WHY IS TRADE REFORM SO UNPOPULAR?

ON STATUS QUO BIAS IN POLICY REFORMS

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ABSTRACT

    Despite the well-known gains from trade, trade liberalization is
politically one of the most contentious actions that a government can take. We
propose and formalize a new argument, having to do with uncertainty, which is
complementary to the usual explanations for why that is the case: many
individuals will simply not know how they will fare under trade reform, and
this can reduce support for a reform which would have been otherwise popular,
even in the absence of risk aversion. We show that reforms that would have
received adequate popular support ex post (i.e., which once enacted will last)
may fail to carry the day ex ante, because of uncertainty regarding the
distribution of gains and losses. Moreover, the role of uncertainty in
determining the outcomes is not symmetric, since reforms that are initially
rejected will continue to be so in the future while reforms that are initially
accepted may find themselves reversed over time. We discuss empirical
illustrations drawn from the experiences of South Korea, Chile and Turkey to
provide support for the argument.

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I. Introduction

Economists may disagree over many things, but one area where there is perhaps surprising amount of consensus is the superiority of free trade over protection. At a purely technical level, the consensus no doubt in part reflects the intellectual appeal of the concept of comparative advantage. But even when the strictly economic case for free trade fails, economists are generally quick to embrace it for the same practical reason that Churchill embraced democracy, namely as the lesser evil among possible alternatives.[1] Politicians and their electorates (or clients) evidently think otherwise. Despite the well-known gains from trade, trade liberalization is politically one of the most contentious actions that a government can take. Historically, significant liberalizations have almost always been associated with changes in political regime or else have been undertaken at a point of economic crisis. Among comparatively recent examples, South Korea and Chile provide illustrations of the former and Bolivia and Mexico of the latter.

As the examples would indicate, it is in the developing world that the conversion to free trade (or any semblance thereof) is least established. The industrial market economies have accomplished a substantial amount of trade liberalization in the three decades following the end of World War II, even though protectionism unquestionably remains popular there too. More recently, a combination of disillusionment with import-substitution policies and pressure from external creditors has led a large number of developing countries to undertake trade reform. No fewer than 40 countries have received trade adjustment loans from the World Bank during the 1980s, promising in

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1. See for example Krugman (1987).

return to undertake trade liberalizing action. These reforms generally include the simplification of trade controls, reduction of quantitative restrictions, and exchange rate devaluation.[2]

Numerous arguments have been advanced as to why the political process may be partial to protection. First, there are the revenue needs of the government: taxes on imports are an administratively attractive method of collecting revenue, especially in underdeveloped countries where they may also be a relatively efficient source thanks to the higher collection costs of alternatives. Second, the distribution of costs and benefits may favor politically powerful groups. Or, what amounts to the same thing, the beneficiaries of protection may be narrow, well-organized groups, while the losers are diffuse and ill-organized and therefore incapable of making their voices heard. Third, the electorate may have short time horizons and value the short-run adjustment costs more than the ultimate benefits. Fourth, voters and policymakers may not believe (or understand) the principle of gains from trade, or may put higher value on "national independence". These and other potential explanations are surveyed and illustrated by Baldwin (1985, chap. 1) and Bhagwati (1988), who also provide references to the large literature that has emerged on this issue.[3]

Our argument, which is complementary to the ones listed above, has to do with the role of uncertainty: many individuals will simply not know how they

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2. A useful account and summary of reforms to date is provided by Halevi (1989).

3. Also relevant here is Alesina and Drazen (1989) which provides an explanation, relying on asymmetric information, for why efficient policies may be delayed.

will fare under trade reform, and this can reduce support for a reform which would have been otherwise popular. Outward-oriented policies favor entrepreneurs and workers already employed in exportables, and these individuals can generally identify themeselves. But they also favor some sectors and individuals who were producing primarily for the domestic market prior to reform, and who will turn abroad under the new price structure. Typically, some entirely new export sectors will emerge. Given the difficulty of predicting what the structure of trade and production will be post-reform, it is unreasonable to suppose that all individuals can clearly identify themselves as gainers or losers ex ante.

More examples will be given later on, but a particularly telling one is provided by Colombia's experience. Exporters of cut flowers in this country were a principal beneficiary of the outward orientation in the late 1960s. This sector grew from practically nothing to more than $200 million of exports by the late 1980s. As the World Bank puts it, "no one had predicted exports of flowers".[4]

The point of this paper is that uncertainty of this kind undercuts support for trade liberalization. To be more precise, we will show that reforms that would have received adequate popular support ex post (i.e., which once enacted will last) may fail to carry the day ex ante, because of uncertainty regarding the distribution of gains and losses. The role of uncertainty in determining the outcomes is not symmetric, moreover, since reforms that are initially rejected will continue to be so in the future while reforms that are initially accepted may find themselves reversed over time.

While this argument, or something close to it, is often made in

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4. This example is given in World Bank (1989), p. 65.

discussions on the political economy of trade reform, we have not seen a formal treatment of it. Krueger (1989), who coins the phrase "identity bias" to describe the problem, develops a formal definition, but upon closer reading her explanation centers on a psychological, Schelling-esque (1984) distinction between statistical and individual-specific information which differs from ours.[5] Of course, formalization is of little use when the central idea is transparent enough. But in this case, the usual renditions of the argument leave many questions unanswered. Is this, for example, really an argument about risk aversion? Do we need to sacrifice rationality to make the argument work? Would it not work when individuals realize that trade reform will necessarily increase aggregate income (that is, when on average everyone's expected benefits are positive)? Should the argument not work symmetrically, by favoring import subsidies as often as it does protection? Does it rely on an assumed asymmetry between eventual gainers and losers? The answers in this paper will be "no" to each of these questions; but that was not evident to us before we started out.

In section II we provide a simple example which shows the logic of the argument in as transparent a manner as possible. In sections III and IV, we develop a more complete model which corrects the obvious deficiencies of the example and imbeds the results within standard trade theory. In section V, we discuss empirical illustrations, drawing from the experience of some developing countries which have undertaken substantial trade reforms. We conclude the paper in section VI.

