

**THE POLITICO-ECONOMIC DETERMINANTS OF
TRADE PROTECTIONISM:
AN ANALYSIS OF DEMAND AND SUPPLY IN
THE POLITICAL MARKETPLACE FOR TARIFFS**

By Stella Luz Alabastro and Nancy Irlanda*

This paper uses both an interest group model and a national policy model to determine political and economic factors that influence trade policy. Findings of this study point to the importance of labor as a determinant of tariff structure. The study was conducted in the context of a unique Philippine trade culture known as "comprador capitalism." In light of this, results seem to confirm that the scarce factor, which in the Philippine case is capital, receives the greater factor returns in spite of labor having the interest.

1. Introduction

This study aims to identify and explain the determinants of trade protectionism using a political model, and to elucidate on the trade policy implications of the behavior of the participants in the political process of securing trade protectionism. Trade policy is rarely determined by economic considerations alone, no matter how beneficial from a welfare perspective. Rather, it is the result of a political process involving many players.

Since certain industries seem more protected than others, trade protectionism could be the offshoot of a tacit alliance between the special interests of manufacturing industries and the legislature. On the other hand, pressure against increased protection could also come from the consumers of a particular industry's product because they suffer a decrease in consumer surplus with a price increase; from firms who use the product as an intermediate input in production; and exporters/foreign investors who fear possible retaliation by other countries.

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The study was made within the context of an existing import liberalization program. Such a scheme has its ramifications throughout varied economic phenomena, for example, aggregate economy, employment, inflation, trade, and smuggling. It is important, therefore, that the reasons behind the policy agenda and the effects thereof be brought to fore so that remedial or accompanying policy measures may be taken to improve the lot of local manufacturers.

The focus of this effort is the tariff, which is a redistributionary tool designed to efficiently allocate resources. This is not to say, however, that what is efficient is also equitable, nor that efficiency is the spirit behind the seeking and assigning of tariffs. Moreover, given that a tariff harms the public at large and benefits a few producers, what then is the rationale behind the imposition of a tariff? Addressing this question would entail an analysis of the supply of and demand for protection in the political marketplace.

The analysis of the political process of supplying a tariff is limited to the action taken by the Philippine House of Representatives. No attempt will be made to analyze the behavior of the Philippine Senate in elevating the approved House Bill 992 to the status of Republic Act.

Secondly, only modifications in ad valorem tariff rates were considered in view of the inconsistency in units of measurements had the changes in specific taxes been likewise used.

Thirdly, in view of the strong political influence of President Corazon Aquino in 1987, the Bill was voted on unanimously. This negates to a large extent the role of party affiliation in voting behavior.

Fourthly, as it is acknowledged that there is no meaningful way of quantifying the extent of lobbying in the local setting, only potential lobbying strength was measured through the use of various industry structural traits.

Fifthly, in view of the Philippines' heavy burden of debt to the International Monetary Fund and World Bank, its autonomy in setting its own trade policies is put in doubt.

Lastly, whereas the purposes of imposing a tariff are: (1) protection of local industry, (2) raising of government revenue, and (3) conservation of foreign exchange, this study focuses only on the

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first application. This is attributed to data constraints (e.g., the lack of import penetration levels per Philippine Standard Industry Classification).

2. House Bill 992

Basic to this endeavor is a certified House Bill entitled "An act further restructuring the import duty rates and classification of certain articles under Section 104 of the Tariff and Customs Code of 1978 (P.D. 1464), as amended," which was forwarded by Malacañang to the House of Representatives last September 1, 1987. The Bill, now Republic Act 6647, was approved on Third and Final Reading on October 15, 1987, during the First Regular Session of the House. Results showed 150 in favor, 3 against, and 1 abstention.

Comparison of the certified House bill initially endorsed by Malacañang and Committee Report No. 6 as well as Republic Act 6647 has revealed differences in terms of the extent of coverage as well as the size of the modifications on tariff levels. Furthermore, particular items were vetoed by President Aquino as evidenced by her letter to the House, dated January 29, 1988.

Beginning late 1986 until July 1987, the Tariff Commission and the National Economic Development Authority (NEDA) held consultations with various consumer groups and nongovernment organizations (NGO's) with a view to restructuring the Tariffs and Customs Code of 1978 in order to cushion the effects of the import liberalization program administered by the NEDA. The Department of Agriculture and the Department of Trade and Industry were also involved in this effort.

