market potential is $V1+V2\bullet t=170$ for country 1, while it is $V1\bullet t+V2=172$ for country 2. Thus, world markets are smaller when supplied from the smaller country. This is due to the fact that the bigger country offers a better access to world markets. In other words, *the bigger country is “closer” to world markets* (DICKEN and LLOYD (1990)). In this sense it enjoys a “location advantage”.

I want to push this line of reasoning one step further to analize the location effect of asymmetric trade costs possibly due to the fact that a region is more protected against imports than another. I argue that the more protected region will be a better location for the increasing return sector since it will be "closer" to world markets. Again, a simple example will clarify what I mean. Suppose that there are only two countries, 1 and 2. Both countries have equal local markets when measured in terms of local sales, say 100. However, country 2 is more protected against imports than country 1: shipments from 1 to 2 incur a trade cost of 30% of their value, while shipments from 2 to 1 only a cost of 28%. Then, region 2 will have a market potential of 172 against only 170 for region 1. *Unilateral protection makes a region closer to world demand*: world markets are bigger if supplied from the more protected region. Unilateral protection generates a "comparative advantage" in the increasing returns production as if the more protected region were bigger.

As KRUGMAN (1992) points out, HARRIS's market potential is only an incomplete index of a region location advantage, since it does not take into account the competition among suppliers. The purpose of this paper is to qualify the insight of the previous example using the rigorous formalization of KRUGMAN's (1991a,b) core-periphery model.

The paper is in four parts. The first extends the core-periphery model to the case of asymmetric trade costs. The second generalizes KRUGMAN's necessary conditions for divergence to that case, arguing that protection has overall consequences on the global stability properties of the economy. The third part introduces welfare considerations and analizes the case for protection in terms of location effects. The final part summarizes the results and suggests some lines of future research to model strategic trade interaction among countries not only in terms of profit shifting but also in terms of location effects. This perspective could add a new dimension to the debate on trade policy.

1. Protection and location in the core-periphery model

In the core-periphery model the economy consists of two regions. There is only one input, labour, which is differentiated into two non-substitutable types, farmers and workers. The total endowment of labour in the economy is set to be one by choice of units and consists of $g \in$ **Errore. Il segnalibro non è definito.**$[0,1]$ workers and $(1-g)$ farmers. Farmers are immobile and their spatial distribution is uniform so that in each region there are $(1-g)/2$ farmers. On the contrary, workers are immobile only in the short run, while they are perfectly mobile in the long-run. Call $L \in$ **Errore. Il segnalibro non è definito.**$[0,1]$ the share of workers in region 1 and $(1-L)$ the share in region 2. Thus, Lg workers are in region 1, while $(1-L)g$ workers are in region 2. The immobility of farmers ensures that each region will always have a local market and it can be thought of as a proxy of the immobility of land (ASILIS and RIVERA-BATIZ (1994)).

Workers and farmers share the same preferences. They consume two goods: a homogeneous agricultural good A and a horizontally differentiated industrial good M ("manufactures"). Preferences are of the S-D-S "love for variety" kind (SPENCE (1976), DIXIT and STIGLITZ (1977)). All

consumers in both location have the same utility function, which is assumed to be nested C.E.S..**Errore. Il segnalibro non è definito.** Each consumer in location *i* has utility:

(1) $U_i = (C_i/g)^g[A_i/(1-g)]^{1-g}$

Errore. Il segnalibro non è definito.where $g \in$ **Errore. Il segnalibro non è definito.**$[0,1]$, A_i is consumption of the numeraire good, C_i is the C.E.S. quantity index:

(2) $C_i = [n_i c_{ii}^{(\theta}$**Errore. Il segnalibro non è definito.**$^{-1)/}$**Errore. Il segnalibro non è definito.** $+ n_j c_{ji}^{(\theta}$**Errore. Il segnalibro non è definito.**$^{-1)/}$**Errore. Il segnalibro non è definito.**$]^{\theta}$**Errore. Il segnalibro non è definito.**$^{/(\theta}$**Errore. Il segnalibro non è definito.**$^{-1)}$

where c_{ji} is the amount of a representative variety produced in *j* and consumed in *i*, $\theta>1$ is the elasticity of substitution between varieties and also the elasticity of demand for each variety. Symmetry among varieties produced at the same location has been considered.