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5. Krueger's argument rests on the presumption that the precise knowledge of the losers' identities evokes a more sympathetic response from the general population towards their plight than if their identity were unknown. We maintain the conventional assumptions on utility functions.

II. An Example

Suppose policies get determined by popular vote and that we start with K individuals in the import-competing sector and L individuals in the export sector. While the language of majority rule is attractive, the argument does not rely on voting being the mechanism by which social decisions are made; all that we need is that trade reform be more likely the greater the number of individuals who support it. We will use the terms "individual" and "entrepreneur" interchangeably. Let the earnings (per entrepreneur) in the import-competing and export sectors be π_m and π_e, respectively. We start with pre-existing trade restrictions, and an allocation of the population such that $K > L$.

If this economy were ever to find itself in free trade, we assume that the new equilibrium would entail a migration of Δ entrepreneurs from the import-competing sector to the export sector, with the post-reform earnings being given by π_m^* and π_e^*. Since such a reform would imply net gains for the economy, it must be the case that:

(1) $(K - \Delta)\pi_m^* + (L + \Delta)\pi_e^* > K\pi_m + L\pi_e.$

Normally, we cannot expect majority rule to yield policies that maximize real national income. Since our focus is not on this inefficiency, we assume that $K-\Delta < L+\Delta$ and $\pi_e^* > \pi_m$. These ensure that once reform is in place: (a) the export sector will employ the majority of the population; and (b) returns from exporting under free trade dominate returns from import-substituting under protection. If we suppose further that all individuals in the Δ-group know their identity ex ante, a direct implication follows: a majority of the population will vote in favor of trade reform.

Now let us introduce uncertainty by assuming that those Δ individuals who

are currently in the import-competing sector but will end up as the beneficiary of the reform do not know their identities. The question is whether a majority will still vote for the reform. The answer is: not necessarily. First note that if individuals in the import-competing sector are completely in the dark as to where they will end up post-reform, they are ex ante identical and will all vote the same way. The representative individual in this group will vote in favor of reform only if trade reform increases his expected earnings.[6] Let us also suppose that behavior is fully consistent with the structure of the model, so that it is common knowledge that Δ individuals will end up moving. Then individuals in the import-competing sector will vote for reform only if:

(2) $[(K - \Delta)/K]\pi_m^* + [\Delta/K]\pi_e^* > \pi_m$,

where the left-hand side is the expected return from the reform to an individual in the import-competing sector and the right-hand side is the (sure) return in the absence of reform. Quick inspection reveals that none of the conditions previously imposed (and in particular equation [1]) necessarily implies that the inequality expressed in (2) will obtain.

More insight can be obtained by restating (1) and (2) in a way that allows direct comparison. The requirement for a vote in favor by the import-competing group can also be written as

(2') $(K - \Delta)\pi_m^* > K\pi_m - \Delta\pi_e^*$

while (1) requires

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6. We assume that voting is costless, and that large numbers prevent strategic voting.

(1') $(K - \Delta)\pi_m^* > K\pi_m - \Delta\pi_e^* + L(\pi_e - \pi_e^*)$.

Note that the only difference is the additional term $L(\pi_e - \pi_e^*)$ in (1'). As long as trade reform increases the profitability of the export-oriented sector (as it is likely to do), this term is negative; it is also larger (in absolute value) the larger the pre-existing labor force in this sector. It is this term which introduces a slack allowing the inequality (2') possibly not to hold while (1') does. A configuration of parameters such that

$$K\pi_m - \Delta\pi_e^* + L(\pi_e - \pi_e^*) < (K - \Delta)\pi_m^* < K\pi_m - \Delta\pi_e^*$$

is therefore possible. Under such a configuration, all individuals in import-competing activities will vote against reform (second inequality). Uncertainty regarding the identity of some of the gainers and losers will therefore prevent a reform from being undertaken. But a dictator who imposed the reform by fiat and then introduced majority rule might be voted an extended term out of gratitude.

The problem highlighted by this example is that the potential swing voters do not take into account the gains to those who are already in exportables, as captured by the term $L(\pi_e - \pi_e^*)$. The larger is this term the more likely that uncertainty will block reform. The explanation is simple: the L individuals who are already located in exportables will vote for reform no matter what; any further gains to them detract from the attractiveness of reform (ex ante) to the rest of the population, and make it less likely that the latter will vote in favor of reform.

This is obviously a contrived example with many loose threads. For example, what keeps returns in the two sectors from being equalized in equilibrium, and is that necessary to the argument? What is the source of uncertainty regarding the identities of gainers and losers? As we will show

in the next section, it is possible to generalize the example and place it in the context of familiar trade models.

III. The Model

Consider a two-sector, perfectly competitive economy in which each sector produces a distinct good, X and Y, using one factor of production, labor (L), and with constant returns to scale technology. There is no harm in thinking of X and Y as aggregates made up of individual commodities. Laborers (or individuals) in each sector can by the same logic be interpreted as producing different products. Thus,

$$X = L_x/a_x \qquad\qquad Y = L_y/a_y$$

and,

$$L_x + L_y = \bar{L}$$

where $a_j > 0$, $j = x, y$.

Labor cannot reallocate itself between sectors costlessly. Instead, there is a cost to reallocation in the form of a human capital investment. This cost is modelled as having two components: θ, a known general investment cost incurred prior to switching sectors, and c_i, an individual specific cost element incurred only upon actually switching sectors. The value of this latter component, however, is unknown to the individual and is revealed only if the general investment cost is incurred. Only the distribution of c_i, $f(c)$, is known. The interpretation is that workers have different abilities and productivities, and therefore their "net" wages in the x-sector will differ. Workers cannot know what their true abilities are before sinking the cost θ. Alternatively, entrepreneurs may not have the information necessary to be able to determine precisely what their firm's cost structure would be in

the new industry. We believe that this is a plausible way of capturing both the nature of mobility costs in developing countries and the uncertainty that is likely to surround each individual's future prospects under trade reform.