3. Theoretical Framework

The basic premise of this work is that the formulation of trade policy is the result of interplay between politician-suppliers and special interest-demanders. Unfortunately, there is no way of unequivocally determining which activities by lawmakers are founded on genuine concern for national welfare and those which constitute material self-interest exacerbated by the highly-coveted prospect of reelection. If the political market operated perfectly and there were free entry and exit (no hindrance to a seat in Congress), then legislators would fully espouse the wishes of voters. Because it is imperfect, then incumbents have a decided advantage by virtue of their access to the opportunity of acting on a tradeoff during the

course of their terms. Given the lack of certainty in delineating altruistic from pecuniary and self-advancing motives, that tradeoff would entail the amount of rents that these legislators are willing to provide producers and the costs they will bring to bear upon consumers. In other words, legislators strive to strike a balance between private profit and social cost. After all, both producers and consumers have their respective arsenals of votes which legislators cannot ignore.

This process is faithful to the basic tenets of the interest group theory of legislation which regards regulation as an economic good. It is demanded by special interest groups and supplied by legislators, the demand of which is manifested by the promise of votes, lobbying, and special interest money provided to individuals and political coalitions. This political marketplace is the setting for conflicting demands of various sectors and degrees of interest whose supply is provided by legislators who face periodic reelection. The more effective demander, therefore, wins. In this sense, politics and the voting process serve as a filter for individual preferences.

It is worthwhile to note that the concepts of rent seeking and the lobby are crucial to an appreciation of the mechanics behind the influence of politico-economic variables on the formulation of trade policy — in this case, trade protectionism.

Brock and Magee (1977) begin their analysis of lobbying by considering the gainers and losers with the imposition of a tariff. While the Stolper-Samuelson model suggests that the intensive factor in import-competing activities throughout the economy gains from a tariff, and the other factor loses, James Cairnes advanced the theory that, given sector-specific factors, a tariff will make labor and capital gain in an import-competing industry and lose in an export industry. Their framework suggests that individuals have a marginal propensity to contribute to lobbying with respect to the stakes. Brock and Magee proceed to use game theory in analyzing how one political party selects a particular trade policy, say pro-free trade, and how another reacts to this choice. Following the economic rule of optimization by equalizing marginal benefits and marginal costs, the pro-tariff party maximizes its probability of election by increasing the level of protection it supports until the positive marginal effect on the party's election probability, given by the protectionist lobby, is offset by the negative effect of lost voters and resource flows from free traders to the free trade party.

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Olson (1965) posited the theory of the lobby as a public good, subject to imperfections such as externalities and the free-rider problem. This poses the problem of non-provision of optimal levels of lobbying efforts due to, say, certain individuals enjoying the benefits of other people's contributions while they contribute nothing. Olson argues that the existence of voluntary organizations, such as the lobby, depends on their ability to offer a set of incentives which discriminate against those who did not contribute to the provision of the good. As such, a group optimal outcome may be achieved by bargaining among themselves without incurring substantial transaction costs.

On the matter of the "supply" of tariff policies, Stigler (1971) advances the interest group theory of legislation based on the premise that politician-regulators supply regulations because there is a demand for them — the demand manifested through votes and monetary support for political coalitions. On the supply side, the material question is: how does such regulation that hurts a large number of people by a small amount and benefits a small number of people by a large amount get legislated? To this, Stigler maintains that the democratic process through representation involves several individuals with various degrees of interest. Since information is scarce and costly, they may decide not to acquire such information, but vote on issues just the same, along party lines. Hence, after the interactions between self-interested demanders and political suppliers who have to face periodic reelection, it is the effective interest group that wins.

Brock and Magee (1978, p. 17) present a similar argument in their article by saying, "Each politician who maximizes his probability of election must calculate how campaign contributions and voters will respond to alternative tariff levels before he announces his position." Again, using game theory, they predict that the politician will raise his tariff until the positive effect of increased funds on his probability of election is just offset by the negative general voter effect and the reactor-politician will not likely quote a zero tariff in an attempt to maximize the negative voter effect.

Rent seeking is viewed by the modern neoclassical approach as an expenditure in real resources in order to secure changes in legal rights and regulations, made by individuals/groups of individuals motivated by a potential increase in their income.

