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**ASIA'S "OPEN REGIONALISM" ALTERNATIVE
TO PREFERENTIAL TRADE AGREEMENTS:
PROMISING, ATTRACTIVE OR VULNERABLE
TO CRONYISM?**

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ABSTRACT

Asia's "Open Regionalism" Alternative to Preferential Trade Agreements: Promising, Attractive, or Vulnerable to Cronyism?

Peter Sinclair and David Vines

Starting with a world where all countries apply Nash-optimal tariffs against all imports, we ask when, if ever, a group of countries can gain by trading freely ("promise") and when, if ever, it pays an outsider to join them ("attractiveness"). The free trade club is promising if enough join, but it cannot be attractive. If the club, instead, abolishes internal tariffs and reduces tariffs on imports from non-members, it can be attractive, and will be promising if it is attractive. Our results are then modified to incorporate cronyism (policies to enhance the rent of a domestic firm at the expense of other domestic agents). Although a trade-liberalizing club stands to gain more from cutting tariffs on a true welfare basis, because cronyism implies higher tariffs, the distorted measure of welfare implied by cronyism may well register a fall, and especially when the club is large.

Key words: free trade, open regionalism, trade liberalization

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1 Introduction

This paper asks two questions about a group of countries taking major steps towards free trade: first, how many members should there be for them to gain, and, second, when will it pay an outsider to join them? We consider a world in which all countries levy tariffs against imports, and suppose that it is not possible to construct a co-operative agreement amongst all countries to remove these tariffs.¹ Our focus is a subset of countries that move towards free trade by forming a free trade club; they remove tariffs on *all* imports and moving to free trade, while other countries remain protectionist.

Our enquiry has been prompted by an important development. In the late 1980s and early 1990s, frustration with the slow progress in the Uruguay round of trade negotiations led countries in the Asia Pacific region to embark on the creation of a free trade club. The aim, promoted by the Asian Pacific Economic Cooperation (APEC) Process, was to advance a form of regional co-operation in which the objective was "concerted unilateral liberalisation of trade" (APEC, 1994, Garnaut, 1994, 1997). This strategy, which its protagonists have named "open regionalism", was to be an alternative to conventional, or "preferential" regionalism in which a set of countries move towards free trade by cutting tariffs amongst themselves, whilst leaving external tariffs in place, so as to form a preferential free-trade area or customs union.²

The basic idea of open regionalism is this.³ There must be some costs attached to unilateral trade liberalisation, since otherwise all countries would independently choose to move to free trade. This point is stressed by Ethier(1998), and Bagwell and Steiger, (1997a, 1997b, 1998). But by joining a free trade club a country gains access to the markets of the other members of the club who are also liberalising. If the right conditions are satisfied then – according to the proponents of open regionalism - these

1 See Krugman (1993), Bagwell and Steiger, 1997a, 1997b.

2 See, for example, Krugman 1991a and 1993, and the review of the literature on this topic in Bhagwati, Panagariya, 1993, and Bhagwati, Greenaway, and Panagariya, 1998.

3 It is not our purpose to formally compare this strategy with that of forming a preferential trading bloc. The reasons proposed for it are discussed in detail in Garnaut (1994, 1997), Bergsten (1997), and Drysdale and Vines (1998b, Chapter 1.) They are: to avoid trade diversion (see Bhagwati et al 1998); to avoid putting yet more pressure on the WTO, whose Article 24 allows the formation of such blocs only under very tightly specified circumstances, circumstances which are nearly always violated (see Sampson 1996): and to give participants individual freedom of action whilst yet making possible a reciprocal exchange of the benefits from liberalisation (see Drysdale, Elek and Soesastro, 1998).

gains can more than compensate for the losses which are attached to liberalising at home.

However, proponents of open regionalism need to confront two key questions. First, would a free-trade club be welfare improving? And would a free trade club be one which other protectionist countries want to join? If the answer to the first question is “yes” then we say that the club is “promising”. If the answer to the second question is “yes” then we say that the club is “attractive”.