Workers must therefore make two decisions: (1) whether or not to undertake the general investment cost, and, (2) if the first is decided affirmatively, whether or not to switch sectors and thereby incur the cost c_i. Starting with the second decision, a worker who has invested θ will choose to switch from industry y to industry x if the difference between wages in the two industries is larger than her c_i. Thus, for any wage difference there exists a level of c, $\tilde{c}$, such that all workers with $c_i \leq \tilde{c}$ will switch to industry x. Thus,

$$\tilde{c} = \tilde{w}_x - \tilde{w}_y$$

where $\tilde{w}_j$ is the equilibrium wage resulting in sector j.

Ex ante, workers are identical and atomistic. Consequently, a worker in sector y will decide to incur the general investment cost if the expected net benefit from doing so is non-negative, i.e., if

$$F(\tilde{c})\{\tilde{w}_x - \int_{\underline{c}}^{\tilde{c}} f(c)c\,dc \ [F(\tilde{c})]^{-1}\} + [1-F(\tilde{c})]\tilde{w}_y - \theta \geq \tilde{w}_y$$

where $\underline{c} \geq 0$ is the infimum over the values taken by c_i, and $F(\tilde{c})$ is the probability that $c \leq \tilde{c}$. The left-hand side represents expected income when θ is incurred while the right hand side is the (certain) level of income in the absence of the investment. Rearranging terms we obtain

$$(3) \qquad [\tilde{w}_x - \tilde{w}_y]F(\tilde{c}) - \int_{\underline{c}}^{\tilde{c}} f(c)c\,dc - \theta \geq 0$$

In order to most clearly illustrate our argument, we consider a country that is small in world markets, so relative prices within each aggregate are fixed by world price ratios, and with a tariff initially in place of a magnitude such that

$$P^0 = a_x/a_y$$

where $P = p_x/p_y$ is the (tariff inclusive) relative price of good X in terms of good Y. We normalize the domestic price of the imported good, good Y, to equal one. Thus, decreases in the value of the tariff have the effect of increasing the relative price of good X. Labor's initial distribution between sectors, L_y^0 and L_x^0, is given by history. Perfect competition in the labor market ensures that

$$w_j = P_j/a_j \qquad j=x,y$$

Therefore, given the initial tariff level, $w_x = w_y$. Note that w_y is invariant to P and equal to $1/a_y$.

Let us analyze the behavior of this economy with respect to changes in the tariff rate. As the tariff rate falls, initially no individual will choose to undertake the general investment cost and thus the wage in sector x relative to that in sector y will simply increase with the relative price. Simultaneously, the value of $\bar{c}$ increases, as $d\bar{c}/dP = dw_x^-/dP = 1/a_x$. The left-hand side (LHS) of (3) is increasing with P (i.e., $d(\text{LHS})/dP = F(\bar{c})/a_x > 0$). Therefore, at a sufficiently high relative price, P^*, all y-sector individuals are indifferent between incurring the investment cost and not. Those individuals that choose to undertake the general investment cost and that have

a $c_i \leq c^*$ will move to sector x (where c^* is the $\tilde{c}$ associated with P^*).[7]

Further increases in the relative price have all y-sector individuals strictly preferring to incur the general investment cost and continue to increase $\tilde{c}$ and the relative wage of sector x, leading to further labor reallocation (see Figure 1).

We wish to show that there exist circumstances in which, under complete certainty, trade reform (in the manner of a tariff decrease) would be voted in, but that under the existing uncertainty as to the ex post identity of individuals, trade reform would be rejected despite the fact that individuals are risk neutral. Consider, therefore, an initiative to change prices in this economy from P^0 to P^* by reducing the tariff level accordingly. Since P^* is the price ratio at which all individuals are exactly indifferent between undertaking the investment cost and not, c^* is exactly that level of $\tilde{c}$ such that

$$\tilde{c}F(\tilde{c}) - \int_0^{\tilde{c}} f(c)c\,dc - \theta = 0$$

If asked to vote on whether or not to undertake this reform, all individuals in sector y would vote against this proposal. To see this, note that the purchasing power of the wage earned by an individual who remains in sector y is unchanged in terms of good Y and is strictly lower in terms of good X. Given that at P^* y-sector individuals are indifferent between the expected value of utility obtained by undergoing the investment cost and that

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[7]This zero-one behavior with respect to undertaking the general investment cost is a product of the linearity of technology. A decreasing marginal product of labor, as in the Ricardo-Viner model, would exhibit a continuously increasing proportion of individuals willing to incur the general investment cost as a function of relative prices.

obtained by not investing, these individuals' expected utility from this reform must be lower than that resulting from remaining with the status quo. Therefore, if $L_y^0 \geq L_x^0$, this measure would be rejected by majority vote.

If, on the other hand, individuals knew ex ante what their identities would be under the new regime, i.e. if individuals knew their c_i, and were then asked if they would be willing to pay (in order to switch sectors) $\theta + c_i$, there are now some y-sector individuals who would be willing to do so and to accordingly vote in favor of the reform. That is, we will show that there exist c_i such that $v(P^*, w_x^* - \theta - c_i) > v(P^0, w_y^0)$, where $v(.)$ is the individual's indirect utility function. (Without any loss of generality, we will assume that tariff revenue is simply distributed among the workers initially located in sector x.)

We further specify some of the characteristics of this economy: Individuals' preferences are assumed to be identical, risk neutral, and given by

$$V(P,I) = v(P)I = \frac{I}{P^\gamma}$$

where I is the individual's income level and $1 \geq \gamma > 0$. $f(c)$ is assumed to be distributed uniformly on the interval $[0, \bar{c}]$, so $f(c) = 1/\bar{c}$ and thus, $\tilde{c} = (2\theta\bar{c})^{1/2}$.