The agricultural good, that is chosen as the numeraire, is produced in a perfectly competitive constant-return sector using farmers' labour as the only input. The related cost function is:

(3) $y_1 = y_2 = (1-g)/2$

where y_i is the output of the numeraire good in region *i*.

The industrial good is produced in a monopolistically competitive increasing-return sector that uses workers' labour as the only input. The related cost function is:

(4) $l_i = Fw_i + Kw_i x_i \quad F,K>0, \; i=1,2$

where l_i is the amount of labour required to produce the typical variety, w_i is the manufacturing labour wage rate and x_i is output of the typical variety, x_{ii} of which is produced for the home market and x_{ij} for the foreign one ($x_i=x_{ii}+x_{ij}$).

The agricultural good can be shipped costlessly from one country to the other. So, farmers' nominal wages are equalized in the two countries and their value is equal to one since the agricultural good has been chosen as the numeraire. On the contrary, manufactures can be traded between regions only at a cost. Trade costs are modelled as SAMUELSON's (1952) "iceberg costs": in order to deliver one unit of any variety from location *j* to location *i*, τ_{ji} units must be shipped, where $\tau_{ji} \in [1,+\infty)$[1]. Differently from KRUGMAN (1991a,b), I allow trade costs to be different in the two directions of trade, possibly due to one region being more protected against imports than the other.

Usual results hold. Firms mark up price over marginal cost:

(5) $p_{ii} = [($**Errore. Il segnalibro non è definito.**$K)/(\theta$**Errore. Il segnalibro non è definito.**$-1)]\, w_i$

(6) $p_{ij} = [($**Errore. Il segnalibro non è definito.**$K)/(\theta$**Errore. Il segnalibro non è definito.**$-1)]\, w_i \tau$**Errore. Il segnalibro non è definito.**$_{ij}$.

Because of free entry, profits are zero in equilibrium and firms have to achieve a fixed optimal scale of production:

(7) $x_i = x_j = F(\theta$**Errore. Il segnalibro non è definito.**$-1)/K$.

This property implies that the total number of firms in the economy is fixed as a proportion of the total endowment of workers:

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[1] In KRUGMAN (1991b) $\tau<1$ is the fraction of manufactures that arrives for each unit actually shipped, which is an inverse index of trade costs. Here the direct index version (e.g. VENABLES (1993)) is adopted instead.

(8) $n_1 + n_2 = g/(F\theta$**Errore. Il segnalibro non è definito.**$)$.

It also implies that the share of firms in each region is proportionate to its share of workers:

(9) $n = L$

where $n = (n_1 F\theta$**Errore. Il segnalibro non è definito.**$)/g$ is the share of firms in region 1 ($n \in$ **Errore. Il segnalibro non è definito.**$[0,1]$).

To solve the model I follow KRUGMAN (1991b) in defining z_{11} as the ratio of region 1 expenditure on local manufactures to that on manufactures from the other region and z_{12} as the ratio of region 2 spending on region 1 products to spending on local products:

(10) $z_{11} = [L/(1-L)][w_1/ (w_2\tau$**Errore. Il segnalibro non è definito.**$_{21})]^{1-\theta}$**Errore. Il segnalibro non è definito.**

(11) $z_{12} = [L/(1-L)][(w_1\tau$**Errore. Il segnalibro non è definito.**$_{12})/ w_2]^{1-\theta}$**Errore. Il segnalibro non è definito..**

In equilibrium the total income of workers in a region is equal to total spending on their industrial products in both regions:

(12) $w_1 L = [z_{11}/(1+ z_{11})]Y_1 + [z_{12}/(1+ z_{12})]Y_2$

(13) $w_2(1-L) = [1/(1+ z_{11})]Y_1 + [1/(1+ z_{12})]Y_2$

where Y_1 and Y_2 are respectively income in region 1 and income in region 2:

(14) $Y_1 = (1-g)/2 + w_1 Lg$

(15) $Y_2 = (1-g)/2 + w_2(1-L)g$.