The financial crisis in the Asia Pacific region has suggested two further questions. Many commentators have attributed the crisis, at least in part, to “cronyism”.⁴ We have therefore considered the connections between open regionalism and a form of cronyism in trade policy; one in which protectionism is driven by the interests of rent-seeking producers at the expense of consumers, as argued by Grossman and Helpman (1994, 1995). Is open regionalism a strategy for overcoming the effects of cronyism (as implied by Drysdale, Elek, and Soesastro, 1998)? Or is cronyism something which threatens the open regionalism project, by putting obstacles in the way of the moves towards open regionalism which are both promising and attractive (as implied by Rollo, 1998)?

Despite the importance of these questions, and the impact which APEC and the open regionalism idea have had on the policy debate 5, discussion of open regionalism has so far been entirely informal. This present paper provides the first formal analysis of the above four questions. We examine them in the context of the familiar oligopolistic, cross-hauling, model of international trade. We do this because this model provides a highly tractable framework for the analysis. A companion paper (Sinclair and Vines, 1998) conducts a parallel inquiry using the variety trade model which Krugman introduced into the study of regionalism, with broadly similar results.

Our findings are striking. We show that a free trade club can be promising, but only if enough countries join. We also show that – unless initial tariffs are very high - a free trade club will *never* be attractive, because outsiders would prefer to free-ride on the benefits without joining. As a consequence of this second result, we consider a variant on a free trade club, namely a “trade-liberalising” club. Such a club is a form of free trade area, in which tariffs are abolished among members, and tariffs are markedly reduced, but not completely abolished, against outsiders.⁶ We show that such a trade liberalising club can be constructed which is *always* both promising and attractive.

As to cronyism, we show that it causes higher initial tariffs. If welfare calculations of promise and attractiveness are still made according to the “true”, undistorted welfare criterion, then this means that promise is more likely. It also means that initial tariffs may be so high that attractiveness is indeed possible. However if the test of promise is that welfare must increase, when welfare is measured

4 Krugman(1998), Bhattacharya, Claessens, Ghosh, Hernandez and Alba (1998), Centre for Economic Policy Research (1998), Corsetti, Pesenti, and Roubini (1998).

5 See Ruggiero (1996)

6 This idea has some similarity to proposals made by Bergsten, 1997.

according to the cronyist welfare function in which producer surplus is overweighted, then it is much harder to establish promise. This is because unilateral reductions in protectionism damage profits, and it may be impossible to obtain sufficient extra profits from foreign markets to compensate for this. In such circumstances attractiveness is clearly also at risk. In fact it may not even be possible to construct a trade liberalising club which is both promising and attractive.

The paper is set out as follows. Section 2 explains the setup. Promise and attractiveness are considered in Section 3, where we also introduce the idea of a trade liberalising club. Section 4 considers the cronyism question. Section 5 concludes by examining the significance of our results.

2 The Setup

2.1 Preliminaries

There is a world oligopoly in an industry which we call steel, and each country has one firm which belongs to this industry. There is Cournot competition in this industry. For simplicity we will suppose that marginal costs are constant and uniform in this industry. Firms from all countries sell in all other countries' markets, so there is cross-hauling. Markets are segmented and there are no transport costs. We shall be analysing the steel industry by means of a multi-country stripped down version of the Brander-Krugman/Brander-Spencer family of models. But our model is a simple general equilibrium one: in the background there is a competitive sector in which a second good, which we call cloth, is produced. In this sector there is perfect competition, also with constant and uniform marginal costs. We let cloth be the numeraire, in units of which steel prices and costs are calculated, and we suppose that the marginal cost of production is a constant which we normalise to unity.

Initially each country sets a tariff on steel imports, partly to divert rent to its own steel industry. Initially in the tariff-ridden equilibrium all countries set the same optimum tariff and there is symmetry, and no country is a net exporter of steel or of cloth, although there is cross-hauling of steel. When some countries become free traders, they will import more steel than they export; in the background this unbalanced trade in steel is exactly balanced by compensating exports of cloth.