Note first that $w_x^* - P^*/a_x = w_y^* + \tilde{c} = w_y^0 + \tilde{c} = (1/a_y) + \tilde{c}$ and therefore, $P^* = P^0 + \tilde{c}a_x$. Thus, we must show that

$$v(P^*)[w_y^0 + \bar{c} - \theta - c_i] > v(P^0)w_y^0$$

that is, show

$$(P^*)^{-\gamma}[w_y^0 + \bar{c} - \theta - c_i] > (P^0)^{-\gamma}w_y^0$$

Noting that P^*/P^0 can be written as $1+\bar{c}a_y$ yields,

$$1/a_y + (2\theta\bar{c})^{-.5} - \theta - c_i > (1/a_y)[1 + a_y(2\theta\bar{c})^{-.5}]^\gamma$$

which can be satisfied for many parameter values (e.g. $a_y=\theta=1$, $\bar{c}=2$, $\gamma=.5$).[8]

IV. Some Dynamic Considerations

The model discussed above establishes that certain reforms that would

have been popular ex post may not muster support ex ante. But so far it does

not establish a _bias_ towards protection. It is just as easy to come up with

instances where reform is embraced initially, only to prove unpopular once the

identities of winners and losers are revealed. In a static setting, the logic

of uncertainty works symmetrically, making both cases equally "likely."

However, there is good reason to suspect that there will exist in

practice an asymmetry in favor of the status quo (protection). The asymmetry

arises from the fact that new information is revealed in the case in which a

reform is initially embraced and instituted, while no such thing happens when

the reform is rejected from the outset. Therefore, if given a second chance,

the electorate will reverse a reform that had been mistakenly embraced.

Moreover, when considering a set of reforms that may possess a short life span

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[8]Note that if $\gamma=1$, i.e. individuals only consume good X, then the above
inequality can never be satisfied since the wage increase in sector x would
leave individuals with the same real wage as prior to the reform and,
moreover, the individual would have paid the general and individual-specific
investment cost.

due to the fact that it will be overturned in the future, rational forward-looking individuals may vote against reforms which initially appear to benefit them. In the case in which an electorate initially chooses to reject a reform, by contrast, the electorate will never change its vote. Since no new information is revealed in the latter case, an electorate that refused reform once will keep refusing it no matter how many times they are given an opportunity to reconsider. Thus, there is an important asymmetry between the time consistency of the status quo and the time consistency of certain reforms.

We will now show 1) that reforms, even if instituted with majority support, may be short lived and, 2) that there is a tendency towards inertia—towards the maintainance of the status quo—in these economies.[9] To see how these arguments work out we introduce some simple dynamics into the framework. Suppose now that the first vote analyzed above is followed up with a second vote sometime in the future. Call the period following the second vote the "second period", and the preceding period the "first period". At the beginning of each period, all individuals vote on whether or not to institute (or continue with) the reform that period. After voting, they decide whether or not to incur the investment cost θ, and, as before, whether or not to switch sectors and incur the individual specific cost. Note that once an individual has undertaken the general investment, she will never choose to do so again in the future since her information is perfectly revealed. What is key here is that θ is a sunk cost that is completely paid upfront. The possible outcomes are exhibited in Figure 2. Nothing qualitative in our

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[9]See the discussion on the importance of the "status-quo" bias in decision making in Samuelson and Zeckhauser (1988). Our explanation differs from those considered by these authors.

results is dependent on the number of time periods (or on the finiteness of individuals' horizon).

Consider first the case where voters are behaving myopically in the sense that they look only one period ahead. In this case, the analysis of the first vote is identical to the one carried out in section III. The second vote, in turn, depends on whether reform is passed or rejected the first time around. As argued in the preceding paragraph, if the reform is rejected in the first round it will definitely be rejected in the second round as well. Since new information has not been revealed, no individual has the incentive to change her vote. Therefore, outcome (4) in Figure 2 is not an equilibrium outcome. The remaining possibilities are: (1) reform is reversed because it proves unpopular; (2) reform is sustained because it proves popular; and (3) reform continues to be opposed. Note the bias towards the status quo: reforms that are initially rejected continue to be so, whereas some reforms which were previously accepted cannot be sustained.

We now turn to the case in which individuals are forward looking. Consider the same economy as in the previous section, with identical parameters and with the same set of initial conditions. Suppose that the effect of the reform under consideration is to change relative prices from P^0 to $P'>P^*>P^0$. P' is such that sector-y (and, of course, then also sector-x) individuals would be willing to vote in favor of this reform if they thought that, once instituted, the reform would be permanent. Thus P' must satisfy

$$(4) \quad v(P')[(w_x'(1+\delta) - \theta)F(\bar{c}) - \int_0^{\bar{c}} cf(c)dc + (w_y'(1+\delta) - \theta)(1-F(\bar{c}))] > v(P^0)w_y^0(1+\delta)$$

where w_j' is the equilibrium wage in sector j associated with P'. The terms in the square brackets constitute the expected income from the reform for an

individual initially in sector y, and the expression on the right-hand side of the inequality is a sector-y individual's status quo utility. Note that the wage earnings of an individual are now multiplied by $(1+\delta)$ which is the appropriate discounting of wages earned over two periods ($0<\delta<1$ is the individual's discount factor).[10] Letting P' be such that $\tilde{c}<\bar{c}$, the above expression can be rewritten as:

$$v(P')[\tilde{c}(1+\delta) \ F(\tilde{c}) - \int_0^{\tilde{c}} cf(c)dc + w'_y(1+\delta) - \theta] > v(P^0)w_y^0(1+\delta)$$

and $\tilde{c}$ can be expressed as:

$$\tilde{c} = \frac{a_y P'-a_x}{a_y a_x}$$

Recalling that $w'_y = w_y^0 - a_y^{-1}$ and performing the appropriate substitutions yields,

$$\left\{ \frac{(.5+\delta)[a_y P'-a_x]^2}{[a_y a_x]^2 \tilde{c}} - \theta \right\} a_y(1+\delta)^{-1} + 1 > \left\{ \frac{P'}{P^0} \right\}^\gamma$$

The above condition ensures that all y-sector individuals would vote in favor of a permanent trade reform that had relative prices changing from P^0 to P' since their ex ante expected utility from this reform is greater than the level of utility enjoyed under the status quo. If, however, $F(\tilde{c})L_y^0 + L_x^0 <$ $[1-F(\tilde{c})]L_y^0$ then, since the individuals who have remained in sector y now enjoy a lower real wage than before, in the second period the majority of the population will vote against the reform and in favor of a return to the status quo. A necessary condition for the above phenomenon to occur is $\tilde{c}<\bar{c}/2$. To

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[10]As expressed in (4), c_i is only incurred in the first period. We could, similarly, have considered c_i to be incurred in each period without altering any of our conclusions.

see that this does not contradict any of our prior conditions, let $a_x=a_y=1$, and $P'=4$. Thus, a necessary condition is $P'-1<\bar{c}/2$. Letting $\bar{c}=9$ yields:

$$[(.5+\delta) - \theta](1+\delta)^{-1} > 4^7$$

which is easily satisfied for γ and θ sufficiently small.

