REGIONAL INTEGRATION
AND
ENDOGENOUS PROTECTION

Regional Integration and Endogenous Protection

Regionale integratie en endogene protectie

Thesis

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Table of Contents

Preface

The completion of this book is very much like Confucius' journey of a thousand miles. It was not the first step that was difficult, though, but reaching the end-post, which seemed to shift with each passing step. I initially planned to finish it in three years, or at least within the seven-year residency period allowed by the University of the Philippines School of Economics (UPSE). What was not planned was my marriage to a Dutch economist, which consequently led me to migrate to Europe, and eventually resulted to two wonderful daughters. I had always been proud of my somewhat nationalist resolve not to leave the Philippines despite the opportunities to join the massive wave of Filipino migration overseas, so adapting to my migrant status was more difficult than I had first foreseen. I have also underestimated the physical, mental and emotional rigours of motherhood, especially in a place where 'yayas' (nannies) are paid in gold, and with grandparents being 10,534.96 km. away.

In 2000, I made another attempt to pursue my dissertation and took the chance to speak with Prof. Bill Ethier during one of his visits to the Netherlands. He suggested that I approach Joe Francois for supervision, and this advice eventually led me to Erasmus University. It is one of my great fortunes that Joe has agreed to be my PhD supervisor, despite my repeated mispronunciation of his name in the beginning. It still amazes me how much I have learned in the five years I have worked with him (it must have amazed him, too, given my hopeless struggles with all those equally hopeless equations!). He has invested significantly in my work, and for that I am truly grateful. His intellectual generosity will also remain an example.

I would also like to thank Erasmus University for having generously accepted me under their hospitality program, allowing me to pursue my doctorate in Europe and at the same time accrediting my previous course work in UPSE. I would also like to thank the De La Salle University which funded my PhD studies during the period that I served as assistant professor in their faculty of Economics. I am likewise grateful to my outstanding mentors in UPSE, especially to Noel de Dios, who was initially my PhD supervisor, and who remain one of the most important influences in my professional life as a researcher and teacher.

I am also grateful to Miriam Manchin, Joe Francois and Douglas Nelson, for their permission to use our joint papers for this book.

Finally, I would like to thank my family and friends who have almost, but fortunately, not totally, given up hope that I will ever finish this dissertation. To my parents, who have missed all my graduations, and sadly including my promotion (due to the cold and the distance), I dedicate

this book. One of the reasons I have never given up this PhD, despite all the odds, is the resolution to give them my doctorate as a gift.

A big thank you to Jacques, whose love and patience gave me the room I needed to pursue this work, even if it sometimes meant swallowing his own tremendously heavy work pressures, in order to relieve me from some family duties. He also very wisely did not get involved in my work, even if he shares my interest in the topics I have chosen. But he has also clearly contaminated me with his passion for economic integration, and I have obviously benefited from our hours of discussion, even though I sometimes took pleasure in not always agreeing with him. Mayumi and Yasmine have also been very loving, and understanding, learning to be independent maybe a bit faster than most of their friends. They have sweetly curbed in their extra demands, waiting patiently till Mama's book was finished. Finally, I would like to thank my many friends who have cheered me on, and who often believed more in me, than me myself. I am sure that they are happy that I have now one less reason (or excuse) to be so absent-minded.

Chapter 1

Introduction

In a political economy perspective, discrimination that leads to the diversion of trade towards partners is an enduring property of regional blocs. According to this view, it is the concept of trading in preferences within a closed region that makes regional integration schemes politically viable and attractive. Giving preferences to partner producers, for instance, enables the club to fulfil various political economy objectives: subsidise each other's exports (Johnson, 1965), hasten the pace of industrialisation, create more trade, or achieve other non-economic goals, without necessarily sacrificing domestic production. In general terms, therefore, political economy theory expects regional integration areas (RIAs) to be trade diverting. Conversely, once trade creation becomes prevalent, the political viability of the preferential agreement itself is threatened.

The empirical literature on the welfare effects of regional bloc formation has indeed produced some evidence of trade diversion.[1] However, the occurrence of trade-creating RIAs has clearly not been ruled out either, which then begs the question of how such results could be supported and sustained by the political market for protection. One line of reasoning is suggested by Richardson (1993), who argues that increased intra-bloc trade weakens the political strength of lobbies in relatively less competitive members, thus helping to lower the region-wide demand for protection. This contradicts the Grossman and Helpman (1995) analysis of free trade agreements, which states that agreements which lead to enhanced protection (that is, domestic industries being out-competed by regional partners) are not politically sustainable. Based on this view, the weakening of the political power of local industries as foreseen by Richardson, will not take place because domestic political lobbying will ensure that the regional agreement will never be signed in the first place.

The proliferation of FTA initiatives as well as the deepening of existing regional integration schemes have also triggered a re-thinking of the political dynamics of

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[1] Chapter 2 of this book provides a survey.

regionalism as it has developed in the last decade.   Baldwin (1993), for instance, suggests a 'domino' theory behind the enlargement of existing RIAs, particularly the EU, and the overall burgeoning of discriminatory agreements everywhere. The theory begins with an idiosyncratic 'push', such as the deepening or enlargement of an existing RIA, which sets the regionalism domino moving. This upsets the political equilibrium in a country considering membership,   largely through the increased political activity of exporters who are threatened by whatever reduced market access the expansion of the RIA might imply.   The cost of protection rises, thereby increasing the probability that the political equilibrium tilts in favour of participation in, or initiation of the regional agreement.

Baldwin's theory, however, is founded on the earlier cited Grossman-Helpman framework, where the political feasibility of an FTA rests on the ability of that arrangement to deliver enhanced protection for everyone concerned. On one hand, the lobbying behaviour of regional exporters is sensitive to the expectation of a 'balanced' distribution of market shares, and on the other hand, the assumption of status quo lobbying on the part of import-substituting producers depends on the expectation that the increase in regional supplies will not lead to any fall in the prevailing domestic prices. Intrinsically, this still means that any trade creation will arrest the domino momentum, and could also possibly cause governments to re-erect the domino blocs back into their original place.   Also, how does one explain that initial push to begin with?   If one wants to understand the dynamics behind the shift of policy, it is particularly important to unravel the critical forces of change.

Some other authors take on another track, altogether. It is assumed that the formation of a regional bloc, while possibly entailing increased political costs for everyone involved, also satisfy non-economic goals that justify the taking up of these costs. Schiff and Winters (1997) illustrate regional integration as diplomacy, while Fernandez and Portez (1998) explore the credibility-enhancement properties of RIA membership, enabling countries to lock-in necessary economic reforms. Whalley (1996) also provide an extensive survey of the various political-economic motives prompting RIA formation.

Behind these approaches, lie an implicit assumption of a less-than passive Government, whose preferences are not only dictated by the financial offers of the

highest policy bidders, but one which is guided by some form of vision, or a calculus of self-interest, independent from short-term protectionist demands. Industrialisation or growth motives, are typically some of the key motives driving the policy choice of government leaders. In fact, the popular debate surrounding regionalism in the last decades is filled with references to the need to amass scale economies, or sustain/trigger high rates of growth by attracting foreign direct investments.

Ethier (1998), in analysing the stylised facts of recent regional initiatives, argued that in gauging the economic or the political economy effects of RIAs, it might not be appropriate to take the Vinerian perspective of trade creation / diversion in the assessment of regionalism today. He points out that the decision of governments to enter a RIA may in fact be an endogenous response to emerging trade-investment-reform opportunities triggered by multilateralism in one hand, and changes in production technology on the other hand. A regional initiative, in the context set by Ethier, does not only affect producer's profit and government objective function by transforming intra-regional trading patterns, but even more importantly, by inducing changes in investment and upgrading decisions of producers within and outside the region. How this would in turn affect the reform or growth-oriented strategies of participating governments is another key factor determining the policy choice of whether or not to join a regional grouping.

The peculiarities of the ASEAN Free Trade Area (AFTA) underscore the importance of taking into account the different environments surrounding the rise of recent regionalism. Initial studies on the impact of AFTA all focused on the trade effects of the agreement, and reached the same conclusion that freeing regional trade will have minimal, if not trivial, effect on increasing intra-ASEAN exchange. The seemingly lack of an economic rationale for an AFTA led many observers to claim that the 1992 Agreement was primarily a political effort, and being such, any substantial progress in liberalisation among the ASEAN Member States would be difficult to expect. The succeeding delays in implementation, the lack of clear institutional procedures, the length and the perceived complication in the process of transition all fed the scepticism that AFTA will in fact be, 'another futile trade agreement'. It was also predicted that given the tenuous economic grounds for the agreement, "any instability or disequilibrium induced by extra-regional events, and factors to which all ASEAN countries are so

sensitive to, would be catastrophic to AFTA or other ASEAN schemes" (Mun Heng & Low, 1992, p. 11).

Contrary to most expectations, however, the AFTA regional scheme was twice accelerated, and the pledge to minimise the amount of excluded products has largely been met.   In 1997, when the financial crisis debilitated the entire region, the target date of AFTA was not compromised, as predicted, but was brought forward by another year, to 2003.   However, the Informal ASEAN Summit in November 2000, did issue a protocol allowing room for the delay of the required tariff cuts for the last remaining tranche of temporarily excluded products. Still, by 2005, there are no more temporary exclusions for ASEAN–6 [2] and the average tariffs within the region has fallen to 1.87% (down from an average of 12.76% in 1993).   The importance of intra-ASEAN trade did increase from a 19.86% share of total exports in 1991, to 25.80% in 1996, before the financial crisis caused a sharp slump in total and intra-ASEAN exports.   Although it is difficult to ascertain whether or not such a rise in regional trading would have occurred even without an AFTA, to claim that the agreement was a mere political instrument with hardly any economic value seems likewise inappropriate.