A short run equilibrium can be found by solving the system (10)-(15) for given L. Then, if for the values found no firm and no worker have an incentive to change location, that equilibrium will be maintained also in the long run. KRUGMAN (1991a) argues that no relocation incentive for a firm is a necessary and sufficient condition for no migration incentive for a worker. Migration incentives are readily assessed. A worker has an incentive to migrate if, by changing location, he expects to achieve higher indirect utility. Thus, if, given L, indirect utility is not the same in both regions, workers will *gradually* move to the higher indirect utility region: the short run equilibrium is not a long run equilibrium ("Marshallian tatonnement") [2]. There are two cases. If indirect utility is higher where there are more workers, in the long run all workers will eventually concentrate in one region ("agglomeration"). On the contrary, if indirect utility is higher where there are fewer workers, in the long run workers will be equally distributed between regions.

Fig.1 represents KRUGMAN's (1991b) results. The share of workers in region 1 is represented on the horizontal axis, the ratio of a typical worker's indirect utility in region 1 to that in region 2 is represented on the vertical axis. As usual in the S-D-S setting, indirect utility W is equal to real wage when using the exact price index as the deflator:

(16) $W_i = w_i/[(q_i)^g(1)^{1-g}]$

where q_i is the C.E.S. price index:

(17) $q_i = [n_i\, w_i^{1-\theta}$**Errore. Il segnalibro non è definito.** $+ n_j^{1-\theta}$**Errore. Il segnalibro non è definito.** $w_j^{1-\theta}$**Errore. Il segnalibro non è definito.** τ**Errore. Il segnalibro non è definito.**$_{ji}^{1-\theta}$**Errore. Il segnalibro non è definito.**$]^{1/(1-\theta}$ **Errore. Il segnalibro non è definito.**$)$.

[2] Throughout the paper I will concentrate on the *tatonnement* argument, thus leaving aside the question of history-vs-expectations (MATSUYAMA (1991), KRUGMAN (1991c)). The analysis of that question requires a fully specified dynamic model which is beyond the scope of the present contribution (see OTTAVIANO (1994, 1995)).

The curves are drawn for θ**Errore. Il segnalibro non è definito.**=4 and g=0.3. The solid curve shows a situation of high trade costs (τ**Errore. Il segnalibro non è definito.**$_{21}$=τ**Errore. Il segnalibro non è definito.**$_{12}$=2), the dotted curve a situation of low trade costs (τ**Errore. Il segnalibro non è definito.**$_{21}$=τ **Errore. Il segnalibro non è definito.**$_{12}$=1.3). In the first case, workers' real wage is higher in the region with less workers: the only long-run equilibrium is *L*=0.5 and it is stable. In the second case, workers' real wage is higher in the region with more workers. Thus, there are three long-run equilibria corresponding to complete concentration of workers and firms in either location, *L*=0 or *L*=1, and to equal division, *L*=0.5. However, while *L*=0 and *L*=1 are stable, *L*=0.5 is not, since any perturbation of *L*=0.5 leads to complete concentration. KRUGMAN calls "convergence" the case of a single equilibrium, "divergence" the case of multiple equilibria.

In Fig.2 region 2 is more protected than region 1. As a result, in the case of convergence, the unique equilibrium corresponds to *L*<0.5: region 2 has a location advantage over 1. The interpretation of the case of divergence is different. The unstable equilibrium corresponds to *L*>0.5. Then, according to the tatonnement argument, the size of the set of short run equilibria leading to complete concentration in 2 is bigger than the size of the set of those leading to concentration in 1. Again, this can be viewed as a location advantage for the more protected region.