Will individuals still vote for the reform in period 1, knowing that there will be a return to the status quo following the second vote? Forward looking individuals will realize that the first-period vote now presents a choice between the status quo and _temporary_ reform. They will vote for the latter only if:

$$(5) \qquad v(P')[w_x'F(\tilde{c}) - \int_0^{\tilde{c}} cf(c)dc + w_y'[1-F(\tilde{c})] - \theta] > v(P^0)w_y^0$$

Notice that second-period wages are independent of which sector workers find themselves in (given the return to status quo). Therefore, y-sector workers will vote for reform only if the expected first-period benefits exceed the costs. Since this condition is more restrictive than that in equation (4)—as the differential between w_x and w_y now accrues for one period only—there will be cases where a reform will be rejected even though it may have been embraced had it been perceived as permanent. Alternatively, some reforms may be supported in the full knowledge that they will be temporary and will be reversed in the future, if the temporary expected benefits are high enough. But the higher is δ—that is, the less the future is discounted or the shorter the interval between votes—the more likely it is that a reform that is accepted when permanent will still be accepted when temporary. Although y-sector individuals would vote in favor of a reform that would be permanent,

the knowledge that it will be overturned in the future may make it unprofitable for them to incur the investment costs, and, therefore, all y-sector individuals may vote against the reform from the outset.[11]

Table 1 presents some numerical examples of voting outcomes under different configurations of parameters. The first two columns display outcomes for the two-stage voting discussed above. For purposes of comparison, the third and fourth columns show the corresponding outcomes in the single vote case (discussed in the previous section) under uncertainty and full certainty, respectively. (The certainty votes assume individuals are made to pay the investment costs, if the outcome is "yes" and they choose to switch sectors.) Examples of all the cases mentioned above can be found in the table. Note that it would appear that reform would always pass for a sufficiently large P; this is misleading, as the size of the reform is constrained by the initial level of trade restrictions.

V. Some Empirical Illustrations

The argument in this paper relies on the presence of a certain amount of uncertainty regarding the identity of (at least) some of the beneficiaries of reform. In this section we will argue that this is likely to have been an important element in some of the major trade reforms undertaken by developing countries. Indeed, incorporating this kind of uncertainty is an important first step in understanding why the attitudes of groups which ultimately

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[11]The question may arise as to whether feasible transfer schemes exist to make otherwise unpopular trade reforms be instituted by popular support. In most models, the answer would be trivially yes. Here, there is an important consideration that constrains the use of such "bribing" mechanisms. Any such transfer scheme may be time inconsistent, providing incentives to the ex-post majority to renege on its agreement. Of course, such questions can be settled only by examining the equilibria of particular "bribing" games.

benefited handsomely from these reforms ranged from lukewarm to hostile prior to reform.

It is typical for economists advocating trade reform to be confronted by skepticism regarding the capacity of the economy to adjust to the reform. Economists retort that existing production structures cannot be taken as rigid, and that new activities are likely to develop once relative prices are altered. S.C. Tsiang, one of the architects of Taiwan's outward orientation, recalls how his ideas on devaluation[12] in the mid-1950s were sharply challenged by government officials who argued that sugar and rice (accounting for nearly 80 percent of Taiwan's exports) essentially faced a zero price elasticity of demand. Here is Tsiang's counter-argument:

... we [Tsiang and T.C. Liu] persisted in arguing that even if the

traditional major exports were confronted with foreign demands of little

elasticity, there must be hundreds of new products that could be produced

with cheap labor supply and readily sold in countries with relatively

scarce labor, provided that the relative cheapness of labor in Taiwan was

not artificially covered up by the overvaluation of her currency"

(Tsiang, 1984, pp. 306, emphasis added).

Tsiang's view of course won the day. But while the economist's innate optimism regarding the availability of "hundreds of new products" may be well justified, it scarcely helps politicians. It is difficult to canvass support from unnamed producers of as yet unestablished products.

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12. In the examples that follow, it will be proper to think of devaluation as trade reform. This is because an overvalued exchange rate combined with foreign exchange rationing—the typical setup prior to devaluations—is conceptually identical to an export (or import) tax.

The experience of countries having undertaken trade reforms lends strong support to Tsiang's arguments. In each case where sufficient time has elapsed to examine the consequences, we observe: (a) a substantial change in the composition of trade; and (b) the appearance of new products which had not made the export list prior to reform.

Tables 2, 3, and 4 display data on the volume and composition of exports for three countries which have undertaken substantial trade reform, South Korea, Chile and Turkey. In each case, two- or three-year averages of exports are presented for years that represent as closely as possible pre- and post-reform periods. For South Korea we present data for three periods, as at least two waves of liberalization can be identified, one in the mid-1960s and another one in the early 1980s. Chile's trade reform took place in the second half of the 1970s, while Turkey's took place in the first half the 1980s. What is striking in these tables is not only the pace at which exports have grown in these countries—growth rates average 30.7 percent in Korea, 17.5 percent in Turkey, and 9.5 percent in Chile—but the often drastic alteration in their composition.