We assume that all agents' utility functions are common, and that utility is quasi-linear: linear in cloth and quadratic in steel. Thus

$$U = x + ay - by^2 / 2 \qquad a, b > 0 \qquad (i)$$

where x denotes consumption of cloth; and y represents consumption of steel, the price of which is p . Maximizing utility subject to a budget constraint $I - x - py = 0$ (where I denotes income) gives rise to

$$y = (a - p) / b \qquad (ii)$$

$$U = I + (a - p)^2 / 2b \quad (\text{iii})$$

Equation (ii) is a linear demand curve for steel, and (ii) is the indirect utility function. The second term on the RHS of (iii) is exactly equivalent to consumer's surplus from the consumption of steel.

We suppose that tariff revenue is distributed to domestic consumers and also that each country's steel firm is locally owned with all of its profits distributed to domestic consumers. (There are no profits in cloth production.) We also assume that intra-country lump-sum taxes and transfers are costless.

These assumptions about production, consumption, and distribution are sufficient to legitimise the use of partial equilibrium surplus techniques, in particular to ensure that that social welfare is equal to the sum of (i) government tariff revenue, (ii) consumers' surplus from the consumption of steel, and (iii) producers' surplus in the steel industry.

2.2 *The Calculation of Welfare*

In each country, i , product demand is given by the inverse of demand curve (ii)

$$\text{above, that is } P_i = a - bQ_i \quad (1)$$

where here Q_i = total sales in i , P_i = price in i and $a; b > 0$. The local firm's profits on home sales are:

$$p_i^i = (P_i - c)q_i^i \quad (2)$$

where c = unit marginal cost and q_i^i = i 's output for sale in home market i . A foreign firm's profits on sales in i are:

$$p_j^i = (P_i - c - t_i)q_j^i \quad (3)$$

where t_i = a specific tariff set by i and q_j^i = j 's sales in market i . Cournot equilibrium, from maximizing (2) and (3), establishes

$$P_i - c = bq_i^i = bq_j^i + t \quad (4)$$

Substitution between (1) and (4) $\left[Q_i = q_i^i + (n-1)q_j^i \right]$ reveals

$$\begin{aligned}
P_i(n+1) &= a + cn + t_i(n-1), \\
Q_i b(n+1) &= n(a-c) - t_i(n-1), \\
q_i^i b(n+1) &= a - c + t_i(n-1) \text{ and} \\
q_j^i b(n+1) &= a - c - 2t_i
\end{aligned}$$

Consumer's surplus in i equals $bQ_i^2 / 2$. Home government tariff revenue (taking the tariff to be a specific tariff at rate t_i) equals

$$t_i(n-1)q_j^i = t_i(n-1)(a-c-2t_i)/b(n+1) \quad (5)$$

Local firm profits in the home market, from (2), will be

$$P_i^i = \frac{1}{b} \left[\frac{a-c+t_i(n-1)}{n+1} \right]^2 \quad (6)$$

Abroad, the home firm will earn

$$\sum_{j \neq i}^n P_i^j = \frac{1}{b(n+1)^2} \sum_{j \neq i}^n (a-c-2t_j)^2 \quad (7)$$

Home country welfare will therefore equal

$$\begin{aligned}
W_i &= [b(n+1)^2]^{-1} \left\{ \frac{1}{2} [(a-c)n - t_i(n-1)]^2 + t_i(n^2-1)(a-c-2t_i) \right. \\
&\quad \left. + [a-c+t_i(n-1)]^2 + \sum_{j \neq i}^n (a-c-2t_j)^2 \right\}
\end{aligned} \quad (8)$$

2.3 The Nash Optimal Tariff

For simplicity we let our benchmark case be one in which tariffs are set by individual countries at Nash optimal rates (as in Krugman, 1991a, Bagwell and Steiger 1997a, 1997b, and Either, 1998). We can compute the Nash tariff t^*_i that maximizes (8), under the assumption that the t_j are given. At these rates the marginal cost of the loss of consumer surplus because of the tariff is just balanced by marginal benefits of two kinds: (i) the increase in the domestic firm's profits; and (ii) the gain to government revenue. We obtain

$$t^* = \frac{3}{n+7}(a-c) \quad (9)$$

where we drop the subscript i because, by symmetry, the Nash-optimal tariff rates are equal in all countries.