Forms for rent seeking include engaging in lobbying to institute or repeal government policy, and involvement in direct politics to secure access to decision-making power. While these activities may be deemed rational and non-wasteful from a private point of view, these are, on the contrary, wasteful and irrational from a social point of view and are refuted by public choice analysis.

In explaining the political process that determines the passage of HB 992, it becomes more meaningful when the political milieu is defined. First of all, there are four entities involved. The executive branch of the national government, special interest groups (e.g. Textile Mills Association of the Philippines), government agencies (e.g. NEDA, Tariff Commission), and the legislative branch (House of Representatives). Secondly, the interaction among these entities is not unilateral.

4. Methodology

In this study, two models of Caves (1976) are used — the interest group model and the national policy model. The interest group model concentrates on the demand and supply of tariffs by industry participants and elected representatives, respectively, on the basis of the benefits and costs of interest groups. The national policy model views the tariff as an instrument of shifting the allocation of resources to a direction complementing national directives and preferences. The decision to use these two models was based on the need to draw a dichotomy between the priority of industry participants and that of the National Government pursuant to its national economic policies as enshrined in the 1987 Constitution.

The interest group model hypothesizes that industries' tariff rates are the result of interest group pressures, and therefore should depend on the structural factors controlling the benefits and costs for industry groups of organizing to secure protection. The underlying assumption of such conjecture is that tariff protection serves primarily to increase profit and rental incomes.

To determine whether a group gets mobilized to pursue its interest, two factors are important, namely: (1) the benefits potentially available and, (2) the costs that the beneficiaries must incur. Specifically, Caves (1976, p. 286) describes the process as follows: the individual firm invests resources (e.g. in lobbying activities) to obtain tariff protection and then compares this outlay with the expected revenue stream due to to this tariff wall. However, given

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this arrangement, there is an incentive for firms to free-ride on other firms willing to expend resources for pressure activities.

There are two interest groups which seek to influence legislators in formulating trade policies — import-using and import-competing industries — both of which have conflicting preferences, with the former favoring the dismantling of trade barriers and the latter, protection.

Due to data constraints (e.g. the absence of a sufficient input-output table using the Philippine Standard Industrial Classification), the point of view taken in the statistical methods employed was that of import-competing industries.

After analyzing how the model operates and considering data limitations, the following variables were identified as possible determinants of tariff structures: number of firms in the industry, employment size for 1987, industry share of value-added, Herfindahl index, value-added per worker, cost of materials consumed, book value of fixed assets, and growth in terms of value-added. Two regression analyses were performed per model in order to capture the determinants of both protectionist and liberal trade policies.

In the Philippine setting, presumably, two types of capitalists operate. There is the "crony capitalist" (also referred to as the "comprador capitalist") who derives much of his income through kickbacks and the ownership of some fixed assets or monopoly privilege within a defined economic realm, rather than from any significant productive activity. They stand to lose more in the event of import liberalization because they are used to operating without serious competition and presumably have a lot more at stake, such as greater capital investment. The other is the classic capitalist who is perfectly competitive, a price taker, and unable to significantly influence the market because of his relative smallness. Furthermore, he belongs to a dynamic, technologically advanced sector that believes that competition enables an industry to achieve greater efficiency, and is confident that they actually have the ability to compete.

Generally, capitalists can be described as being motivated by self-interests. However, a line can be drawn between the type who can exert a strong and effective influence upon the political process (comprador), and the other who is constrained by relative insignificance by virtue of his size (classical).

Equation (a) is based on the premise that import-competing manufacturing industries want to be protected. Moreover, it invokes the infant-industry argument which says that in less developed countries, a temporary tariff allows infant local industries to learn how to operate more efficiently until it can do without the tariff. This is because the temporary tariff reduces imports and gives local industries the opportunity to learn by doing. Unfortunately, these once infant industries who were granted temporary tariffs are able to perpetuate this privilege presumably through rent-seeking and this may lead to their rise as monopolies (Kindleberger and Lindert, 1978, p. 141).

Equation (b) assumes that there are import-competing industries which actually welcome competition because of their classical nature.