In Korea, manufactured exports rose 26-fold in seven years, going from $26 million in 1962-63 to $683 million in 1969-70, and their share in total exports went from 37 percent to 81 percent. The Korean export transformation is too well known to need much discussion. It highlights in extreme fashion the diversification that outward orientation promotes. To pick a familiar example, exports of transport equipment rose from $8 million in 1969-70 (1 percent of total exports) to $5.9 billion in 1984-85 (20 percent). In the early 1960s, the Economic Planning Board's statistical yearbook allowed for only eight subdivisions in its export statistics under "manufactured goods classified by materials"; this number grew to 30 by the late 1960s, and to 53

by mid-1980. In 1962-63, there were no items under "machinery and transport equipment" worth reporting; there were 45 of them in 1984-85. Even if we believe this to be the consequence of targeted industrial policy, and perhaps therefore not a tremendous surprise to the Korean government, it would stretch imagination to envisage that the beneficiaries of this diversification—all the workers, managers, and sub-contractors that were drawn into the emerging sectors from others—could have anticipated it or their role in this transformation.

In Turkey, a rather similar transformation was accomplished within an overall smaller rate of expansion. Between the late 1970s and the mid-1980s, the share of manufactured exports rose from 32 percent to 73 percent. This in itself is considerably more surprising than in Korea since, unlike Korea, Turkey is well endowed with agricultural land and resources. It had long been presumed that Turkey's comparative advantage lay in farm products and in light agricultural processing. The common expectation was that some de-industrialization would be the natural result of outward orientation. As Table 3 shows, the outcome was quite different. In fact, many of the sectors that led the way were archetypal import-substituting sectors. Among these, particularly noteworthy is the experience of iron and steel: exports in this sector rose at an annual average rate of 57 percent, going from $21 million to $766 million. Exports of petroleum products rose from nil to $300 million and that of metal products and machinery from $17 million to $251 million.

In Chile, the shift towards manufactured products has been much less pronounced, perhaps reflecting the "cleaner" trade reform in that country. Nonetheless, the export structure in 1985-87 was hardly a blow-up of that in 1970-72. Striking increases were registered in fresh fruit exports, which

rose from $5 million to $450 million and from 0.6 percent of total exports to
10.3 percent. Fish and fishmeal exports also registered comparable increases.

The point of marshalling these statistics is not to marvel at the
consequences of trade reform, but to suggest how difficult it is to predict ex
ante which sectors will benefit from the reform. As our previous model
indicates, even this is only part of the problem. Even if individuals have a
fairly good idea about the sectoral implications, they may be uncertain about
their skills and abilities, and the consequences for their own employment.

These considerations go some way toward explaining a paradox observed in
all three countries (and in Taiwan as well): while outward orientation has
been a boon to large sections of the private sector, in none of these cases
was the private sector particularly enthusiastic about trade reform early on.
In both South Korea and Taiwan, trade reform was not on the agenda of the
private sector, and the governments' decisions were taken in spite of business
opposition. In Taiwan,

> [t]o the extent that [businessmen] advocated a shift in policy to
> respond to the problems of ISI [import-substituting
> industrialization], it was toward cartelization of the domestic
> market and further government support for import substitution. The
> argument can be stated more strongly. Not only was the shift in
> policy designed in isolation of private sector interests, it
> demanded such isolation to be effective. (Haggard, n.d., p. 34,
> emphasis in the original.)

The strong hand of the government was even more in evidence in South Korea
where one of the first acts of the Park regime was to arrest most of the
country's leading businessmen and threaten confiscation of their assets (Jones
and Sakong, 1980, p. 69). This set the stage for government-business

intractions during the reforms to come. Korean business was generally happy with the import substitution policies, but could not deflect the regime from its reforms. The crucial 1964 devaluation was resisted by businessmen even though they would eventually profit from it. Haggard et. al. (1987, p. 63) attribute the opposition to uncertainty about the effects of the devaluation.

The Turkish reforms of the early 1980s exhibit some similar features. For one thing, they were launched during a military interregnum when the technocrats' policymaking autonomy was relatively unrestricted. Business was generally against the policy of real devaluation (Öncüt" 1980, p. 473), as well as the import liberalization that came later, but did not make a big fuss early on in view of the pro-business outlook of the government. The reforms in this period can be interpreted as part of a general package deal whereby the military regime put an end to some perennial business problems such as political violence and labor militancy in exchange for business acquiescence in outward orientation. Once the fruits of liberalization became evident, the trade reforms came to be supported by an important section of private industry, creating a split within big business between exporters and import-substituters which did not exist before. Arat (1989) relates how the sharp criticism of the old-line industrialists were being countered by the mid-1980s by a new, emerging group of export-oriented businessmen.

In Chile, the quid pro quo between political stabilization and economic reform was even clearer. Business interests were grateful to Pinochet for having saved them from Allende; opposing the General's trade policies, even if that would have been feasible, would have seemed quite ungrateful indeed. As trade liberalization proceeded and the identity of winners started to become clear, trade reform appears to have gained more adherents among the private sector (Marshall, n.d.). For example, when the basic tariff was raised from

10 percent to 35 percent in response to macroeconomic difficulties in the
early 1980s, the traditionally protectionist manufacturers' association
opposed the move: "The association's character had been transformed by an
influx of diversified exporters who were willing to exert political pressure
to keep the trade regime outward oriented" (World Bank, 1989, p. 64).

VI. Concluding Remarks

Our framework has a number of interesting features. First, it shows how
uncertainty about the identities of gainers and losers can prevent trade
reform from being adopted, even in cases when reform would prove quite popular
after the fact. As the extended version of the model shows, there is a bias
towards the status quo, in this case protection. An implication of our model
is that to the extent that it can be argued that countries with developed and
diversified economies exhibit less uncertainty of this kind, they will be less
susceptible to this problem. Second, the model suggests that an appropriately
large reform will be needed to get individuals to respond in the desired
manner. This is a conclusion shared with some other positive models of trade
reform in which either hysteresis or asymmetric information plays a role (see
Rodrik 1989a and 1989b). Third, our model helps explain an apparent puzzle:
in Korea, Chile, and Turkey, radical trade reforms introduced by autocratic
regimes have not collapsed (and indeed have turned out to be popular) even
though they had little support prior to reform. Our framework makes clear why
ex-ante hostility to reform and ex-post support are quite consistent with each
other.