As n increases, the steel price falls closer to marginal cost, squeezing rents and reducing the size of the optimal tariff. As $n \rightarrow \infty$, the perfectly competitive limit under Cournot assumptions, $t^* \rightarrow 0$.

3 Promise and Attractiveness

3.1 Promise

The first result which we obtain is that a club can be promising if enough countries join. The intuition here is that unilateral liberalisation by one country - call it the “home country” is bound to be welfare reducing for it - as compared with initial Nash optimum tariff position. (This just follows from fact that the initial tariff is a Nash optimum.) But the liberalisation by each of the other $m-1$ “partner” countries will give the first country access to extra profits in each of their markets, as the home firm can sell a higher quantity there, at a higher price, after the removal of the tariffs against it. We can show that if m/n is large enough then this effect in partner markets will just outweigh the loss from home liberalisation, and the club is promising.

Formally, we contrast (8) with the level of welfare which results if the home country, and $m-1$ others, adopt a policy of free trade, so that $t_i=0$, and $t_k (k \neq m-1) = 0$. There are two sets of effects.

As a result of *liberalising at home*: (i) the local price p_i falls, raising Q_i and consumers’ surplus in the home country; (ii) government tariff revenue disappears; and (iii) the home firm’s profits on local sales, p_i^i , falls. The first effect raises W_i , while the second and third effects reduce it. We call the sum of these effects A and obtain:

$$A = -t_i (n-1) \left(3(a-c) - t_i (n+7) / 2 \right) / b(n+1)^2.$$

If we substitute in for the Nash tariff, t^* , from (9) we obtain:

$$A = -9(n-1)(a-c)^2 / 2b(n+7)(n+1)^2$$

A is clearly negative at the Nash tariff rate, but would be zero (positive) if t equalled (exceeded) $2t^*$.

As a result of *the liberalisation in $m-1$ partner countries*, the home firm’s profits from sales in each of its $m-1$ free-trade partner countries rises.⁷ The home

⁷ It is clear from (8) that the Nash tariff rate set by non-free-traders will remain unchanged at t^* . This will ensure that, under our assumptions, there is no change in the profits earned in

firm's overseas profits thus change by $m-1$ times the size of this effect in any one market. . We call this effect B . B is given by

$$B = 4t_j (a - c - t_j) / b(n + 1)^2$$

and will *always* be positive ,[m has nothing to do with the formula, and the discussion only makes sense for $m > 1$ since t_j above $(a - c) / 2$ would be prohibitive.

The change in home welfare, ΔW_i , may thus be written as

$$\begin{aligned} \Delta W_i &= A + (m - 1)B \\ &= \left[-t_i(n - 1)(3(a - c) - t_i(n + 7) / 2) + 4t_j(m - 1)(a - c - t_j) \right] / b(n + 1)^2 \end{aligned} \quad (10)$$

Our question is, what must be true for ΔW_i to be positive? In particular, how large must m , the size of the free-trade club, be for this to be so?. We may substitute in for the optimum tariff t^* . This gives

$$\Delta W_i = \left[\frac{a - c}{(n + 1)(n + 7)} \right]^2 [24(n + 4)(m - 1) - 9(n - 1)(n + 7)] / 2b \quad (11)$$

so that $\Delta W_i > 0$ if

$$8m \geq 3n + 14 - 45 / (n + 4) \quad (12)$$

(12) shows us that a free trade policy will always raise home welfare if m is sufficiently large.

For example, if $n = 5$, promise requires $m \geq 3$; if $n = 41$, $m \geq 17$; if $n \rightarrow \infty, m/n \geq 3/8$. Note that we can also show that even if tariffs are initially at levels other than the Nash optimum - either higher or lower - then there is still "promise", if m is large enough, and that (as we would expect) promise is more likely the higher the initial tariff. If t_i is more than double the Nash rate, A is positive, so unilateral tariff-removal is welfare improving even if no other countries follow suit.

foreign non-partner countries by the home firm.

3.2 *Attractiveness*

The second basic result which we obtain is that – starting with Nash optimal tariffs - a free trade club will *never* be attractive. Again this has a simple intuition: outsiders would prefer to free-ride on the benefits without joining.