A multivariate logit analysis was performed on the variables stated above based on the following equations:

$$\begin{aligned}
 P_{ig} &= \text{Protection of Import-Competing Industries} \\
 &= f(\text{NUM}, \text{EMP87}, \text{BKVAL}, \text{VASH}, \text{VAPW}, \text{HI}, \text{COST}, \\
 &\quad \text{GRO}) \\
 &= 1 \text{ if } t_1 - t_0 > 0 \quad (\text{i.e., an increase in tariff}) \\
 &\quad 0 \text{ if } t_1 - t_0 = 0 \quad (\text{Equation a})
 \end{aligned}$$

$$\begin{aligned}
 L_{ig} &= \text{Liberalization of Import-Competing Industries} \\
 &= f(\text{NUM}, \text{EMP87}, \text{BKVAL}, \text{VASH}, \text{VAPW}, \text{HI}, \text{COST}, \\
 &\quad \text{GRO}) \\
 &= 1 \text{ if } t_1 - t_0 < 0 \quad (\text{i.e., a decrease in tariff}) \\
 &\quad 0 \text{ if } t_1 - t_0 = 0 \quad (\text{Equation b})
 \end{aligned}$$

where

<i>NUM</i>	=	number of firms in the industry
<i>EMP87</i>	=	employment size in 1987
<i>BKVAL</i>	=	book value of fixed assets
<i>VASH</i>	=	industry share of value-added
<i>VAPW</i>	=	value-added per worker
<i>HI</i>	=	Herfindahl Index
<i>GRO</i>	=	growth in terms of value-added
<i>COST</i>	=	cost of materials purchased.

Interest group considerations predict a negative relationship between industry size measured in terms of the number of firms and the imposition of tariffs for both protectionism and liberalization

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equations. This is because a smaller number of participants allows for easier organization into an effective lobbying bloc.

However, industry size in terms of employment level and book value of fixed assets is expected to be positively related to the degree of protection. The extent of leverage is an adjunct of employment as a measure of size, implying that "labor has the votes" (Caves, 1976, p. 286). Furthermore, the amount of fixed assets is a virtual measure of an industry's access to special interest money, thereby allowing a stronger presence in the political process. For the liberalization equation, the 1987 level of employment is expected to assume a negative relationship with the odds of a liberal vote within the context of a situation of surplus labor. Therefore, it may be in the interest of labor to see their firm remain viable so as to ensure retention of their jobs. The expected sign for *BKVAL* remains positive for the same reason.

A negative relationship between value-added per worker (which is the inverse of labor intensity) and trade protection is expected because the lower the value-added per worker (the higher the labor intensity), the greater are the benefits derived by laborers from a tariff that insulates a given amount of value-added from import competition. And again, assuming that labor has votes, workers have a stronger incentive to organize. The opposite relationship is expected for the second equation because low skills (low *VAPW*) render labor immobile between occupations. Hence, labor would be moved to oppose liberalization.

The relationship between tariffs and seller concentration as measured by the Herfindahl Index is ambiguous because it cannot be ascertained which of three conflicting tendencies is dominant: (1) the more concentrated the industry, the easier it is to organize and to raise special interest money, (2) the more concentrated the industry, the more complacent the participants become in their market niches, and (3) the fewer the industry participants, the more confrontational and the more difficult to reach a consensus. (For instance, a four-digit industry classification could be an aggregate of several firms among which there may be a dominant firm asserting greater influence on the group — the group being more confrontational in the sense that they can bargain more directly with each other.) Since in a concentrated industry, less organizational and free-rider problems exist, incentives to engage in lobbying activities for protection are greater. However, it may be the case that the monopolist, by virtue of security, would feel no need for expending additional

resources in seeking protection. Moreover, Caves, (1976, p. 286) asserts this questionable relationship by citing the very possible case of an unconcentrated industry whose lobby efforts are successfully coordinated by its entrepreneurs with vast experience in organizational work. On the other hand, a negative relationship is predicted for the liberalization equation because it assumes that the classical dynamic capitalist belonging to an industry characterized by equally sized firms (low *HI*) would want competition to boost efficiency.

A positive relationship is expected between the cost of materials consumed and the level of protection, because the higher the costs of an industry the lower the profit margin and the greater the incentive to seek protection. Conversely, a negative relationship is predicted for the second equation because it is presumed that the principle of profit maximization would move the producer to object to a liberalization scheme which would depress prices. This is because high costs and low prices would result in a decrease in profit margin.