2. Protection and stability

This section extends KRUGMAN's (1991b) necessary conditions for divergence to the case of asymmetric trade costs. KRUGMAN derives those conditions as the result of spatial arbitrage by firms. OTTAVIANO (1995) shows that the same conditions can be readily derived from spatial arbitrage by workers: if complete concentration of industry in one region, say in region 1, is a stable long run equilibrium, then it must be true that the real wage in 1 is higher than the real wage in 2 subject to *L*=1. Following this line of reasoning, with asymmetric trade costs, necessary condition for agglomeration of manufacturers in region 1 is (18):

(18) $\nu = (1/2)\tau_{12}^{-g\theta}\left[(1+g)\tau_{21}^{1-\theta} + (1-g)\tau_{12}^{-(1-\theta)}\right] \leq 1.$

Fig.3 shows the behaviour of **Errore. Il segnalibro non è definito.** as a function of the ratio **Errore. Il segnalibro non è definito.** between τ**Errore. Il segnalibro non è definito.**$_{12}$ and τ**Errore. Il segnalibro non è definito.**$_{21}$ (β **Errore. Il segnalibro non è definito.**=τ**Errore. Il segnalibro non è definito.**$_{12}$/τ**Errore. Il segnalibro non è definito.**$_{21}$).

For β**Errore. Il segnalibro non è definito.**=1 trade costs are symmetric as in KRUGMAN (1991b): if trade costs are high (ν**Errore. Il segnalibro non è definito.**1(β**Errore. Il segnalibro non è definito.**)), ν **Errore. Il segnalibro non è definito.**>1 and agglomeration in 1 is unstable i.e. workers mobility leads to a flow of firms from 1 to 2; on the contrary, if trade costs are low (ν**Errore. Il segnalibro non è definito.**2(β**Errore. Il segnalibro non è definito.**)), ν**Errore. Il segnalibro non è definito.**<1 and agglomeration is stable.

In the first case (ν**Errore. Il segnalibro non è definito.**1(β**Errore. Il segnalibro non è definito.**)), the incentive for firms to agglomerate in region 1 is weaker, the lower the barriers to trade to region 1 relatively to those to region 2 (β**Errore. Il segnalibro non è definito.**>1). Interesting properties are revealed if region 1 has higher trade barriers. For "small" values of β**Errore. Il segnalibro non è**

definito.<1, agglomeration in 1 is stable. However it is again unstable for "very small" values. This is due to the presence of two opposite effects. On one hand, protection makes trade costs lower from the more protected region. On the other hand, since consumers in 1 have to pay a higher trade cost for each imported variety, protection reduces the nominal wage differential that region 2 has to offer to attract workers. This second effect prevails if region 1 is much more pretected than region 2.

When trade costs are low (ν**Errore. Il segnalibro non è definito.**2(β**Errore. Il segnalibro non è definito.**)), agglomeration in 1 is weaker the less region 1 is protected relatively to 2. If 1 is much less protected than 2, agglomeration in 1 is unstable. On the contrary, the more protected region 1 is, the stronger is agglomeration but only up to a certain level of relative protection. If region 1 is much more protected that region 2, agglomeration in 1 is unstable.

Thus, there exists a degree of relative protection that maximizes the agglomeration economies in the more protected region. In particular, by moderate unilateral protection, a region can make agglomeration of manufacturers inside its borders a *stable* equilibrium even if it would not be a stable equilibrium in the presence of symmetric trade costs. Moreover, by choosing unilaterally the degree of relative protection (β**Errore. Il segnalibro non è definito.**), a region can make agglomeration of manufacturers inside its borders *the only* long run equilibrium.

This insight can be checked by other numerical results. An example is Fig.9: no matter whether trade costs are high or low, workers' real wages are higher in region 1, which is the more protected region given the chosen values of β**Errore. Il segnalibro non è definito.**. This is true whatever the initial spatial distribution of workers.

To summarize the results, *unilateral protection not only gives to the more protected region a location advantage due to better access to world markets no matter whether divergence or convergence prevails in the long run, but it also affects the global dynamic properties of the economy, by altering the stability and the number of long run spatial equilibria*.