In more detail the argument is as follows. Compare the welfare of the home country with that of a rest-of-the-world country which remains protectionist (called a foreign country). Both the home country and the foreign country gain in home’s “partner” countries because their firms obtain access to profits in partner countries *in exactly the same way*. So we only need to compare the welfare effects on the home country and the foreign country resulting from changes *in the home market*. We know that the liberalisation in the home market will damage the welfare of the home country (because it is starting from a Nash optimal tariff). We also know that the liberalisation in the home country will be advantageous to the foreign country because it increases the profits of the latter’s firm in the home country’s market. Now adding back the welfare benefits to home and ROW from effects in partner countries (which we have already said are the same in both cases) we can assert that the welfare gain to the foreign country from the formation of the club is necessarily larger than the gain to the home country. Thus the club is not attractive.

The foreign country gains mB , which must be positive. The home country gains $A + (m - 1)B$, which is ambiguous in sign. Attractiveness requires home’s gain to exceed foreign’s, or $B < A$. At the Nash tariff,

$B - A = \frac{3}{2} \left(\frac{a - c}{n + 7} \right)^2 [3n^2 + 26n + 11] > 0$. So at the Nash tariff, the free trade club cannot be attractive.

We can extend this argument by showing that it is true even if the initial home tariff is not a Nash optimum – unless initial tariffs are very high. The only case in which attractiveness is possible is that in which initial tariffs are so high that there is a welfare gain from unilateral liberalisation and it is actually larger than the welfare gain which foreign firms obtain from getting access to the domestic market. This cannot happen if t is double its Nash value, but will if it is three times this level: in that case,

$$B - A = -t \frac{a - c}{n + 7} [3n^2 + 5(2n - 1)] < 0.$$

3.3 *A Trade liberalising Club: Promising and Attractive*

In the light of these results, we consider a variant on a free trade club, namely a “trade-liberalising” club, or “TLC”. Such a club is a form of free trade area, in which tariffs are abolished among members, and tariffs are significantly reduced, but not

completely abolished, against outsiders. Bergsten (1997) has proposed such an arrangement for APEC. We study a particular form of TLC, in which tariffs against outsiders are set exactly such as to ensure that outsiders do not gain from the trade liberalisation of members. Our TLC sets tariffs according to principles originally proposed by Kemp and Wan (1976). They considered lowering external tariffs upon the creation of an FTA, just such that outsiders do not lose; we are considering keeping external tariffs upon the creation of an FTA just such that outsiders do not gain.

We can show that the size of the required external tariff is small. If t_0 is the initial tariff, then \hat{t} is given by

$$\hat{t} = 2t_0/(m+1)$$

The proof of this is as follows. With $t = \hat{t}$ against $n - m$ outsiders, and tariffs set at zero on partner imports, the domestic price inside a TLC country will be $[a + cn + \hat{t}(n - m)]/(n + 1)$. An outsider will receive a profit margin on its exports to any TLC country of $p - c - \hat{t} = [a - c - \hat{t}(m + 1)]/(n + 1)$. Previously, before the TLC formed, it earned $p - c - t_0 = (a - c - 2t_0)/(n + 1)$ in such a market. Preventing outsiders from gaining from the club means keeping the outsider's profit margin unchanged. Hence, $\hat{t} = 2t_0/(m + 1)$.

It is clear that, in such circumstances, the club is attractive if it is promising. We now prove the following strong result: such a club will *always* be both promising and attractive. The intuition is as follows. The reason why removing protectionism unilaterally can be damaging (and why the whole idea of a club may be worth thinking about in the first place) is because home firms lose profits and the nation may, by removing protection, bid up the price of its imports. However if tariffs remain against outsiders in such a way as to give outsiders no extra profits then none of these effects can operate vis à vis outsiders. And by symmetry, no such effect operates among insiders: any loss of profits to a partner is offset by a gain of profits from a partner. Therefore there are no such effects, and liberalisation is advantageous.