In fact, it is highly unlikely that the momentum to realise AFTA could have gathered strength (even during the height of the financial crisis) without an overriding economic impetus propelling economic integration. Since the start, the foreign direct investment motive has been cited in the officials and non-governmental circles as a principal driving force behind the formation of the AFTA, but it was only years later that observers and scholars have come to weigh in the viability of the regional drive based on its impact on FDI inflows (Athukorala & Menon, 1996). With the benefit of hindsight, it is now apparent how important it was for ASEAN in the 1990s to forge a collective response to the opening up of the Chinese market and the resulting dramatic increase in China's share of global FDI. While the more than 400% growth of foreign investments in ASEAN from 1985 – 1992 is in all accounts impressive, it pales beside the FDI performance of China. In 1990, total FDI in China was just over $4 billion. After just three years, this figure has risen to $27.5 billion and in 1996, to $40.8 billion (see Table 1.1).   Considering that economic growth and industrial modernisation in ASEAN,

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[2] Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand.

especially since the 1980s, have been anchored on its ability to attract foreign capital and technology, the impending loss of competitiveness to China as FDI hosts, must have been a powerful motive to shore up ASEAN economic cooperation.

The analytical question at this point, is how one can characterize the political equilibrium when regionalism is driven by scale economies and FDI motives, as in ASEAN. The answer is not immediate given that standard political economy literature remains firmly based on assumptions of constant returns to scale. This implies that welfare is neutral to any policy-induced market expansion, and consequently, so are preferences of political actors over trade policy. A sizeable literature on variable returns to scale do address the welfare effects of trade, but there seems to be no systematic effort to feed these analyses into mainstream endogenous protection theory.

Table 1.1 Foreign Direct Investment in ASEAN countries and China ($ billions)
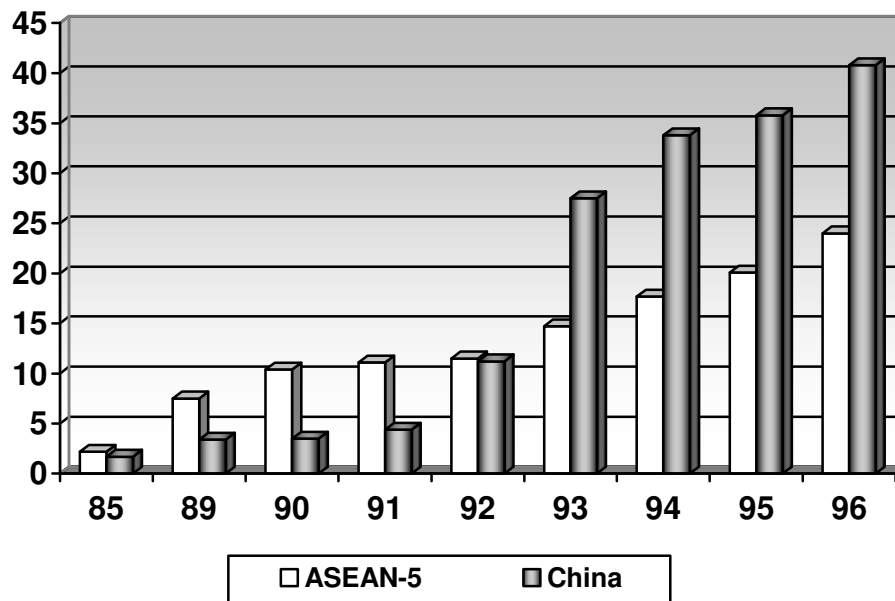
source: ADB Asian Development Outlook, various issues

One objective of this book is therefore to explore the theoretical implications of increasing returns to scale on the political determination of the optimal level of protection. This is done, first in chapter 2, where the literature covering endogenous protection, variable returns to scale, and regionalism, is surveyed, and in chapter 3 where

endogenous protection in the presence of increasing returns to scale is formalised. Given the inherent difficulties of capturing the implications of scale effects on the political market, the ambitions of this study can not be but modest. It is, after all, not for nothing that the analysis of endogenous protection has remained within the confines of a constant-returns-to-scale world for so long a time. Indeed, neutralising the effects of scale has kept basic models tractable, enabling analysts to focus on the essential consequences of trade policies on the welfare of various stake-holders, and the resulting trade of political goods in the policy market. The assumptions of constant-returns-to-scale, however, must inevitably be relaxed in order to begin to understand the current dynamics of regionalism, and of trade policy-making, in general, where scale effects assume much more than a marginal role.

The next collection of chapters take a more applied approach in the analysis of regionalism. They are essentially a selection of essays written to examine empirically the political economy determinants of EU trade policy, as in Chapter 4, the actual extent of regional integration in ASEAN, in Chapters 5 and 6, and the general equilibrium impact of the full implementation of an AFTA, in Chapter 7.

In Chapter 4, entitled 'deconstructing EU Trade Policy', the political underpinnings of EU import protection is examined. Most empirical work in endogenous protection is focused on the US , perhaps partly due to the numerous difficulties one can expect in directly observing the political economy dynamics in the EU, where overt lobbying and political contributions are illegal, and where the policy mechanisms have evolved in both ambition and complexity. We argue, however, that it is important to unravel not only the collective, but also the national preferences of Member Countries, because while the supply of regional protection may correspond to the sum of individual national demands, the common trade policy in the EU and the complexities surrounding it, conceal the interplay of private, national and aggregate regional interests.

Empirical tests of political economy models, in particular, that of the influence-driven approach of Grossman-Helpman, involve the use of lobbying indicators to serve as the weights attached by government to industry profits. In this Chapter, we instead employ a general equilibrium approach to estimate the direct and indirect marginal impact of protection at the sectoral level, and use these estimates to econometrically derive the revealed pattern of policy weights. These resulting weights, lend us some

insights into the relative protection of agriculture and manufacturing, for instance. We also find that the strength of downstream linkages matters for policy weights and the rates of protection, as does the national posture of industry.

The next series of chapters on the ASEAN Free Trade Area, begins with the analysis of preferential tariffs in chapter 5. Despite the region's success in implementing the tariff liberalisation commitments under the AFTA, questions remain regarding the relevance and credibility of the whole regional exercise. This is largely due to the prevalent view that the most basic of instruments offered by AFTA, namely the preferential tariffs, are hardly ever used in practice. It is true that in the last decade, MFN tariffs have rapidly fallen as well, thereby diminishing the relative importance of AFTA preferences. The extent in which preferences have been eroded, or the manner in which preferences has affected actual market access in ASEAN, however, is not known, because of the enormous data problems confronted by ASEAN analysts. We therefore partly address some of these data problems and we employ a gravity model to arrive at alternative ways of gauging the importance of preferences in the absence of data on the actual utilisation of AFTA preferential tariffs. We also aim to identify the range of products where AFTA might exert some trade-stimulating effect on intra-ASEAN trade.

The low utilisation of ASEAN preferences hint to presence of non-tariff barriers and particularly to the high costs of compliance to the rules of origin. Chapter 6 provides an analysis of these rules, especially those that accompany the web of East Asian FTAs that has emerged in the last 3-4 years. While the coverage of regional integration may be substantial, one of the real tests of the liberalisation intent of members can be gleaned from the design of the agreements' rules of origin. Understanding the actual depth and scope of regionalisation, therefore should entail some appreciation of the restrictive or liberalising effects of these rules.

Just what is the worth of preferences in terms of their welfare effects? This is the question posed in chapter 7, where the benefits of the full utilisation of AFTA preferences are estimated using a CGE approach. Since full utilisation implies the successful implementation of trade facilitation measures, and removal of non-tariff barriers (including those linked to rules of origin), the estimation of AFTA effects also provides an indication of the economic returns corresponding to these policy efforts. AFTA simulations performed by past CGE studies assume that ASEAN liberalisation

under the AFTA leads to the reduction of MFN tariffs all the way to zero.   In this study, instead, the actual AFTA regime is approximated by the use of trade-weighted rates of the Common Effective Preferential Tariffs or the CEPT.   Scenarios of global liberalisation, open regionalism (AFTA rates extended to non-ASEAN countries), full AFTA (complete elimination of intra-regional tariffs), and AFTA (reduction of MFN tariffs to CEPT rates), are compared.

Finally, chapter 8 summarizes the key ideas raised in this study and concludes.

Chapter 2

Endogenous Protection, Agglomeration and Regionalism:
A Literature Survey

2.1   Introduction

Trade policy as practiced, is often considered as a critical component in an overall development and industrialization strategy, especially in the developing world. Policy is seen as a way of affecting the size of markets, thereby stimulating scale economies which eventually make growth sustainable. Such thinking, in fact, is frequently behind the adoption of either a protectionist or a free trade regime. Familiar infant industry arguments accompany the former, while the latter is argued, among others, to be an effective FDI strategy that enables local producers to access global markets. The apparent attraction of many governments towards the formation of regional integration agreements (RIAs) recently, is likewise brought on by the need to pool and expand markets. Again, whatever the degree of regional openness opted for, building up economies of scale is one of the principal motives.