As we mentioned above, our framework establishes a bias in favor of the
status quo, rather than of protection per se. To explain why protection is
typically the status quo, we have to appeal to other arguments. For poor

countries, perhaps the most sensible explanation is that trade is a good source of revenue for governments and is therefore taxed as soon as central authorities establish themselves. Our explanation becomes relevant when we consider why these restrictions remain when other, more efficient tax sources come within the reach of governments.

It should be obvious that our framework has relevance beyond cases where policy is determined by a strict head count. Even in popular democracies, well-organized and resourceful pressure groups can exert influence over policy considerably in excess of their importance in the population. But these groups themselves are collections of individuals, so the distribution of preferences within them play an important role in determining the stance and vigor of the political pressure exerted. This was obviously the case in the illustrations discussed in the previous section: in South Korea, Chile and Turkey, it was the attitude of individual businessmen that determined to a large extent whether trade reform would receive adequate political support or not. Our model makes no claim to explaining the distribution of power that made business, in this instance, the key actor. For that, we would have to turn to alternative theories that explain why some groups are better able to organize than others. Our framework points out that the policy preferences of these politically-active groups can be systematically distorted—relative to their ex-post preferences—by the role played by uncertainty.

It should be equally obvious that while we have selected examples of trade reform, the logic applies to any reform that creates a distribution of gains and losses whose incidence is partially uncertain. Since this is a characteristic of any important policy change one can think of—whether it be macroeconomic stabilization, tax reform, or welfare reform—the general

principle established here with respect to the obstinacy of the status quo has
wide relevance indeed.

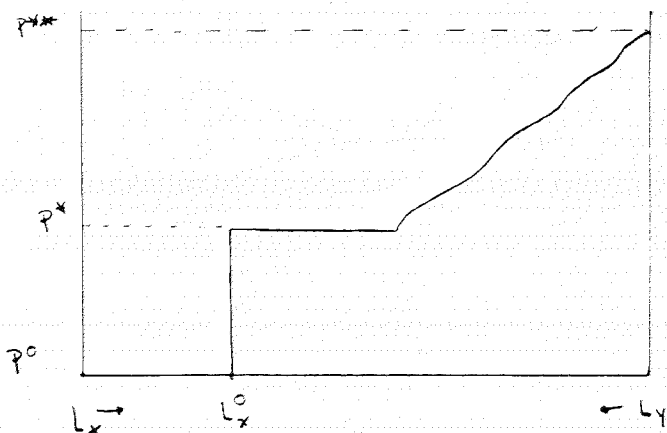Figure 1: Sectoral Reallocation of Labor in Response to Trade Reform
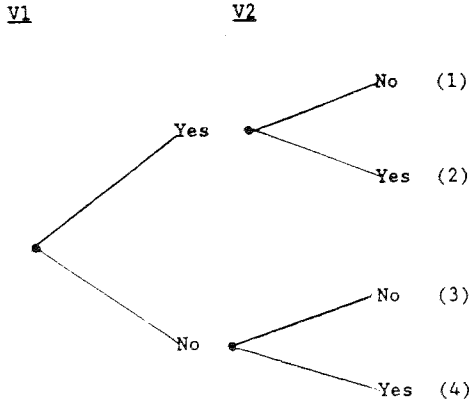
Figure 2: Voting for Reform

V1   V2

Table 1: Voting for Reform: Illustrative Calculations[a]

	voting outcomes			
	with multiple voting under uncertainty:		with single voting under uncertainty:	complete certainty:
	V1	V2		
(a) L_x^0=10; L_y^0=90				
			$\gamma = 0.1$	
P < 1.75	No	No	No	No
$1.75 \leq P \leq 2.02$	No	No	Yes	No
$2.02 \leq P \leq 2.33$	Yes	No	Yes	No
P > 2.33	Yes	Yes	Yes	Yes
			$\gamma = 0.3$	
P < 2.24	No	No	No	No
$2.24 \leq P \leq 2.33$	No	No	Yes	No
P > 2.33	Yes	Yes	Yes	Yes
			$\gamma = 0.5$	
P < 2.34	No	No	No	No
$2.34 \leq P \leq 2.83$	No	No	No	Yes
P > 2.83	Yes	Yes	Yes	Yes
			$\gamma = 0.7$	
P < 2.34	No	No	No	No
$2.34 \leq P \leq 3.62$	No	No	No	Yes
P > 3.62	Yes	Yes	Yes	Yes
(b) L_x^0=20; L_y^0=80				
			$\gamma = 0.1$	
P < 1.75	No	No	No	No
$1.75 \leq P \leq 2.02$	No	No	Yes	No
$2.02 \leq P \leq 2.12$	Yes	No	Yes	No
P > 2.12	Yes	Yes	Yes	Yes
			$\gamma = 0.3$	
P < 2.13	No	No	No	No
$2.13 \leq P \leq 2.23$	No	No	No	Yes
P > 2.23	Yes	Yes	Yes	Yes
			$\gamma = 0.5$	
P < 2.13	No	No	No	No
$2.13 \leq P \leq 2.84$	No	No	No	Yes
P > 2.84	Yes	Yes	Yes	Yes
			$\gamma = 0.7$	
P < 2.13	No	No	No	No
$2.13 \leq P \leq 3.63$	No	No	No	Yes
P > 3.63	Yes	Yes	Yes	Yes

(c) $L_x^0=30$; $L_y^0=70$

$\gamma = 0.1$

P < 1.75	No	No	No	No
1.75 ≤ P ≤ 1.85	No	No	Yes	No
P > 1.85	Yes	Yes	Yes	Yes

$\gamma = 0.3$

P < 1.86	No	No	No	No
1.86 ≤ P ≤ 2.23	No	No	No	Yes
P > 2.23	Yes	Yes	Yes	Yes

$\gamma = 0.5$

P < 1.86	No	No	No	No
1.86 ≤ P ≤ 2.83	No	No	No	Yes
P > 2.83	Yes	Yes	Yes	Yes

$\gamma = 0.7$

P < 1.86	No	No	No	No
1.86 ≤ P ≤ 3.63	No	No	No	Yes
P > 3.63	Yes	Yes	Yes	Yes

Notes: [a] All simulations assume a uniform distribution of c_i in the interval [0, 3], $a_x=a_y=P^0=1$, $\theta=0.1$, and $\delta=0.5$.