Slow growth is a chronic frustrator of expectations. When the increase in value of industry output between two years is not substantial, incentives for groups to organize are strong, thus a negative relation between trade protection and growth is expected. Furthermore, when an industry has suffered, the case for tariff protection becomes stronger (Caves, 1976, p. 287). This is opposed to the sign expected for the second equation because it is assumed that a high-growth, emergent sector would again favor competition to further stimulate the dynamism of the sector.

A negative relationship between *VASH* and the odds of a protectionist vote is in line with the concept of *VASH* as the difference between an industry's total value of output and costs divided by the total value added of the manufacturing sector. Thus, *ceteris paribus*, the smaller the difference (lower *VASH*), the larger the likelihood of an industry not to perform well and the greater the case for protection. The reverse holds true for the second equation.

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Below is a tabulation of expected signs for the interest group model:

Table 1

Variable	Protectionism	Liberalization
<i>NUM</i>	-	-
<i>EMP87</i>	+	-
<i>BKVAL</i>	+	+
<i>VASH</i>	-	+
<i>VAPW</i>	-	+
<i>GRO</i>	-	+
<i>HI</i>	?	-
<i>COST</i>	+	-

Specification for the national policy model is based on Article 12, Sections 1, 12, and 19 of the Constitution of the Republic of the Philippines, entitled National Economy and Patrimony. The goals of the national economy were identified as follows:

- to promote a sustained increase in the amount of goods and services produced by the nation for the benefit of the people
- to expand labor productivity as the key to raising the quality of life
- to promote industrialization
- to advance full employment, through industries that make full and efficient use of human and natural resources
- to protect Filipino enterprises against unfair foreign competition
- to encourage preferential use of Filipino labor, domestic materials, locally produced goods, and adopt measures that help make them competitive
- to regulate or prohibit monopolies when the public interest so requires.

Given these, the government would most likely have a preference for protecting industries which are:

- (1) widely dispersed;
- (2) growing, in terms of employment or output;
- (3) incurring gross additions to fixed assets; and
- (4) employing low-skilled, low-wage workers.

Below is the regression equation which embodies such national preferences:

$$\begin{aligned}
 P_{np} &= \text{Protection of Import-Competing Industries} \\
 &= f(HI, GROEMP, ADFIX, COMP) \\
 &= 1 \text{ if } t_1 - t_0 > 0 \quad (\text{i.e., an increase in tariffs}) \\
 &= 0 \text{ if } t_1 - t_0 = 0 \quad (\text{Equation a}) \\
 L_{np} &= \text{Liberalization of Import Competing Industries} \\
 &= f(HI, GROEMP, ADFIX, COMP) \\
 &= 1 \text{ if } t_1 - t_0 < 0 \quad (\text{i.e., a decrease in tariffs}) \\
 &= 0 \text{ if } t_1 - t_0 = 0 \quad (\text{Equation b})
 \end{aligned}$$

where HI = Herfindahl Index
 $GROEMP$ = growth of employment from 1986 to 1987
 $ADFIX$ = gross additions to fixed assets
 $COMP$ = average annual compensation per worker.

Table 2 summarizes the hypothesized relationships in the national policy model.

Table 2

Variable	Protection	Liberalization
HI	-	+
$GROEMP$	+	-
$ADFIX$	+	-
$COMP$	-	+

In a desire to achieve the most meaningful statistical results for the interest group model, a sample was taken from the population of a total of 124 manufacturing industries classified according to the four-digit level of aggregation. The basis for the selection of sample elements was an arbitrary benchmark using figures for the output share of industry ($OUTSH$); those less than 0.001 were omitted. On the other hand, the total population was used for the national policy model because it is the essence of this model to avoid any discrimination among industries. National directives should be applicable to all industries, without bias.

5. Data Base

Industry data are based on the 1977 Philippine Standard Industrial Classification (PSIC) obtained from the 1987 Annual Survey of Establishments, which covers all legitimate manufacturing firms employing ten or more workers. Specifically, the following items of data were taken: employment, compensation, census value-added, costs of materials purchased, book value of fixed assets, gross additions to fixed assets and number of firms.

Concentration ratios, including *CR4*, *CR8*, and Herfindahl Index were supplied upon request from the Manufacturing Division of the National Statistics Office.