3. Welfare

So far we have seen how protection affects location discovering that a region which is more protected, attracts more firms because of its relative "proximity" to world markets. However, before concluding that a region has a unilateral incentive to protection, some welfare analysis is required to establish that (i) more firms imply higher welfare and (ii) the welfare incentive to unilateral protection can lead to overall welfare losses.

As BALDWIN and VENABLES (1993) and RAZIN and SADKA (1994) point out, regional welfare analysis in models with migration raises a conceptual issue. The migrant no longer belongs to the origin country community and becomes a member of the destination country community. "The conceptual issue is about whether to take into account the welfare of those who may join or leave the society in the future. This issue is particularly relevant when evaluing a policy that is directly and significantly going to cause population shifts" (RAZIN and SADKA (1994), p.138). This is relevant

in the present setting, since, as already seen, in the core-periphery model protection not only alters the indirect utility of individuals but it also changes the spatial distribution of workers.

In the case of divergence, the question is complicated by the existence of multiple equilibria. As stressed by BALDWIN and VENABLES (1993), careful evaluation requires a fully specified dynamic model (OTTAVIANO (1995)), which goes beyond the scope of the present paper. Thus, I concentrate on the welfare analysis in the case of convergence.

Since profits are always zero in equilibrium and trade costs are modelled as deadweight loss in terms of goods lost in transit, I choose the indirect utility of individuals in a country as the country welfare indicator.

Fig.5 shows workers' real wages (i.e. indirect utilities) in the two countries as a function of the share of workers in region 1. The solid curves represent workers real wages when trade costs are symmetric; the dotted curves when the region 2 is more protected than 1. Workers' real wages in region 1 are represented by the curves with higher intercept; real wages in 2 by the curves with lower intercept. Thus, Fig.5 shows convergence since workers' real wages are higher where there are less workers. As before, starting from symmetric trade costs, unilateral protection by country 2 moves the long run equilibrium from L=0.5 to L<0.5: workers migrate to the more protected country until their real wages are again equalized in the two countries. If there is no cost of migration, workers are as well off as before. In particular, they achieve the same level of indirect utility in both regions. So, as far as workers' welfare is concerned, protection and relocation are neutral.

As to farmers' welfare, their nominal wages are always equal to 1 in equilibrium. By inspection of equations (16) and (17), it is readily observed that farmers are better off in the region with a higher share of manufacturers and workers. Individually rational migration behaviour by workers has a negative welfare effect on farmers in the origin country and a positive welfare effect on farmers in the destination country. Migration actually leave the remaining population worse off (see also LAYARD et al. (1992)). So, *unilateral protection favours the immobile factor owners (farmers) while it is irrelevant as far as the mobile factor owners (workers) are concerned.* From the point of view of political economy, calls for unilateral protection by farmers are likely to face little opposition.

Quite interestingly, farmers may favour unilateral protection in manufactures independently from any claim concerning agriculture. That happens because they benefit from the local production of manufactures that otherwise would have to be imported incurring a trade cost.

In reality, it is difficult to think of unilateral protection as a likely scenario. If region 1 unilaterally raises barriers against imports, region 2 has the opportunity to react. For expositional purpose, I consider a tit-for-tat reaction: region 2 can choose whether to be passive or to react tit-for-tat. Fig.6 show the result of a bilateral increase in trade costs. The solid curves represent the initial situation, while the dotted curves represent the outcome of the common increase in trade costs. Workers are worse because more goods are lost in transit. For the same reason also farmers are worse off. However, compared with the unilateral protection case, farmers in region 1 could be better off.

There are two effects of the tit-for-tat reaction. On one side, firms relocate to 1. On the other, trade costs are higher. If the increase in trade costs is not too big, the first effect will prevail.

So, farmers in one region might have an incentive to call for higher protection no matter what the other region does. It is a typical prisoner's dilemma: individually rational behaviour leads to a Pareto inferior equilibrium in which there is too much protection.