Formally, if $\hat{t} = \frac{2t}{m+1}$, then

$A + (m + 1)B = \frac{t(m - 1)}{b(m + 1)(n + 1)} \left[a - c + \frac{t}{2}(n + 1) + \frac{nt(n - m + 1)}{(m + 1)(n + 1)} \right]$. This is unambiguously positive for $m > 1$. Thus even if just two countries form a trade-liberalizing club, they will gain. If more do so, gain is guaranteed, too. This means that a TLC must be promising if it is attractive. Both promise and attractiveness are satisfied. This result contrasts sharply with the case of a free-trade club, which may or may not be promising but can never be attractive.

4 Cronyism

We may capture cronyism by assuming that a government operates on a distorted vision of social welfare, call it DW , which equals W plus σp_ℓ where p_ℓ is the local firm's profits, and σ is a cronyism parameter. If tariffs are set to maximize *distorted* rather than true welfare, we have a Nash optimal tariff of t' , where

$$t' = \operatorname{argmax} DW = \frac{(3 + 2\sigma)(a - c)}{n(1 - 2\sigma) + 7 + 2\sigma} \quad (13)$$

Clearly $\partial t' / \partial \sigma > 0$. Greater cronyism must imply higher tariffs, a result stressed recently by Grossman and Helpman (1994, 1995).

What is the effect of such higher tariffs on the promise and attractiveness of a free trade club, when both are measured according to the true welfare function, W ? Consider first a free trade club.. How does greater cronyism affect $A + (m - 1)B$? Since

$$\frac{\partial [t'(a - c - t')^{-1}]}{\partial \sigma} = 8(n + 1)[4 + n(1 - 2\sigma)]^{-2} > 0$$

and since we have already seen that $A + (m - 1)B$ is increasing in t , it follows that promise can only become likelier. Indeed initial tariffs may be so high that attractiveness is possible.

Now consider the effect of \hat{t} . The value of \hat{t} that maximizes the true welfare of a TLC member will be $\left[(a - c)(m + 1 + (n + 1) / (2m + 1))^{-1} \right]$. So long as \hat{t} is set below this value, higher \hat{t} will always raise $A + (m - 1)B$, and increase the chance that a TLC is promising.

What happens to distorted welfare? If TLC members set \hat{t} at $\frac{2t'}{m + 1}$, outsider profits are unchanged. So the TLC, under these circumstances, is attractive if and only if it is promising on a distorted welfare definition. The difference between distorted and true welfare is the extra weight the former attaches to the home firm's profits.

$$\text{Hence } \tilde{DW} - DW = \tilde{W} - W + \sigma (\tilde{p}_\ell - p_\ell) \quad (13)$$

Here W denotes true welfare, and the tilde refers to the value of a variable after the TLC has formed.

We have already established that $\tilde{W} > W$ when $m > 1$ and TLC members set \hat{t} at $\frac{2t'}{m+1}$. So can we sign the second term, $\mathbf{s}(\tilde{\mathbf{p}}_\ell - \mathbf{p}_\ell)$? If t' is the tariff rate ruling in non-TLC countries, we may write

$$\mathbf{c} \equiv (\hat{\mathbf{p}}_\ell - \mathbf{p}_\ell) b(n+1)^2 = m \left\{ (a-c + \hat{t}(n-m))^2 - (a-c - 2t^*)^2 \right\} \\ + \left[(a-c - 2t^*)^2 - (a-c + t(n-1))^2 \right]$$

Setting $\hat{t} = \frac{2t}{m+1}$ and $t = t'$, χ reduces to

$$\mathbf{c} = (n+1)(m-1)(m+1)^{-2} t \left[2(m+1)(a-c-2t) - t(n+1)(m-1) \right] \quad (14)$$

Promise and attractiveness on a distorted basis require χ to be positive (or at least non-negative). \mathbf{c} will exceed zero once $m > 1$, if t is low enough. If t is set at t' , the level at which *distorted* welfare peaks in a Nash equilibrium, $\chi > 0$ requires not just that $5 > m > 1$, but also that $\mathbf{s} < (5-m) / 2(1+3m)$, a very confining restriction.