Since tariffs are assigned on the basis of the Philippine Standard Commodity Classification (PSCC), it was necessary to correlate such classification with the PSIC on which industry data were based. In accomplishing this, the PSIC to PSCC and International Tariff Heading to PSCC conversion tables were indispensable, the latter being secured from the Tariff Commission.

6. Empirical Results

Statistical results for the interest group and national policy models are as follows, where figures within parentheses represent two-tailed levels of significance:

$$\begin{array}{lll}
 P_{ig} = - 3.1711457 & - 0.0046098 \text{ NUM} & + 0.0001336 \text{ EMP87} \\
 (0.016) & (0.639) & (0.04) \\
 + 4.629\text{E-}07 \text{ BKVAL} & - 99.658992 \text{ VASH} & + 0.0041515 \text{ VAPW} \\
 (0.207) & (0.224) & (0.268) \\
 - 0.2729826 \text{ GRO} & - 0.5449733 \text{ HI} & - 1.56\text{E-}07 \text{ COST} \\
 (0.594) & (0.778) & (0.696)
 \end{array}$$

(Equation 1a)

$$\begin{array}{lll}
 L_{ig} = - 0.3264857 & + 0.0059907 \text{ NUM} & + 0.0001018 \text{ EMP87} \\
 (0.685) & (0.193) & (0.039) \\
 + 1.613\text{E-}07 \text{ BKVAL} & - 72.848356 \text{ VASH} & + 0.0029401 \text{ VAPW} \\
 (0.702) & (0.145) & (0.034) \\
 - 0.751105 \text{ GRO} & - 3.2951154 \text{ HI} & - 1.087\text{E-}07 \text{ COST} \\
 (0.385) & (0.168) & (0.327)
 \end{array}$$

(Equation 1b)

Another regression was performed based on the interest group model, this time using the variable *CR8*, instead of *NUM*. The market share of the top eight firms in an industry (*CR8*) is also a measure of industry size; however, it may offer more insight because *CR8* is a summary index of fewness (Martin, 1988). In contrast, the Herfindahl Index has the advantage of providing information about the relative sizes of market shares of all firms in the market and not just the largest eight. Therefore, a positive relationship is predicted between *CR8* and protectionism because of the greater ease for a concentrated industry to organize into an effective lobbying bloc.

The results of the new equations are as follows:

$$\begin{array}{lll}
 P_{ig} = - 10.553769 & + 8.7069814 \text{ CR8} & + 0.0002144 \text{ EMP87} \\
 (0.61) & (.169) & (0.031) \\
 + 4.701E-07 \text{ BKVAL} & - 143.21987 \text{ VASH} & - 0.005707 \text{ VAPW} \\
 (0.293) & (0.156) & (0.201) \\
 - 0.3698582 \text{ GRO} & - 4.2783993 \text{ HI} & - 1.309E-07 \text{ COST} \\
 (0.534) & (0.346) & (0.761)
 \end{array}$$

(Equation 2a)

$$\begin{array}{lll}
 L_{ig} = - 4.7986956 & + 5.1216008 \text{ CR8} & + 9.572E-05 \text{ EMP87} \\
 (0.048) & (0.093) & (0.041) \\
 + 1.781E-07 & - 70.822662 \text{ VASH} & + 0.0027328 \text{ VAPW} \\
 (0.68) & (0.184) & (0.056) \\
 - 0.8166251 \text{ GRO} & - 5.1726809 \text{ HI} & - 8.488E-08 \text{ COST} \\
 (0.353) & (0.088) & (0.447)
 \end{array}$$

(Equation 2b)

The national policy model, on the other hand, yielded the following outcome:

$$\begin{array}{lll}
 P_{np} = - 3.298 & + 1.4524685 \text{ GROEMP} & + 2.325E-06 \text{ ADFIX} \\
 (0.000) & (0.068) & (0.069) \\
 - 1.945E-06 \text{ COMP} & - 0.2625368 \text{ HI} & \\
 (0.841) & (0.874) &
 \end{array}$$

(Equation 3a)

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$$\begin{aligned}
 L_{np} = & - 1.587 & - 0.817161 & \text{GROEMP} & + 1.202E-06 & \text{ADFIX} \\
 & (0.001) & (0.312) & & (0.250) & \\
 & + 7.336E-06 & \text{COMP} & - 1.9066158 & \text{HI} & \\
 & (0.077) & & (0.143) & &
 \end{aligned}$$

(Equation 3b)

For interest group equation 1a, wherein a protectionist vote was indicated by a dummy variable taking the value of 1, only *EMP87* was significantly supported by the model, with a 0.040 two-tailed level of significance and a beta coefficient of 0.0001336. Among the seven explanatory variables whose expected outcomes were unambiguous, six carried correct signs. These were *NUM*, *EMP87*, *BKVAL*, *VASH*, *GRO*, and *COST*.