These considerations are only a heuristic devise. However, the results obtained point at a new line of research that might be worth pursuing. When locational effects are taken into account, trade policy decisions gain an additional dimension. As for traditional strategic trade policy (BRANDER (1994)), individually rational decisions by countries create situations in which coordination could lead to superior equilibria. However, while traditional arguments rely on profit shifting, here the question is firms shifting.

From a political economy point of view, factor mobility plays a central role. In the core-periphery model, there are two natural "parties". The immobile factor owners have an individually rational incentive to call for unilateral protection even in sectors where they do not take part in production. The mobile factor owners do not and are more likely to be keen on trade liberalization.

4. Conclusion

Trade policy affects the static allocation of resources. It also affects accumulation and growth. Recent theoretical contributions have appeared where it is argued that, in the presence of increasing returns to scale and trade costs, trade policy could also have relevant effects on the spatial distribution of economic activities.

Most contributions focus on the location effects of symmetric trade agreements by which partners agree on a common level of trade barriers. Trade costs make world markets smaller. However they are even smaller when supplied from the smaller region since a higher share of world demand can be supplied only incurring a trade cost. The bigger region thus enjoys a "comparative advantage" in the increasing returns sector. I have pushed this line of reasoning one step further. Consider two regions of the same size, one of which is more protected against imports than the other. Then, the more protected region offers a better access to world markets since products from that region can be supplied incurring a lower trade cost: the protected region is "closer" to world markets.

This insight has been implemented in the core-periphery model obtaining the following results: (i) unilateral protection attracts firms to the more protected region by creating a locational advantage in terms of access to world markets; (ii) unilateral protection also affects the global dynamics of the economy and can be used to make agglomeration in the more protected region the only stable long run equilibrium whatever the initial distribution of firms and whatever the dynamic properties in the case of symmetric trade costs; (iii) the location effects of unilateral protection favour the owners of the immobile factor and are neutral as far as the welfare of the mobile factor owners is concerned; (iv) competitive protection by the two regions in order to get a higher share of the increasing returns

sector can lead the economy to a Pareto-inferior equilibrium where there is too much protection. As far as higher trade barriers are the best choice for a region whatever the other region does, the economy faces a typical Prisoner's Dilemma that, in the absence of any coordination mechanism, might lead (in the limit) to a breakdown of trade.

The paper is only a first step towards adding a new dimension to the theoretical debate on trade policy. Countries may use trade policy not only to shift profits from foreign to domestic firms as in the traditional strategic trade policy literature, but also to shift factors and firms from foreign countries to domestic sites. I have used the by-now familiar core-periphery model to illustrate the point. Further research is needed. In particular, Hotelling-type oligopolistic models of spatial price competition could be used to mirror the strategic trade argument, according to which government can use trade policy to alter the strategic interaction between domestic and foreign firm.

Along a related line of research, one should also study in depth the issue of welfare evaluation of policies that cause migration, such as trade policies when location effects are relevant. Owners of immobile factors might have a rational incentive to call for protection, while owners of mobile factors might be more keen on coordinated liberalization. This also raises a political economy question. Interestingly enough, owners of immobile sector-specific factors might call for protection in sectors different from their own.

Finally, when agglomeration forces dominate, multiple equilibria appear complicating the welfare analysis and raising the question of history-vs-expectations. These issues can be tackle only by a fully specified dynamic model, which is beyond the scope of the present contribution whose aim was to suggest a way of enriching the theoretical debate on trade policy and, in particular, protection. Some interesting insights have been shown by means of a familiar static model of geography and trade. Complex dynamic aspects have been set aside but remain a basic challenge for future research.