However, despite the obvious association between growth objectives and the choice of trade policy regimes, such linkages are not explicitly or adequately addressed in political economy theory. Since all the major approaches are based on the assumption of returns to scale being constant, private profits or overall growth are neutral to any change in size, and therefore do not enter as variables in the calculation of political payoffs. Moreover, the behaviour of political actors is, in general, implicitly assumed to be characterized by myopia, so that the implication of policies on long-term growth, and as a consequence, on long-run profits and electoral success are often ignored.

One reason for this neglect is perhaps the fact that endogenous protection models are largely based on developed-country setting where politicians have relatively less pronounced or explicit industrialization motives, lobbying is a more dominant feature of the policymaking process, and where the maturity of democratic institutions (could) effectively curtail the policy discretion of the government elite. The determination and the shift of policies produced in the political market is thus largely a demand phenomenon. Once the assumption of the self-interested politician is made, the focal point of the analysis shifts to the lobbying behaviour, and what drives it. There is increasing attention given to the role of institutions, and it is not entirely excluded that politicians would actually perform their duty and have some regard for public interest, but behaviour and outcomes remain driven by the desire to maximize the pay-offs of the politically active.

This present survey will lay several key pieces of endogenous protection literature along side those dedicated to the analysis of increasing returns to scale (IRS), with the aim of underlining some of the challenges and opportunities inherent in efforts to link these fields. It is organized as follows. The following section provides a brief overview of the main approaches in endogenous protection as well as empirical findings. Section three tackles the IRS literature, with focus on the welfare effects of trade policies in the presence of variable returns to scale. Section four is centered on the subject of regionalism. This, like the literature on endogenous protection and IRS, has developed to be a huge intellectual ground to cover, so that focus will be placed on 'new regionalism' (Ethier, 1998) and FDI-driven RIAs. Section five summarizes and draws some key lessons.

2.2 Survey of Political Economy Models

One of the main premises of political economy is that policies are best understood by scrutinizing the workings of the political market rather than relying on pure economic logic. A government that opts for trade protection, for instance, is not mainly motivated by the intention of augmenting the economic well-being of the general populace. The aim instead, is to favor the interests of the median voter, or raise the incomes of sectors that command great political influence through their role in securing the electoral future of political parties and incumbent leaders. Unfortunately for the world's voters, public

policies are often 'produced' based on the same private valuation of costs and benefits that drive the demand and supply of goods, rather than on the calculation of net societal gains. Understanding the nature of this policy market therefore requires insight on the preferences of suppliers and demandeurs of these policies, as well as the strategic interaction of political players.

Starting from the **demand side**, preferences over trade policy are inevitably shaped by the income effects of alternative trading regimes. Nelson (1988) points out that since demand and supply functions are taken as given, the ultimate determinant of income/profit effects is the relative mobility of production factors across various sectors. Taking the long-run assumption of perfect factor mobility, for instance, tariffs are expected to raise the income of voters who own the factors intensively used in the production of the protected good. Capital and labor owners are therefore anticipated to assume opposing positions in the tariff debate regardless of the type of industries that employ their services. In the short-run, however, factor mobility is regarded as highly constricted so that the income prospects of factors are tied to the fortunes of their employers. Voters then would tend to coalesce along industry lines, this time regardless of factor ownership.

Ultimately, however, the political influence of private agents depends on their capacity to act and express their individual preferences. If political action or participation is costless, as in the basic referendum model of Mayer (1984), then the optimal tariff is decided by the median-voter's preferences, which in turn is determined by his/her factor ownership relative to the country's overall factor endowments.[3] For instance, if labour holds the critical vote, as one would expect in a labour-rich economy, then the chosen trade policy is the subsidy of exports, being an intensive user of the country's most abundant resource.

In a one-person, one-vote setting, the power of numbers is only too obvious. However, alternative scenarios exist where individuals, largely by pooling their resources, could influence the weights attached to their votes, thereby making participation or the exercise of political influence, costly. How to jointly act, becomes the central question, together with how to solve that inevitable free-riding problem that besieges most

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[3] Key assumption is that preferences are single-peaked: voters differ only in their factor ownership.

collective ventures. The expenditures of rent-seeking individuals therefore not only consist of direct lobbying costs but cover the costs of organization as well.

As for the **supply** of the protection, government preferences are determinant. In its simplest characterization, government choice is seen as fully reflecting the electorate's will as expressed by the median-vote. In most models, however, government behavior is largely described as being motivated by self-interest, which is best served by (re-) election into power or continued political support, as in the incumbent's case. If the acquisition of power is costless and entry into the political contest is free, as in a world of perfect information and perfect electoral competition, then election victory is fully determined by aggregate welfare, making government's self-interest completely compatible with national interest. However, once politicians face the need to inform and convince the electorate in order to win votes, and/or given the incentive to raise their 'profits' through influence peddling, then campaign resources becomes a key element in shaping government behavior. This then opens up a channel wherein lobby groups, with their offers of financial support, can directly sway electoral results, and consequently compel the inclusion of their member's private well-being into the preference function of elected officials. The voters' saving grace is that in a working democracy, regular elections are bound to sanction the accommodation of the interests of individual lobbies that comes at the expense of aggregate welfare, as well as discipline visible rent-seeking behaviour on the part of incumbents. The political cost of protection in terms of lost votes, thus still necessarily entails the consideration of public interests in the government's welfare maximization.

Characterizing the **institutional setting** is essential as well since it delineates the political constraints and incentives, and defines the set of strategies available to players. In current theoretical literature, however, assumptions made about institutions are largely based on advanced industrial countries, predominantly the US (Grindle, 1999). Grindle observes that political action is typically depicted as being initiated by societal groups such as parties or lobbies, or by public opinion, which is in contrast to the state-centric politics as practiced in most developing countries. Policy-making is also assumed to take place in transparent and stable political settings, again much different from those observed in relatively young and unstable democracies.

The importance of **leadership**, though hardly disputed, is not mirrored in standard endogenous protection theory. This may be partly due to the 'society-centric' tradition of the literature as mentioned above. The difficulties involved in formulating a general characterization of what may be idiosyncratic in nature, is another analytical hurdle. Not only is it difficult to isolate the circumstances that produce leadership, but establishing whether a policy was brought about by an act of vision, or by masked self-interest, is a complex challenge as well. Moreover, it is tempting to assume that given the periodic electoral contest that leads to the future being discounted heavily, politicians are not prone to cultivate long-term vision, anyway. This under-representation of leadership helps reinforce a rather cynical view of governance, that is, the effects of policies on public welfare enter as a cost component in the political calculus, while the pursuit of the welfare of the powerful few delivers direct political benefits and thus motivates the behavior of elected leaders.

In the various **approaches to endogenous protection,** such is the underlying assumption of government behavior. Magee, Brock and Young (1989), for instance, depict the political parties' probability of being elected rising with the financial contribution offered by lobbies to the electoral campaign of favoured officials, but fall with the amount of overall distortions the public expects from its policy interventions. Trade policy, in this **electoral competition approach**, is determined by the strategic interaction of pressure groups in their choice of contribution spending and the electoral competition between parties. It is a two-stage game wherein parties first trigger the process by picking the policies which maximize the probability of their being elected, followed by the response of pressure groups in the form of financial support for the campaign of the party whose electoral platform carry the desired policy of the lobbies. The outcome of the Nash game played by the two political lobbies produces the equilibrium tariff rates.

In the **political support function approach,** largely attributed to Hillman (1989), government's preferences are explicitly described while those of sectoral lobbies are simply assumed to be folded into the government welfare function. It offers no detailed account of lobbying effort but policy makers are assumed to be weighing the gains of these particular industries against the efficiency losses borne by society as a result of protection. Tariffs raise industry profits and consequently draw political support from

13

producers, but at the same time, drive down the consumers' real income thereby eliciting a negative vote. Equilibrium tariffs therefore result from the government's (political support) maximization problem, where the willingness of government to marginally trade units of producers' profits against losses in consumer welfare plays a critical role.

The role of these policy weights attached by government to producer and consumer welfare is given further emphasis in Grossman and Helpman's (1994) **political contributions approach**. The tariff-determination process is sketched as a common agency problem where lobbies act as principals offering financial contributions meant to directly influence the policy choice of the incumbent government. Contrary to the game described by Magee, Brock and Young, lobbies move first by presenting the incumbent with a donation contract of contribution schedules that state the level of donation for each possible policy stance taken. The agent, in turn, takes these contributions as given and proceeds to optimize its welfare that is linear in total campaign donations and aggregate welfare. An important assumption is that of Berheim and Whinston (1986) "truthful Nash Equilibria".[4] This essentially implies that the contributions reflect the true worth of the policy good to the lobbies, making it possible to aggregate the preferences of participating principals. Given quasi-linear preferences, the government is thus expected to maximize the weighted sum of overall welfare and the welfare of the lobbies involved.

While politicians can ill-afford to ignore the societal cost of protection, it seems to be implicitly assumed that producer interests relatively weigh more. The whole subject of policy weights is, in fact, rather ad-hoc and illusive, given the numerous exogenous factors that could exert some influence, such as the number of impressionable voters (or extent of rational ignorance), design of institutions, or even the 'type' of political leaders. Reference is often made of Olson's (1965) collective action theory, where power is not in numbers, but lies in the presence of strong and intense motivation to act. Relative to consumers and to exporters, who are greater in number, import-competing producers are better able to overcome the free-riding dilemma, and face greater incentives to mount a collective action, since their policy stakes are more easily identifiable.