Results of the regression analysis for interest group equation 1b, which determines a liberalization vote for import-competing industries, yielded the following significant variables, ranked accordingly: *VAPW*, *EMP87*, *VASH*, and *HI*. The one-tailed test was employed to determine the significance of *VAPW*, *EMP87*, and *VASH* because the hypothesized relationship between these variables and a liberalization vote is clearly defined. The t-statistics for *VAPW*, *EMP87*, and *VASH* are 2.165196, 2.1129572, and -1.4758316, respectively, indicating that the first two are highly significant while the third is not. Since the expected sign of *HI* was ambiguous, the two-tailed test was applied and revealed nonsignificance. The variables *NUM*, *BKVAL*, *VAPW*, *HI* and *COST* registered correct signs; *EMP87*, *VASH*, and *GRO* did not.

In Equation 2a, wherein *NUM* was replaced by *CR8*, results were generally as expected — *CR8* yielded a positive relationship with a protectionist vote while the rest of the variables retained the same signs as in Equation 1a. With the inclusion of *CR8*, there was an improvement in significance in all variables except *BKVAL* and *COST*. All explanatory variables with definite expected signs, except *VAPW* were correctly signed.

Results of regression equation 2b show two highly significant variables — *EMP87* and *VAPW* — as well as two near significant variables — *CR8* and *HI*, as evidenced by the respective t-statistics for the first three and the two-tailed level of significance for the latter. Among the eight variables, three were wrongly signed — *EMP87*, *VASH*, and *GRO*.

The national policy equation explaining a protectionist vote is supported by only two near-significant variables — *GROEMP* and *ADFIX*. Beta coefficients show that both variables are important factors in accounting for the occurrence of a protectionist vote, from a nationalist perspective. Moreover, all four variables registered correct signs.

On the other hand, the second national policy equation in which a liberalization vote is designated by a value of 1, resulted in no significant variables. However, at $\alpha = 10\%$ using the two-tailed test for hypotheses, *COMP* is significant and correctly signed but its beta coefficient indicates its negligible contribution to the odds of passing a liberalization bill. Both *HI* and *ADFIX* yielded incorrect signs.

7. Interpretation of Results

An examination of the results of the interest group equation 1a would reveal that labor intensive industries would most likely merit protection. The incorrect signs for *VAPW* and *COST* could be accounted for as follows — *VAPW* may be an indicator of the level of skills; thus, the higher the *VAPW*, the greater the workers' ability to negotiate at the bargaining table. That is, the more highly skilled the workers, the more aware they are of their options, such as banding together in pursuit of common goals. Moreover, the lower the cost of materials the greater the profit margin, indicating an increase in surplus funds which are available as special interest money.

On the other hand, Equation 1b shows that the dynamic capitalist sector tends to be granted import liberalization when characterized by a large number of workers and high value-added per worker. In spite of the relative strength of the labor organization as indicated by the industry's employment size and productivity on a per worker basis, the granting of protection which should be forthcoming is not the case.

In tandem with the first regression equation, the results could imply that capitalist preference — crony or classical — permeates the labor force. This is in line with Stephen Magee's argument (1976, p. 86) that the goals of labor and management are actually in consonance with each other. He disagreed with the "long-run Stolper-Samuelson result that one factor will gain and the other will lose. If only the short-run effects are considered, or if they dominate present value calculations of factor returns, then we have an explanation of

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labor and capital from an industry cooperating in pressing politicians for tariffs." Consequently, it is the entire firm that is the relevant unit of analysis in international trade, not labor nor capital taken individually, as the Stolper-Samuelson theorem would imply. In the event of a protectionist or liberal policy, both labor and capital gain or lose simultaneously.