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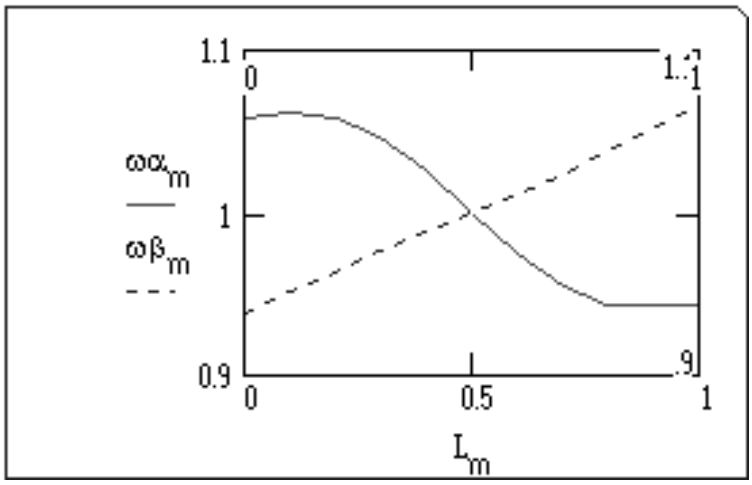

Fig.1 - Symmetric trade costs

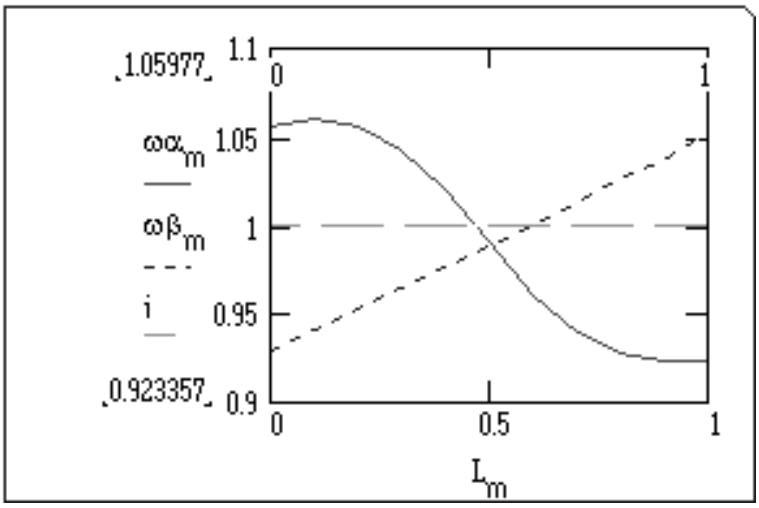

Fig.2 - Asymmetric trade costs

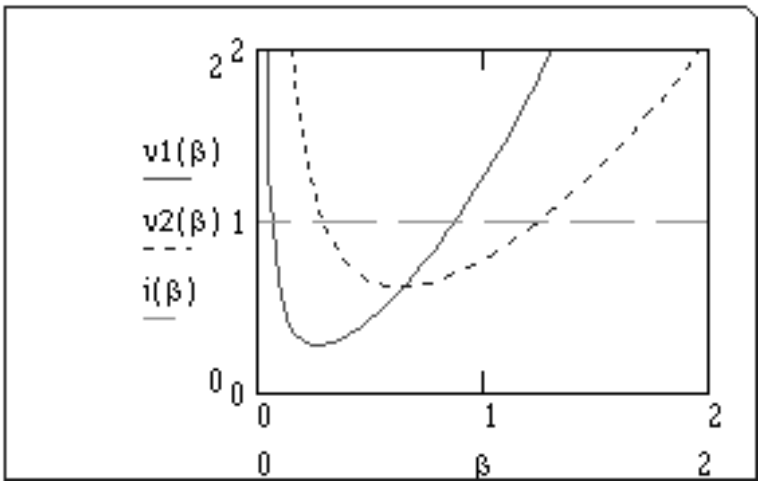