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[4] See Grossman & Helpman, 2002, chapter 1 for a more complete treatment of the common agency problem and Bernheim and Whinston's model that produces an efficient 'truthful' equilibrium in a non-cooperative game setting.

Table 2.1 **Endogenous Protection Models**

Analytical Approach	Tariff equation	determinants of protection
median-voter	$t_i^{mv} = -\dfrac{\left(\gamma_i^{mv} - n^{-1}\right)X_i}{\left(\partial m_i / \partial t_i\right)}$ - t (tariffs); m (imports); X (output of good i); $(\gamma^m - n^{-1})$ (extra ownership of factor used intensively in X)	- factor ownership of median voter relative to country's overall endowments; - slope of import demand function - initial trade orientation (ex. more outward-oriented economy means median voter relatively well endowed in the factor used intensively in the exportable good;
tariff-formation	$t = t(L_1^1, L_2^1)$ • L^1 (amount of labor expended in lobbying)	Results depend on the shape of tariff function, which is not elaborated upon by theory, making predictions difficult (Helpman, 1995)
political-support function	$t_i^{ps} = -\dfrac{X_i}{a\left(\partial m_i / \partial t_i\right)}$ • a (marginal rate of substitution between aggregate welfare and lobby's welfare)	- output size (+) - import demand elasticity (-) - exogenous weights reflecting politicians preferences over aggregate and industry welfare (+)
campaign-cont.	$q\,(\$^K, \$^L, p_1 - p_1{}^*, p_2 - p_2{}^*)$ $\quad\;(+)\;\;(+)\quad(-)\qquad(-)$ • q (probability of electoral victory); $\$^K$, $\$^L$ (campaign contributions of pro-capital & pro-labor lobbies, resp.); • Nash equil. of game played by lobbies determine equil. $\$$ levels; political parties choose tariff stance that maximizes their probability of winning, which is a function of amount of $\$$ received & amount of distortions resulting from protection.	- comparative disadvantage of sectors: the bigger is the wedge between domestic and foreign prices, the greater is the rents accruing to lobbies due to protection, and so is the equilibrium level of contributions. However, the price distortions are also higher, which exert an opposing effect on tariffs.
political-cont.	$t_i^{GH} = -\dfrac{\left(1 - \phi_i\right)}{\left(a + \phi_i\right)}\dfrac{X_i}{\left(\partial m_i / \partial t_i\right)}$ • ϕ_i fraction of population belonging to lobby i.	- output size (+) - import demand elasticity (-) - industry concentration (+) - exogenous weights reflecting politicians preferences over aggregate and industry welfare (+)
social-concerns	tariffs are determined by government's national and international goals, as well as by its concern for welfare of vulnerable social and economic groups. Government with conservative social welfare function will also prevent significant deviations from status quo.	- exogenous shocks - unemployment rates - import surges - sector's share of low-wage, low-skilled workers - overall adjustment costs of industry
adding-machine	Voting strength of sector determines tariffs.	- Employment size of industry - geographical dispersion of firms

Lobbying is thus the principal driving force in the political market as in the **tariff-formation function approach**, where tariffs are completely determined by the amount of lobbying resources employed by pressure groups. Findlay and Wellisz (1983), Brock and Magee (1978), and Feenstra and Bhagwati (1982) analyze the entire tariff-formation process as a game between private groups with opposing interests and actively lobbying for Government assistance. The eventual tariff is a result of a Nash equilibrium in the two industries' lobbying strategies.

Regardless of government's relative valuation of industry and aggregate welfare, it remains so that any increase in the deadweight loss due to protection raises the **price of lobbying** itself, since producers must 'compensate' government for its political cost. However, given less than perfect information, or assuming rational ignorance on the part of the general electorate, the public 'perception' of societal welfare loss, may be subject to manipulation, so that lobbying resources can sometimes be expected to be used in creating, or swinging public opinion in favor of protection. It helps that individuals are said to place a greater welfare weight on the loss of a given amount of income than on an income gain of the same amount (Baldwin, 1989). It is thus easier to build up public sympathy and support for declining or ailing firms, and their need for continued or even greater protection. The greater is the propensity of the public to tolerate such protection, the lower is its political cost, and consequently, the lower is the necessary financial outlays for lobbying.

In cases wherein conservatism characterizes the government's social welfare function, protection may even come free of any lobbying cost on the part of producers. Corden (1974) suggests that it is possible to interpret the conduct of trade policy as an attempt to avoid "any significant absolute reductions in real incomes of any significant section of the community." Sectors subject to high adjustment costs due to competition, or those that employ a large share of vulnerable income earners, could therefore be expected to collect the highest lobbying surplus. The same is true whenever government is said to place a high premium on equity as in Constantopoulos (1974) and Fieleke (1976). Protection will likewise be supplied to sectors with a large proportion of low income (and/or unskilled) earners, without any collective action on the part of

beneficiaries. Trade policy is also totally supply-driven whenever governments display nationalistic preferences, or attaches public good value to the creation of national 'champions'.

Appendix A provides a condensed overview of the formal treatment of the approaches just discussed. Table 2.1 presents the derived equilibrium tariffs, and the determinants of protection implied by these tariff expressions, while Table 2.2 summarizes some of the key empirical results.

Empirics of endogenous protection

Based on previous discussions, the political power of a sector is largely determined by its voting strength, the effectiveness of its collective action, and the extent to which its interest coincides with that of a socially-concerned government. Empirical investigations would therefore typically begin by identifying certain industrial characteristics that could indicate the presence of these influence-enhancing properties. Voting strength, for instance, is proxied by size of labor employment, while most country studies justify the use of industry size (Baldwin, 1989). Moreover, Caves (1976) suggests that geographically dispersed sectors are also likely to enlist the support of more regionally elected leaders, and thus possess greater voting power via their congressional representatives.

In terms of facilitating collective action, however, numbers do not necessarily imply strength as it only induces free-riding. On the other hand, industry or market concentration does matter not only because free-riders are easier to detect in a smaller pool of players, but also because the income effects of policies are more intensely felt by producers who stand to lose the most. Bigness, may also be a virtue since large industrial output would obviously provide substantial financial resources to fund lobbying activities. However, there is a political risk of being perceived by the public as peddlers of influence to the few and mighty, making politicians averse to enacting policies that are clearly partial to lobby interests. This is one of the reasoning used to explain the choice of tariffs and not subsidies and quotas, for instance, which are more firm-industry-specific. Firms may also decide to direct their lobbying towards moulding public opinion to their advantage, also for this reason. Still, the rather ambiguous relationship between industrial concentration and protection found in empirical results,

17

may nonetheless be partly due to the political fall-out of being too closely identified with rent-seeking lobbies.

Counter-lobbying is yet another element that could potentially dilute the effectiveness of collective action. Cadot, de Melo & Olarreaga (2004) point out that it is not the size of total output per se that may be influential, but the amount of sales directed to final users. Lobbying is more costly for producers of intermediates as they must outbid the offers of downstream users lobbying to reduce the tariffs of their inputs. Final good manufacturers, on the contrary, are not expected to face resistance from consumers who are assumed to be hindered by free-riding obstacles.

Lobbying is so central to standard models based on self-interested government that establishing a good indicator of its presence and extent is deemed necessary for a satisfactory empirical test of the model. Pioneering work on this field has been done by Goldberg and Maggi (1999), and Gawande and Bandhopadhyay (2000), who study the cross-sectoral variations of NTB coverage ratio in the US. They rely on contributions data of the Political Action Committees (PACs) in ascertaining which sectors could be taken as being represented by lobbies. They find that when the distinction between organized and non-organized industries is accounted for, the variation of protection across sectors conform to the theoretical expectations of the Grossman-Helpman model, that is, the level of protection of politically active industries increases with the output / import ratio, but falls with any rise in import demand elasticities.

However, Gawande and Krishna (2002) in their extensive survey, draw attention to some puzzling results of these structural estimations. The derived weights attached by government to overall welfare, a, for instance, is surprisingly high: between 100 to 3000. The lack of sufficient theoretical underpinnings of these weights, preclude the establishment of any priors, thereby making it difficult to draw anything definitive from these findings. Cadot, Gretcher and de Melo (2003) offered an alternative test of the Grossman-Helpman model and generated a much lower weight of 5.1. They themselves admit, however, that even at this rate, lobbying is still prohibitive, as this implies a political contribution of $5 for each dollar of deadweight loss. It is clear that the problem lies in the crafting of the lobby indicators. Actual monetary contributions are just one of the many forms of lobbying, and may not even be the principal or preferred means employed by producer lobbies in many countries.