If national governments overweight home firm profits in their conception of welfare, and promise requires a rise in *distorted* welfare then, a trade-liberalizing club is rather unlikely to be attractive; the greater the overweighting, the less probable attractiveness becomes. The reason is that tariff reductions damage profits, and it may be impossible to obtain sufficient extra promise from partner markets to compensate for this, even if tariffs against rest-of-world countries are set so as to avoid donating profits to the rest of the world. Interestingly, there is a *ceiling* on the quorum for the TLC. If the status quo consists of tariffs set to maximize distorted welfare, promise and attractiveness require that the club to have no more than four members. The intuition for this finding is that governments are so keen to maintain high profits for the home firm that they may prefer it to have an unimpeded domestic monopoly to seeing its profits whittled down by competition, even if this means denying it access to some foreign markets. The larger the size of the club, the lower the profit margin earned in it. The rise in the firm's output volume is unable to compensate, so profits fall. The larger the excess welfare weight on home firm profit, the greater the emphasis the government places on these developments, relative to effects on the consumer welfare (which club enlargement will always benefit).

Furthermore, keeping outsiders' welfare unchanged (setting \hat{t} at $2t/(m+1)$) implies setting lower and lower external tariffs as the TLC expands. On a true welfare definition, this would, of course, help to raise welfare within the TLC, and, indeed, a snowball develops - bigger TLCs have more to offer members than smaller ones. But on a distorted welfare basis, the effect goes the other way, because TLC expansion squeezes inside firms' profits.

In sum, then, cronyism implies larger initial tariffs, and a greater likelihood that a trade-liberalizing club will bring true welfare gains to its members when these higher tariffs are removed against partners and relaxed against others. The problem is that the distorted measure of welfare, that cronyism suggests the government of a club member is working on, may well drop. Indeed, it is bound to do so if the club is too *large*. A large trade-liberalizing club generates big transfers from club firms profits to club consumers; when home profits are overweighted in the government's eyes, these transfers are viewed as damaging. Too many members, and the club's governments will not let it get off the ground. So cronyism makes trade-liberalizing clubs more truly beneficial for members but less likely to be established in practice - more needed, less probable!

5 Conclusions

5.1 Summary

We have established a number of results in the context of our simple trade model. It has been shown that a free trade club can be promising if enough countries join, that – if initial tariffs are at their Nash optimal levels – it can never be attractive, because outsiders would prefer to free-ride on the benefits without joining, but that a trade-liberalising club can always be constructed which is both promising and attractive. We have also shown that cronyism, which causes higher initial tariffs, will enhance the promise and attractiveness of a TLC on a true welfare definition, but may make it harder to obtain promise, may further damage attractiveness and make it impossible to construct a trade liberalising club which is both promising and attractive when the definition of welfare is distorted by an over-weighting of domestic profits.

5.2 Extensions and Generalisations

The simple model could be readily extended to any number of oligopolistic sectors, if utility remains quadratic in these products and linear in the numeraire good.

The model assumes Cournot competition. It lies within the polar extremes of Bertrand competition on the one hand and monopoly on the other. It is worth noting that at both of these extremes the results are not particularly illuminating. In the case of the Bertrand competition, the local price equals $c + t_i$ in a country i that levies a tariff of t_i against imports from all other countries. Eliminating the tariff against only one partner is sufficient to drive the price down to c , bringing an unambiguous welfare gain unless producer profits are (sufficiently) overweighted. So $m \geq 2$ suffices for promise. Rents vanish, so outsiders gain nothing if the tariff is eliminated against them too; so a free trade club with at least two members is also attractive. At the other extreme of perfect collusion between all the world's steel producers, price will be set at the profit-maximizing price of $(a + c)/2$. In the presence of tariffs, all local demand will be met by the local plant. Removing tariffs will have no effect on anything.

More interestingly, we establish in a companion paper (Sinclair and Vines, 1998) that the key results of the present paper remain valid in a model similar to that of Krugman (1991) in which all production is specialized. In such a model all countries have market power and find it desirable to restrict trade unilaterally.⁸ In these circumstances membership of a sufficiently large free trade club would be promising. But such a club would not be attractive: all club members would suffer terms of trade loss relative to non-members, because exports of their national goods were not restricted by protectionism, while exports in outsider countries were so restricted.

⁸ See also Bagwell and Steiger, 1998, Ethier 1998.

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