An important aspect in interpreting the results of interest group equations is the identification of both opponents and proponents of protectionist and liberal votes. For instance, it is in the interest of consumers to oppose the imposition of tariffs for both inputs and final goods since these increase commodity prices. Likewise, import-using industries are pro-trade liberalization, especially for intermediate goods, since profit maximization through cost minimization is the usual objective.

As regards the unexpected result in the relationship between *VASH/GRO* and the likelihood of obtaining liberalization in Equations 1b and 2b, it is possible that demanders of such policy among import-using industries are a relatively stronger pressure group. Even when growth is slow (low *GRO*) and performance in terms of output is weak (low *VASH*), a liberal vote is likely. In this case, even if the economic implications of the industry characteristics *VASH* and *GRO* point to a protectionist policy, the import-users' preference may have weighed more heavily on the political process, hence, the move towards liberalization.

Equation 2b gives an interesting perspective of *CR8* and *HI*, both significant variables. The conjecture that the odds of securing liberalization increase when an industry is composed of equally sized firms (low *HI*) and the ability in forming effective lobbying blocs through trade organizations when *CR8* is high were both confirmed by regression results. They further support the hypothesis that no classical capitalist is big enough to influence the market for tariffs and that he seeks competition in an attempt to attain efficiency.

The provision of a measure of fewness in an industry gives more meaningful insights on the effects of concentration on trade patterns, hence, confirming that *CR8* is a better explanatory variable than *NUM*.

The national policy model produced results consistent with that of the interest group model, that is, as a response to populist demands of promoting full employment, protection is given to indus-

tries with growing employment levels. Additionally, the significance of the variable *ADFIX* is indicative of the importance of industrialization as a national directive. Lastly, import liberalization is adopted when an industry has relatively highly-paid workers because low paid workers (and presumably low-skilled workers) are rather immobile, thus, warranting protection.

The relevance of incorporating the national policy model in this inquiry is not so much to compare the explanatory powers of the two models, although Caves made an effort towards this goal. This paper instead concerns itself with the comparison of the Canadian and American cases with that of the Philippines. It will be noticed that unlike Caves, there is a separate specification of variables for both models. The Philippines is characterized by a politico-economic situation unique from that of Canada or America in that there is an absence of strong legal structures, such as anti-trust laws. Therefore, a comparison on this basis may depict the feature of Philippine trade policy that has to do with the relative weakness of industry structure variables in determining trade policy. Furthermore, unlike Canada and America wherein the entire population of manufacturing industries can be considered without making a distinction between import-competitors and import-users, such a dichotomy is required for the Philippines whose manufacturing industries are regarded as being highly dependent on imported raw materials.

8. Conclusion

The major inference from this study is that local manufacturing industries which can plead a strong case for labor are most likely to secure protection. However, it cannot be ascertained whether or not this case for labor is due to the strength of labor organizations or to the resourcefulness of capitalists in using this case for labor as leverage to further their own preferences.

In the course of carrying out this study, however, four additional constraints were discovered. One is that because of suppression of certain data from the National Statistics Office, the true nature and self-interest of certain industries are couched within the merging of some industry classifications. For instance, in the case of an industry consisting of only one firm, this entity is merged with an industry classification with more participants. The implication of this is that the real preferences of the monopolist is somewhat filtered — the increased aggregation of industries thus serves as a form of smokescreen.

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Another is that due to data constraints, the import users' point of view was not assumed, although this would have proven useful in the second equation of the interest group model that looked into the probability of import liberalization.

Thirdly, this undertaking excluded important variables such as the extent of foreign ownership, import penetration levels, and tariff revenues. However, exclusion of these variables cleared the way for a more focused perspective for this study.

Moreover, the short-run interest group model employed was deemed inadequate by Baldwin (1985): "... The models focusing exclusively on short run direct self-interest are insufficient for explaining the wide-range of behavior patterns observable in trade policy area. Models that include behavior based either on long run self-interest or concern for the welfare of the other groups and the state are also necessary to account for the action of voters and public officials."

It would also prove instructive to pursue a study on Executive Order No. 413 signed July 19, 1990, entitled, "Modifying the rates of import duty and nomenclature of certain imported articles under Section 104 of the Tariff and Customs Code of 1978 (Presidential Decree No. 1464, as amended)."

Finally, the research bent of this study is still at its infancy, especially in the Philippine context. Hence, there is considerable opportunity for refining research design such as constructing models more applicable to the unique complications of the Philippine case.

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