Table 2.2 Summary of Empirical findings

Determinants of protection	observed relationships	Authors
employment / industry size	+	Finger, Hall, & Nelson (1982) Lee & Swagel (1997) Cadot, de Melo & Olarreaga (2004) Mansfield & Busch (1993) (case of NTBs) {Goldberg & Maggi (1999) ;Gawande & Bandhopadhyay (2000); McCalman (2004); Mitra, Thomakos & Ulubasoglu (2000)} - (but only in case of organized sectors) Hong (2005); Karacaovali (2005) Trefler (1993) – free-rider problem
	-	Esfahani & Leaphart (2000)
unemployment rates	+	Mansfield & Busch (1993)
unempl. benefits	+	Matschke (2004)
import penetration	+	Anderson (1980); Marvel & Ray (1983); Baldwin (1985)
	-	Lee & Swagel (1997); Afontsev (2002); Hong (2005)
import growth	+	Trefler (1993); Cheh (1974)
import demand elast.	-	Goldberg & Maggi (1999)
industrial concentration	+	Pincus (1975); Saunders (1980); Trefler (1993) Ferreira & Facchini (2004)
	-	Caves (1976); Finger, Hall, & Nelson (1982); Anderson & Baldwin (1987)
geog. concentration of producers	+	Pincus (1975); Caves (1976); Godek (1985), except for the case of NTBs (Ray, 1981)
geog. concentration of consumers	-	Pincus (1975); Trefler (1993)
proportion of low-skilled, vulnerable (i.e. elderly) workers	+	Cheh (1974); Anderson & Baldwin (1987); Esfahani & Leaphart (2000)
output/profit growth	-	Marvel & Ray (1983); Ray (1991)
type of goods (cons. or intermediates)	+ (cons) - (interm)	Baack & Ray 1983; Marvel & Ray (1983); Ray (1991); Cadot, Gretcher, de Melo (2003)
capital-labor ratio (country-wide)	-	Magee, et al (1989)
capital-intensity	-	EL 2000; Anderson & Baldwin (1987); Ray (1981) Beaulieu & Magee (2004)
number of parliamentary constituencies	+	Mansfield & Busch (1993)
economies of scale productivity	+ +	Afontsev (2002) Karacaovali (2005)
income growth	-	Ray (1987); O'Halloran (1994); Bohara & Kaempfer (1991)

As Table 2.2 illustrates, a considerable bulk of empirical work is geared to test how much of protection could be attributed to the government's social welfare goals. Protection of industries with a large share of low-skilled, low-income and/or elderly workers, for instance, indicate government preference for equity and the alleviation of adjustment costs due to foreign competition. Harm caused by import surges, or other external shocks leading to recession or high unemployment, is also observed to induce policy intervention, notwithstanding the absence of lobbying on the part of producers.

Some empirical results, however, seem to hint at the predominance of politicians' industrialisation motives. Protection was observed to be increasing with capital intensity, as found by Finger, Hall and Nelson (1982) , for example. Moreover, country studies on China (Hong, 2005), Russia (Afontsev, 2002) and Columbia (Karacaovali, 2005), find that protection is higher in large industries. Economies of scale also display a significant effect on Russian and Columbian tariff levels, while more productive sectors are also found to enjoy higher tariffs in Columbia. Lee and Swagel (1997) also observed that controlling for the simultaneity between wages and protection, industries with higher value added per worker are more likely to be protected.

The endogeneity of protection with respect to productivity noticed by Karacaovali is a particularly interesting result given the implicit assumption that the usual beneficiaries of policy intervention are inefficient import-competing firms. On one hand, greater productivity implies lesser vulnerability to foreign competition, and thus relatively lower returns under a protectionist regime. Still, one can argue that large productive firms could more easily translate their economic strength into political influence. In theory, only a marginal role is conceded to output size and its growth, considering it determinant only in the presence of lobbying activity in the sector. Moreover, the assumption of constant returns to scale in theory implies that while productivity might influence the granting of protection, protection itself has no effect on productivity via the expansion of industrial output.

The rhetoric of actual policy debates, is filled with the contrary, however. The need to generate scale economies as an instrument for catch-up growth, a means to maintain a country's competitive position, or attract foreign direct investments, for instance, have been dominating the menu of arguments used by government and industry alike. Even from a political economy viewpoint, that is, assuming that politicians and producers are

purely motivated by self-interest, the presence of scale economies could have significant implications on the political costs and benefits of protection, and could potentially shift preferences over trade policy. Externalities that are domestic in origin, for instance, lowers the deadweight losses of protection (i.e. political cost of supplying protection), while increasing the returns to lobbying, not only through higher sales but also through lower production costs. Internationally generated scale economies, on the other hand, implies that profits are a function of a sector's integration in the global economy. Moreover, improvements in productivity of firms world-wide, and the manner in which agglomeration forces further strengthens the competitive position of the front-runners, ensure that ever increasing tariffs would be necessary to maintain the profit margins of local producers. As a consequence, lobbying outlays must increase, and so will the political cost of protection in the form of deadweight losses. Taking scale economies into account, thus potentially alters the current valuation of the price and the returns to protection, and fundamentally changes the strategies of public and private political actors.

2.3   Variable returns to scale and the welfare effects of trade policy

The impact of scale economies on the political market while being far from trivial is nonetheless not given ample attention in endogenous protection literature. This may have been rational given the 'unwanted' consequences of introducing variable returns: multiple equilibria, indeterminacy, and path dependency. Slight modification in assumptions also easily leads to divergent analytical paths. For instance, focusing on final goods, as was done by Krugman (1981), or on producer or intermediate goods, as was the choice of Ethier (1979, 1982), bring to the fore different sets of welfare and policy issues. In the case of final goods, different assumptions of market structure, monopolistic or oligopolistic competition, could even produce contrasting results, while for intermediate goods, welfare effects starkly differ depending on whether the assumed source of externalities is the national or global market, or whether the good characterized by increasing returns to scale (IRS) is traded or not.

Unleashing the 'messy' implications of IRS, however, is behind much of the 'newness' introduced in various fields, such as economic growth, industrial organization,

technology, development and economic geography. Still, in international trade, the subject of scale economies is sometimes met with ambivalence or even discomfort because it exposes a set of circumstances where free trade could be potentially harmful, and thereby provides ideological ammunition to protectionist and neo-mercantilists interests. It is argued that even if it would be possible to do better than free trade, the information needed by government to get intervention right is just too gargantuan to be accessible. The dilemma faced by policymakers, however, is that a laissez-faire approach that leads to poverty/low-growth traps, or deindustrialisation, may be a politically unacceptable risk.

For small and developing countries, in fact, theory predicts a loss of welfare under free trade as this would result to the specialisation in the good produced under decreasing returns to scale (DRS). It is well known that in the presence of increasing returns to scale, the marginal costs faced by private producers exceed that borne by society, so that in equilibrium, the IRS good is underproduced. Thus, under the Kemp and Negishi (1970) criterion, a country can unambiguously gain only when trade results to incomplete specialisation and to the expansion of the production of the IRS good. Panagariya (1981) instead, illustrates in a two-country model with symmetric tastes and technology, that non-intervention will lead a small open economy to specialize completely in the DRS good. Welfare maximization in this case, would therefore require a permanent tax cum subsidy scheme that would promote the expansion of the IRS good and the contraction of the DRS good.

Depending on the initial size or comparative advantage, scale economies could therefore 'lock' a country into a 'good' or 'bad' specialisation. As demonstrated by Panagariya (1981) and Bhagwati, Panagariya and Srinivasan (1998), in a setting where nonconvexities result to multiple equilibria, stability arguments lead to the expectation of a high-output/wage and a low-output/wage equilibria. Figure 2.1 is a graphical representation of Panagariya's (1981) IRS model in a small-country context, replicated here from Bhagwati, Panagariya and Srinivasan. Sector *2* is assumed to be subject to IRS, while sector *1* is produced under constant returns to scale. As in Herberg and Kemp (1969), the production possibilities frontier (PPF) is shown to be strictly concave and strictly convex to the origin as output of sector 1, Q_1, and output of the IRS good, Q_2, respectively approach zero. The price line is also shown to cut the PPF from below

depicting the inequality of the price and the social marginal cost of producing the IRS good.

In the example shown in Figure 2.1, three equilibria are identified for a given price ratio, two corresponding to diversified production, E_2 and E_1, and the third, E_3, to complete specialisation. Figure 2.2, on the other hand, mirrors these equilibria in the labor market where IRS in sector *2* production results to an upward sloping labor demand curve. Using the Marshallian tatonnement process to establish the supply response of labor to changes in wages, it is found that E_1 is an unstable equilibrium while the rest is stable.[5] The question at this point is which of these equilibria will eventually be selected. In the context of a static economy, initial conditions largely determines whether a country ends up in a high or a zero manufacturing output equilibrium. If the size of manufacturing employment of a country is, for instance, such that it finds itself initially to the right of E_1 in Figure 2.2, then the adjustment process will bring that economy to E_3. Labor employment slightly above E_1, on the contrary, leads to a high-output position of E_2. This illustrates the risk a developing country may face in being trapped in a state of preindustrialisation, as the small manufacturing sector vanishes with complete specialisation in agriculture.

Figure 2.1

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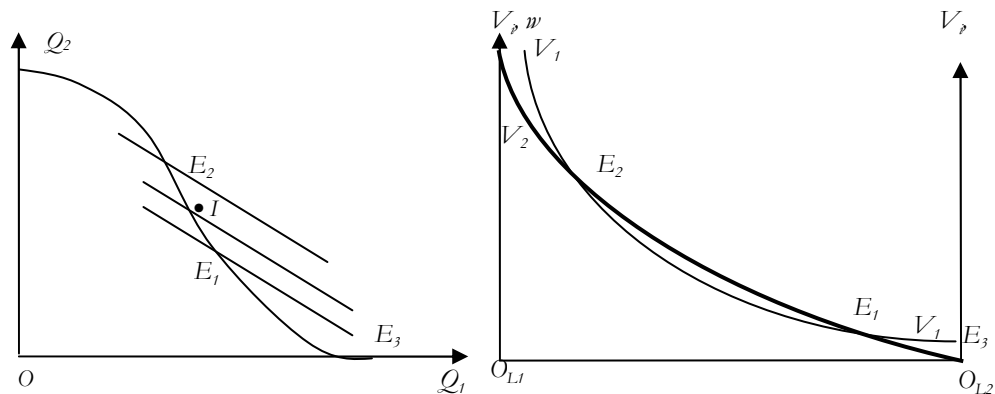
[5] Since labor is assumed to move towards the sector that offers the higher wage, any disturbance to the left or right of E_1 will send the equilibrium away from E_1, making it unstable.