Table 2: South Korea: Exports by Commodity ($ million)
          (share in total in parentheses)

		1962-1963	1969-1970	1984-1985
Total		68.98	721.05	29759.46
		(1.00)	(1.00)	(1.00)
I.	Food and live animals	19.74	57.40	1142.77
		(0.29)	(0.08)	(0.04)
II.	Beverages and tabacco	0.19	14.54	112.83
		(0.003)	(0.02)	(0.004)
III.	Crude materials inedible (except fuels)	22.62	85.45	312.53
		(0.33)	(0.12)	(0.01)
IV.	Mineral fuels, lubricants and related materials	2.67	6.51	889.74
		(0.04)	(0.01)	(0.03)
V.	Animal and vegetable oil and fats	0.08	0.06	3.95
		(0.001)	(0.000)	(0.000)
VI.	Chemicals and related products	0.95	10.55	889.46
		(0.01)	(0.01)	(0.03)
VII.	Manufactured goods classified by materials	13.18	195.95	7218.95
		(0.19)	(0.27)	(0.24)
	Leather, leather manufactures, n.e.s. and dressed furskins	n.a.	0.30	59.74
			(0.00)	(0.00)
	Textile yarn, fabrics, made-up articles, n.e.s. and related products	n.a.	74.70	2578.88
			(0.10)	(0.09)
	Iron and steel	n.a.	8.08	1924.36
			(0.01)	(0.06)
	Non-ferrous metals	n.a.	5.32	126.86
			(0.01)	(0.00)
	Manufactures of metal, n.e.s.	n.a.	10.90	1459.66
			(0.02)	(0.05)

VIII.	Machinery and transportation equipment	2.43 (0.04)	57.20 (0.08)	10913.13 (0.37)
	Machinery, other than electric	n.a.	8.64 (0.01)	2942.01 (0.01)
	Electric machinery, apparatus and appliances	n.a.	40.12 (0.06)	2061.87 (0.07)
	Transportation equipment	n.a.	8.39 (0.01)	5896.97 (0.20)
IX.	Miscelaneous goods	3.45 (0.05)	292.28 (0.41)	8231.45 (0.28)
	Clothing	n.a.	185.30 (0.26)	4474.60 (0.15)
	Other	n.a.	106.98 (0.15)	3756.95 (0.13)
X.	Not classifiable	0.09 (0.00)	0.32 (0.00)	32.78 (0.00)

Source: Economic Planning Board, Major Statistics of the Korean Economy.

Table 3: Chile: Exports by Commodity ($ million)
          (share in total in parentheses)

		1970-1972	1985-1987
TOTAL		980.6	4369.7
		(1.000)	(1.000)
I.	Mining products	826.4	2261.9
		(0.843)	(0.518)
II.	Farming, livestock and fishing	30.0	654.3
		(0.031)	(0.150)
	Farming products	22.04	527.6
		(0.022)	(0.121)
	Fresh fruit	5.4	449.9
		(0.006)	(0.103)
	Other	4.3	77.7
		(0.004)	(0.018)
	Livestock	3.4	39.0
		(0.003)	(0.009)
	Forestry	2.2	1.8
		(0.002)	(0.000)
	Fishing	1.5	84.6
		(0.002)	(0.019)
III.	Industrial products	121.6	1446.3
		(0.124)	(0.331)
	Fishmeal	20.0	317.0
		(0.020)	(0.073)
	Paper, cellulose, cardboard and derivatives	30.8	275.6
		(0.031)	(0.063)
	Timber	5.8	148.7
		(0.006)	(0.034)
	Chemicals and petroleum derivatives	10.0	95.5
		(0.010)	(0.022)
	Basic metalic industries	24.8	301.6
		(0.025)	(0.069)
	Other (2)	28.9	299.2
		(0.029)	(0.068)

Source: Central Bank of Chile, Economic and Social Indicators.

Notes: (1) Other: Cereals, other.
        (2) Other: Foodstuffs, soft drinks, metal products, machinery,
                electrical products, transportation material and other, and
                non-monetary gold.

Table 4:   Turkey: Exports by Commodity ($ million)
           (share in total in parentheses)

		1977-1979	1984-1986
TOTAL		2085.4 (1.000)	7508.4 (1.000)
I.	Agricultural Products	1292.2 (0.620)	1783.2 (0.237)
II.	Mining and Quarring Products	127.1 (0.061)	243.7 (0.032)
III.	Processed and Manufactured Products	659.0 (0.316)	5475.7 (0.729)
	Processed agricultural products	131.5 (0.063)	703.9 (0.094)
	Manufactured products	526.3 (0.252)	4762.1 (0.634)
	Textiles and clothing	312.0 (0.150)	1838.3 (0.245)
	Hides and leather	45.1 (0.022)	406.1 (0.054)
	Forestry	1.3 (0.001)	51.0 (0.007)
	Chemicals	26.6 (0.013)	252.5 (0.034)
	Rubber and plastics	2.6 (0.001)	113.9 (0.015)
	Petroleum products	0.0 (0.000)	300.3 (0.040)
	Glass and ceramics	31.1 (0.015)	163.7 (0.022)
	Iron and steel	20.9 (0.010)	765.6 (0.102)
	Metal products and machinery	16.6 (0.008)	251.2 (0.033)
	Electrical equipment and products	3.6 (0.002)	115.7 (0.015)
	Other (1)	62.4 (0.030)	424.1 (0.056)

Source: State Institue of Statistics, Annual Indicators of Turkey.

Note: (1) Other: cement, non-ferrous metals, other.

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