Fig.3 - Incentive to agglomeration

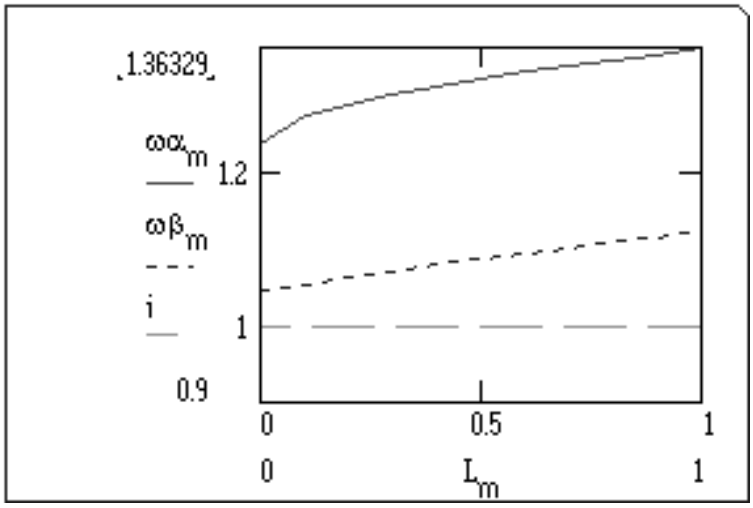

Fig.4 - Uniqueness of equilibrium

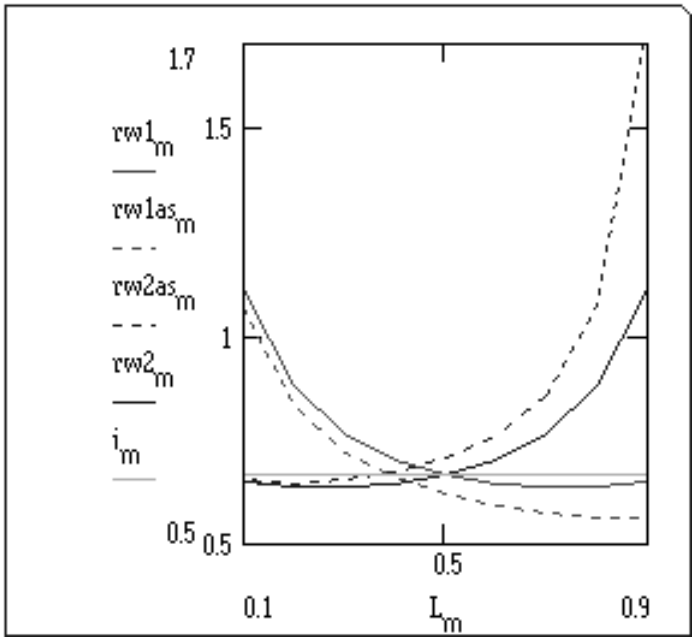

Fig.5 - Unilateral protection

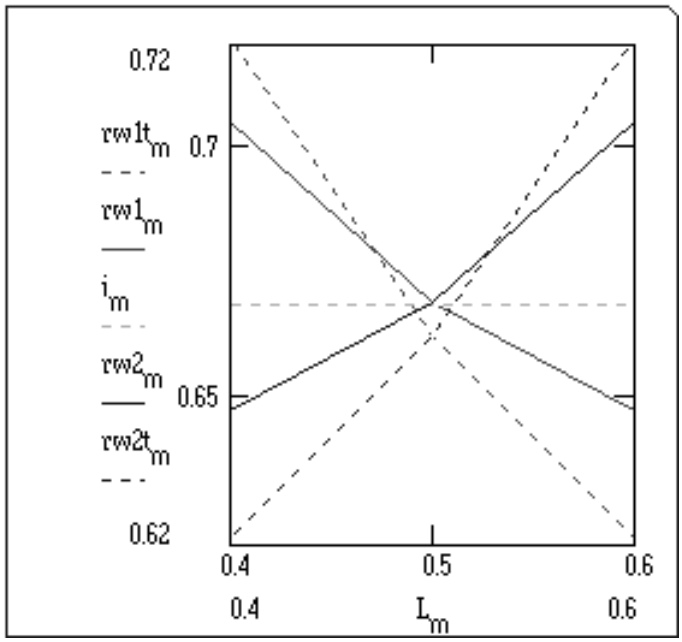

Fig.6 - Bilateral protection