Moving to a high-wage industrialized equilibrium is obviously the much preferred state, and indeed agents will be willing to shoulder the adjustment costs implied by such a move, given the assurance or confidence that such a state could actually be attained. This is the point raised by Krugman (1991) in his work on the role of expectations in equilibrium selection. Thus, whatever the size of initial manufacturing employment, it is possible for an economy to industrialize as long as expectations for a take-off is adequately coordinated.

Matsuyama (1991) using global dynamics analysis further explores the circumstances where history or expectations are determinant, and considers the role of government policy in affecting the set of equilibria under various assumptions of employment size, strength of scale economies, and the rate of time preferences. Policy intervention is judged as effective if it is able to generate a 'good' equilibrium or eradicate a 'bad' one. With weak scale effects, and low initial manufacturing employment, an industrial take-off is highly unlikely under laissez-faire. But even if the employment is high to begin with, deindustrialization remains a possibility due to self-fulfilling pessimism. In both instances, a subsidy or a tariff is required to escape the poverty trap, or prevent the return to zero-output stationary state. However, if scale economies are sufficiently strong initially, then the role of expectations becomes decisive, and government is left with a relatively less intrusive task of coordination or infusing optimism in the private sector.

All these assumes, however, that scale economies are nationally generated, that is, the economy-wide productivity gains stem from the greater specialisation implied by a larger domestic production of manufactures.[6] The novelty introduced by Ethier in his 1979 and 1982 seminal articles is that free trade in producer goods, effectively expands the size of the market where specialisation could be further encouraged, resulting to the interplay of internal and external economies that increases productivity world-wide and brings down costs.

The assumption of international increasing returns to scale alters the nature of analysis in two fundamental ways. First, the problems of indeterminacy and multiple

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[6] The typical approach in literature is to adopt the so-called Marshallian externalities, that is, scale economies are assumed to be external to the firm but internal to the industry as a whole. This enables one to reconcile the presence of increasing returns to scale with perfect competition.

equilibria is suppressed, since equilibrium adjustments entail changes in the number of production units or product variety, and not in the size of production of individual firms.

Second, much of the welfare implications of trade policies, particularly for small countries are reversed when it is the size of the international market that matters instead of national output. Francois (1992) illustrates how the merit of commercial policies is significantly reduced in the context of international increasing returns to scale. The benefits of subsidies aimed to boost economies in a small country, for instance, is likely to spill-over to producers of other countries, who will see their costs fall as soon as subsidies lead to an increase in the size of global output. Similarly, any tariffs that result to a fall in the number of intermediates varieties available for international producers will eventually hurt local suppliers due to lower scale economies and hence, higher production costs. For a large country, the only difference is the presence of terms of trade effects, which on one hand, adds to the adverse welfare effects of externalities stemming from subsidies, but at the same time provides some gains due to the application of optimal tariffs. The latter is bound to invite retaliation, however, so that the inevitable conclusion still points to the policy superiority of free trade.

This policy assessment is once again altered if scale economies is assumed to be generated not from the production of intermediates but from final goods instead. As Flam and Helpman (1986) tried to illustrate, under the setting of monopolistic competition a small tariff may be welfare improving, even for a small country. This is because despite the economy's size, individual firms producing differentiated goods exercises monopoly power, that is, they face a downward sloping demand function. A small tariff, by shifting demand from foreign to domestic varieties, therefore has the effect of raising the output price, leading to more R & D activities, more product varieties and eventually to higher output in the aggregate.[7] Consumers, assumed to have love for variety, also experience some welfare improvement from the availability of more varieties, whereas the economy as a whole gains because of the so-called pro-competitive effect of trade policy. This refers to the rise in the individual firm output of the under-produced good to socially optimal levels. Flam and Helpman show, however, that even

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[7] Free entry exerts a countervailing effect on domestic demand however, so that the end outcome depends on the relative strength of these opposing pressures.

without this latter effect, the terms-of-trade effects together with the consumer gains from increased varieties are enough to outweigh any adverse welfare effects that a fall in firm output may generate.

In endogenous protection literature, there is hardly any accommodation of variable returns to scale, except for a recent article by Chang (2005) which imbeds the type of results discussed above into the protection-for-sale model of Grossman and Helpman. The point of departure is the optimality of a small tariff, so that lobbying is aimed at obtaining tariff levels still higher than this optimal rate. This would then imply that the equilibrium tariffs reached under assumption of increasing returns and monopolistic competition is higher than those attained in a constant-returns-to-scale (CRS) world, and that tariffs for unorganized sectors will never fall below zero, unlike the negative protection rates hypothesized in the standard case. This is because under monopolistic competition, lobbies' care about the tariffs faced by other sectors only as consumers who gain from the lowest possible price for their imports. Secondly, it is assumed that export taxes are welfare improving from a revenue perspective, so that lobbying by organized export groups would not necessarily lead to export subsidies, but to an export tax rate lower than those faced by unorganized firms. Finally, for sectors with low import penetration (hence, large domestic output), protection is expected to be high not only for organized firms but also for those unrepresented by lobbies. The standard Grossman and Helpman reasoning is behind this result for organized firms (i.e. larger size implies bigger stakes in terms of profits), while for sectors without lobbies, tariffs are positive to begin with, in contrast to the CRS result of negative protection.

Chang's work is motivated by the need to explain protection, given that most of today's trade comes in the form of trade of differentiated products, or intra-industry trade. The first step taken is therefore to incorporate the Krugman-Dixit-Stiglitz monopolistic competition model in a standard endogenous protection analytical approach. As stressed by Ethier (1982), Markusen (1989) and Francois (1992), however, it is trade in intermediates rather than final products that characterize much of two-way trade. Moreover, in sectors where intra-industry trade is truly dominant, one would expect scale economies to be international in scope, thus making free trade, and not a small tariff, the optimal policy choice. If ever government intervention emerges as a first-best option, then it can only be because of the need to move to a global optimum,

26

or to a high-output, high-wage equilibrium. That would then assume that increasing returns to scale originates from the increased production of differentiated manufacturing products due to a bigger domestic market.

Unfortunately, there is no work known to the author at the moment of writing, where endogenous protection is modelled in the presence of increasing returns to scale in intermediate goods production. Baldwin et. al (2003) and Baldwin and Robert-Nicoud (2002), however, did consider the political economy repercussions of industrial agglomeration. One of the basic assumption of Ethier's analysis is the ever falling costs of transportation and communication that facilitates finer specialisation in world production, and easier access to important markets. However, once transportation costs, are fully taken into account, for instance, then benefits may emerge for vertically-integrated firms to locate in a single production base, or within countries with significant demand.

Under this setting, any lobbying-induced expansion of output could induce foreign entry, which potentially leads to crowding out and falling profits for individual local firms. Along similar analytical lines, Baldwin and Robert-Nicoud explains the policy tendency to support ailing firms. Using the Grossman and Helpman model, they show that unlike the case of expanding firms whose incentive to lobby is eroded by the entry of foreign producers, firms in declining sectors tend to lobby harder, being better able to appropriate the rents engendered by protection. This is because foreign interest is dampened in sectors where the likelihood of recovering entry costs (i.e. product development, advertisement, etc.) is low. In Baldwin et. al, on the other hand, the combination of unilateral protection and entry restrictions (i.e., investment capital restrictions, business regulations, etc.) is examined with respect to its impact on lobbying incentives, showing that if political power is such that both import and relocation barriers could be raised, then the real income of lobbying firms will rise.

In new economic geography, however, foreign entry is desirable, especially the ones that trigger the expansion of industrial output which then further strengthens the backward and forward linkages among firms. This could then potentially lead to industrial agglomeration that catapults an economy to a high-growth equilibrium, generating higher incomes and profits for all. In this context, the cost of being by-passed as a production base could be quite significant given that cost advantages generated by

scale economies in the preferred location tend to cumulate through time. This implies an ever widening price wedge between the protected market and that of its competitors, leading to even higher lobbying expenditure rates that would be needed to attain an adequate level of protection. Clearly, the political tariff equilibrium is bound to fall, as rising lobbying costs and deadweight losses, exert downward pressures on demand and supply, respectively.

With scale economies elsewhere undermining protection domestically, strategies and preferences over trade policy are bound to be modified. One direction of change is towards the use of trade policy as an instrument to enhance the attractiveness of the local market as a production base for global manufacturers. Thus, unlike the case envisaged by Baldwin and Robert-Nicoud, lobbying might be aimed at obtaining an active policy that will facilitate, rather than hamper, foreign entry. Exactly what set of policies will be opted for depends on the kind of "agglomerative forces" a country might want to exploit to outcompete its rivals. For developing countries with small manufacturing markets, low wages are the principal draw, so that unilateral liberalisation, or selected market opening through 'free trade zones' (export processing zones) might be preferred. Bigger markets, on the other hand, offer lower overall production costs due to the productivity benefits implied by large scale production. Further elimination of trade barriers, together with the granting of fiscal and other investment incentives would then be among the many available options.

The surge of regionalism in the last two decades could also be explained along these lines. Puga and Venables (1998) noted that the formation of regional groupings could have a dynamic effect on industrial location. As earlier mentioned, given that transactions are costly if firms cross national borders, agglomeration benefits are reaped by firms close to other firms. When locational competition among similar countries work to neutralize the effects of policies aimed to enhance foreign interest, there are benefits to be gained through coordination and collective action. Moreover, a bigger regional market is by far a more attractive production hub, conferring on individual members a competitive position each would have been unable to achieve acting alone. Lastly, as Francois (1994) points out, policies geared to enhance local production when scale economies are international in scope only lead to externalities that might be better internalized by the formation of a regional grouping.

2.4   Regionalism

From a purely political economy perspective, however, membership in an RIA can only emerge as a political equilibrium if doing so would enhance the domestic protection of the participating country. It therefore implies that the principal merit of an RIA is its ability to divert trade, thus giving local exporters an opportunity to sell at higher prices and at the same time causing import-substituting industries minimal harm. This in contrast with orthodox trade theory, where countries do not resort to protectionism having recognised the gains of international trade and they would all the more not join an RIA when they have the option of unilateral tariff reduction (Krauss, 1972). Along classical lines, the only valid justification considered by Johnson (1965) is the terms of trade argument: a customs union among countries eliminates the beggar-thy-neighbour terms-of trade effect due to activist tariff policies of members.

It took Cooper and Massell (1965) to articulate the problem of the economic rationality of an RIA. They argue that economic efficiency through trade creation can not be the objective of countries joining an RIA since it can be proven that non-preferential trade policy is superior to an RIA as a device to bring about more trade. Therefore the rationale for an RIA must lie beyond its trade-creating effects and can be traced to the non-economic objectives held by member countries. Cooper and Massell argues that in the case of developing countries, the key to the development of an economic theory for CU begins with the acceptance of industrialisation as a principal policy objective. The analysis should then proceed to investigate how joining the RIA will allow the developing countries to "achieve more economically the ends served by protection."

Johnson expressed a similar idea albeit in a more general context. By attaching a public good value to the objectives set by nationalism, he is then able to provide an economic rationale for the formation of a customs union among countries who share a strong preference to expand their production and exports of industrial products. In the Johnson framework, there are gains to be attained because a country opening its market for the industrial exports of the other country is guaranteed a reciprocal treatment and access to the market of the partner country for its own industrial products. Through an RIA, each country can offer its partners an increase in exports while minimising its own

29

loss of production. Participation in an RIA therefore becomes a disguised form of subsidy: each partner indirectly subsidises its own industrial exports by subsidising its industrial imports from the other.

In both analyses, the merit of an RIA is seen through the manner it enables countries to further pursue their industrialisation goals and still allow them to maintain a degree of protection from foreign imports. In the case that the entire increase in industrial production in the region is brought about by trade diversion, the benefits to be derived by members are maximised since no loss or sacrifice of domestic production is experienced[8]. The crux of the matter is that countries can achieve their policy objectives more effectively as a discriminating club than when they are acting alone. One can suppose that countries experience the need to expand their "domestic market" in order to reach a scale of industrial production that would eventually enable them to be competitive in the global market. This "training ground" argument is certainly one that is still widely used by RIA advocates today.

The idea that mercantilist motives drive countries to form an RIA permeates much of political economy literature today. In fact, in many models there is an implicit assumption that the member countries' objective is to divert trade, and it is only once this condition is fulfilled that an RIA can be feasible. However, as Whalley (1996) points out, analyses of the impact of an RIA and predictions on what form arrangements would eventually take can be misleading if the main objectives for individual RIAs are not kept firmly in mind. He then presents a range of factors that countries take into account in their decision to participate in an RIA: safe haven concerns; locking-in domestic policy reforms; the use of trade agreements to underpin security arrangements; and the tactical interplay between multilateral and regional trade negotiating positions.

Traditional trade gains or market access is certainly one key economic goal, especially if major trade partners are involved. For smaller countries, joining an RIA that includes a large market is particularly attractive. However, it must be pointed out that many RIAs are formed among countries with similar trade structures. This refers

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[8] However, this requires that a complementary production structure exists among member countries. Otherwise, with substantial overlapping, trade creation will most likely dominate the

particularly to developing countries, where key markets of interest are often outside the integrating region. Hence, there seem to be hardly any economic rationale of forming an RIA if factor endowments are similar and the scope for increasing efficiency by allowing comparative advantages to emerge, is limited. Even in a political economy view, an RIA would not be plausible since trade creation can be expected to exceed trade diversion in such instances.

RIA advocates often refer to the dynamic[9] as opposed to the static effects as a more important economic justification of forming a regional grouping. Baldwin (1989, 1992), in applying neoclassical growth theory to regional integration came to the conclusion that the medium-term bonus could double or even treble an RIA's static efficiency effect on output. Economic integration is also said to induce foreign direct investment (FDI) in as much as it could raise the rates of return on capital (see Baldwin, Forslid, & Haaland, 1996, and Baldwin & Seghezza 1996). Given that tradable goods are typically more capital-intensive than non-tradables, an RIA could increase the relative demand for capital by reducing the transaction costs on tradable goods relative to tradables. Moreover, an RIA may make capital equipment imports more accessible and/or enhance the efficiency of the financial sector (thus lowering the cost of funds) by exposing it to more regional competition.

The more important avenue with which an RIA can induce FDIs is by improving the credibility of a country's sound policies and/or lowering the degree of uncertainty on the success of reforms. For developing countries, unilateral trade liberalisation would lack credibility because of time inconsistency and asymmetric information problems. Fernandez and Portes (1998) explained how an RIA could strengthen the incentives to implement its liberalisation commitment better than does the WTO. The larger constituency of the WTO offers substantial room to behave as a free-rider. Retaliation is therefore costly (hence, not credible), leading to greater difficulties in extracting cooperation or compliance. An RIA, on the other hand, may be an effective tool for dealing with the free-riding and sanctioning problems and thus be a more attractive

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RIA, and the end result of the RIA for members would then be negative since the loss through national income foregone would exceed that of the rise in industrial production.

[9] Schiff and Winters (1998) defines dynamic effects as 'anything that affects a country's rate of growth over the medium term'.

vehicle to lock-in domestic reforms. Moreover, there is also more scope for punishment if an RIA delivers benefits beyond the WTO (i.e. investment). In a similar vein, if investors are hindered by the uncertainty about the nature of the economy and the type of government they face, then a country's entry in an RIA could be used as a device to signal not only the government's liberal intentions but also the existence of the right economic conditions that would instil or even compel local industries to increase its efficiency and overall competitiveness.

Bagwell and Staiger (1993) argue that the motivations discussed in the current section remain difficult to reconcile with the mercantilist flavour that characterises actual negotiations. They insist that Johnson was right all along: governments enter an RAI mainly for terms of trade reasons. Governments do not join an RIA as a means to liberalise their trade, indifferent to the policy commitments of their partners. Instead, the main driving force of RIA formation is the manner in which an RIA could internalise the effects that the partner country's policies have on other members. They conclude that during the transition period during which an FTA is being formed, the effect of an FTA will be to reduce the volume of trade between members and non-members. The anticipation of a future reduction in multilateral trade flows inhibits the enforcement of low MFN tariffs, leading to temporarily higher multilateral tariffs. Once the RIA formation process is completed, however, liberal multilateral trade policies can be restored, as the initial balance between current and expected future trade flow re-emerges. Again, a critical assumption made here is the presence of trade diversion in the formation of an RIA.

Political Economy view of RIA

As earlier mentioned, an RIA where trade creation is expected to dominate (or at least, where trade diversion is unimportant) is a puzzle in political - economic terms. The main stream view is exemplified by Grossman and Helpman (1995), where they conclude that FTAs are likely to arise only if they provide overwhelming benefits that would allow government to ignore lobbies or if they tend toward enhanced protection. They use the similar framework surveyed earlier in section 2.2, and they emphasise, as in their earlier work on trade wars and trade talks (1993), that international relations among politically

motivated governments involve two stages of strategic interaction. In the first setting, a country's policy stance is the outcome of political competition among various special interests, and the extent of the government's concern for aggregate welfare. The international equilibrium is subsequently determined by give-and-take between governments.[10]

Suppose therefore that two governments, *A* and *B*, are faced with only two choices: to pursue an RIA or not. Interest lobbies, moving first, will then design their contribution schedules, C_i, and associate their gifts with the government's entry into an FTA, C_{iF}, or with the status quo, C_{iN}. The interest groups play a Nash game and set their contributions noncooperatively. The government will then decide to enter the FTA if its welfare, *W*, is higher with the FTA than without, that is, $\sum_i C_{iF} + aW_F \geq \sum_i C_{iN} + aW_N$. To find the value of W_F and C_{iF}, the effects of FTA is measured for voters and special interest groups, respectively. Consider a situation where $\tau_i^A > \tau_i^B > 1$ and *B*'s endowment of the specific factor is such that *B* is unable to supply all of *A*'s import demand and this will cause *A* to continue to import from non-members at the relatively higher domestic price, τ_i^A. Then trade-shifting, as it was first illustrated by Shibata (1971), will bring about *enhanced protection* for producers in *B* since it would allow then to divert all output towards the *A* market and sell at higher prices. If *B*, on the other hand, is able to satisfy all of *A's* demand at the lower price, τ_i^B, then producers in *A* will receive less than before. The FTA has given rise to *reduced protection.*

The effects on welfare are familiar from standard customs union literature. In the case of enhanced protection, producers in *B* gain and the government earn extra tariff revenues from goods now imported from abroad, while welfare in *A* is reduced by the amount of tariff revenue lost. In contrast, when protection is reduced, producers in *A* suffer profit losses, tariff revenues are zero, but consumers gain via low prices. Country

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[10] When an FTA involves across the board liberalisation (i.e. all tariffs are set to zero), the political contest in the second stage is not very different from that of the initial stage: export interests compete against import-substituting interests. However, if negotiations involve product-by-product liberalisation then the battle is between the export interests in one country and the import-competing firms in the other country producing in the same sector.

B in this case, only gains from higher tariff revenues[11]. A significant part of the support for an FTA would therefore originate from exporters expecting to sell at higher regional prices. This implies that an FTA will be reached by *A* & *B* only when there is enough 'balance' in the potential trade between them. Specifically, there must be a sufficient number of potential exporters who will lobby for entry, or a sufficient number of sectors where welfare gains can offset losses from trade diversion.

Grossman and Helpman then proceed to show that in the event that governments are able to negotiate for long periods of adjustment and /or exclude some sectors from the agreement, an FTA could be made politically viable. Governments *A* and *B* in this setting, will make alternating offers, with each government naming a number of exclusions. If offers are not accepted, either the negotiation comes to a halt or counter-offers are proposed. The process continues until an agreement is reached or negotiations breakdown. The conclusion reached in both instances is similar: an FTA is a supportable equilibrium only when enhanced protection (i.e., trade diversion) prevails. As the authors themselves put it: 'an FTA is most likely to be politically viable exactly when it would be socially harmful'.

Cadot, de Melo, and Olarreaga (1996) apply the Grossman-Helpman model in a 3-country model . They then ask what integration between country *A* and *B* will do to protection against a non-member country *C*'s exports. They consider the case where tariffs on different goods are substitutes: if one is reduced (by FTA members) others rise (on *C*). This is because the unprotected sector contracts, increasing the size and reducing the lobbying costs of the other sectors. They conclude that a propensity to raise non-RIA tariffs exists for members and hence, an RIA constitutes a move away from multilateralism.

The same view is taken by Levy (1997): an FTA, once feasible, can undermine political support for multilateral liberalisation, and can never enhance political support for broader free trade. Adopting a median-voter (with differentiated product) model, he shows that by offering the median voter disproportionately large gains (via additional product varieties) with relatively small loses (through adverse price shifts), the bilateral

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[11] Output is still diverted totally to *A*'s and *B*'s tariff revenue is increased through non-partner imports coming in to satisfy *B*'s demand for *i.*

FTA could raise the utility of the median agent above that offered by a multilateral agreement. According to Levy, this is more likely the case in FTAs between countries with similar capital-labour rations and roughly different median voters. Once again, trade diversion among members with different tastes but a large scope for intra-industry trade, has saved the day for a discriminatory arrangement.

Leidy & Hoekman (1992) adds another pessimistic verdict in their study of the effects of RIA on the multilateral trade negotiation process. Using a public choice framework, they illustrate that the interest group participation in the determination of negotiators' preferences will produce non-transparent 'holes and loopholes' which will heavily limit liberalisation not only in an RIA but in multilateral trade negotiation (MTN) processes as well. The model contains three stages: pre-negotiation, negotiation and implementation. The vision that sets the agenda is introduced in the first period. In the negotiation stage, a blueprint for policy is produced through formal government-to-government bargaining. However, officials are subject to domestic lobbying pressure which alters the negotiators' preferences over policy packages. Finally, in the implementation stage special interest groups work to influence the administrative details of the agreement, which in turn determine how the new policy will affect the distribution of income. The behaviour of interest groups in earlier stage depends on their anticipation of the extent of autonomy and malleability of the administrative bureaucracy. It is clear that a rule-based, well-behaved bureaucracy will induce sectoral lobbies to move their activities in the negotiation as opposed to the implementation stage. In contrast, when policy actions occur mainly in the last stage due to the discretionary and autonomous character of administrators, groups will withhold their lobbying resources during negotiations and instead offer them later to administrative bureaucrats.

In sum, what one can expect from regional, or multilateral negotiations, for that matter, is an agreement which may appear liberalising in its bold print and rhetoric, but in effect hides its essentially protectionist character behind the complex and ambiguous details that are contained in its articles, escape clauses, timetables, interpretative notes, administrative instructions, enacting provisions, grey area measures, and the like. Due to the underlying domestic political pressures faced by its members, an RIA can be expected to introduce higher net protection, accommodate a number of non-transparent trade-inhibiting provisions, and retard the overall progress for global trade liberalisation.

It is not surprising that the proliferation of regional agreements in the last two decades, has sparked renewed fears concerning the future of the multilateral system. About 55-60% of world trade now occurs within such trading blocs and there is virtually no country, with very few exceptions, which has not taken part in an RIA exercise in one time or another.[12] The intense debate about the desirability of RIAs highlights the ambiguity that has long accompanied customs union theory. In the Vinerian tradition, for instance, a customs union (CU) is good if it creates trade, but it is not necessarily bad if it induces some diversion. This is because despite the diversion, a regional agreement still brings about increased imports and hence, more consumer surplus in the high-cost partner. The end-result is said to depend on the 'size of the triangles' (i.e. the relative sizes of consumer and producer surpluses). For many decades discussion about RIAs has largely centered on these types of discourses, that is, on the welfare consequences of RIA creation on member countries. It is only in the last decade that analytical interest has shifted to the issue of how RIAs impacts on nonmembers' welfare and on the global trading order as a whole.

Open Regionalism and the agglomeration motive

The inconsistency of regionalism with multilateral liberalisation has been strongly refuted by advocates of recent initiatives, claiming that global openness, is in fact, the dominant trend. However, the term 'open regionalism', which has been coined to express this view, was quick to elicit dismissal, given the seemingly unavoidable contradiction that the term implies (i.e. non-discriminatory, and yet preferential). Proponents and interested analysts, for this reason, have made several attempts to give the concept more clarity. Wei and Frankel (1995) offer four possible definitions: (1) *open membership* (given that entry criteria are met, nonmembers can choose to join); (2) *non-prohibitive* (any member can unilaterally extend benefits to nonmembers); (3) *selective liberalisation and open benefits* (members can choose to liberalise on an MFN basis, sectors where they dominate world trade) and; (4) *reduction in non-member barriers* (collective lowering of trade restriction vis-à-vis the rest of the world).

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[12] The GATT was informed of 33 regional trading arrangements in the first half of the 1990s alone. That constitutes a third of all regional agreements since 1948 (Frankel, 1997).

As mentioned earlier, endogenous protection theory expects that same conditions that will make RIA politically feasible will be the same conditions that will retard progress in global liberalisation. A dissenting view is given by Richardson (1993) when he suggested that the initial trade diversion that could occur in the formation of a free trade area is precisely the stimulus that could create incentives for a country to further reduce external tariffs. There are two key elements in his argument. One is the likelihood of a steady decline in political influence as the declining industry is exposed to regional competition. Second, the incidence of trade-shifting[13], and the subsequent loss of tariff revenues by the high-cost partner, means that with the lower political costs of further liberalisation, it will be to a country's interest to actually lower its external tariffs so as to recapture the tariff revenues from higher imports. This begs the question of why an import-competing industry with foresight will not oppose the FTA in the first place. Richardson's answer has the same tinge of mercantilism as Grossman and Helpman (1995): for an FTA to be feasible, there must be enough sectors in country *A*, where exporters would gain from reduced tariffs in country *B* so as to outweigh the losses to importers from reduced tariffs against non-partner *C*. Only in this way will the government's political support function increase enough for it to enter an FTA. Putting it differently, an FTA permits a 'packaging' of tariff reductions that, whilst harming some sectors, emerge as beneficial overall. There remain a number of unresolved issues, however. The line of reasoning persists that trade diversion, and hence, the opportunity to sell at higher prices in partner markets, drives the political feasibility of an FTA. The expectation that diversion would eventually turn into trade creation will therefore weaken the ex-ante support for an FTA. Richardson suggests that it is possible to incorporate an explicit channel by which industry groups in country *B* would participate in the internal political contest of country *A* so as to bloc its move to lower tariffs against *C* producers. However, interested industries from non-member countries could also join in the fray, and help off-set the efforts of partner lobbyists. The outcome of such a political circus where a government must consider the weights of still a greater number of players, becomes even more ambiguous.

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[13] This reasoning is similar to Shibata's (1971) trade-shifting, and Grossman and Helpman's enhanced protection arguments.

Some nonetheless agree with Richardson that there remains no clear expectation for a trade-diverting FTA, because even with diversion, welfare may increase or decrease. Wonnacott (1996) for instance, argues that trade diversion triggers a process of trade liberalisation within the region with all the expected effects of more competition in a larger market. It could very well be that country *B* will emerge as *A's* lowest-cost supplier, as specialisation in *B* will cause reduction in technical inefficiencies, higher investments, economies of scale, and the like. Wonnacott also points out that an expanding FTA could reverse previous diversion, as in the case of the unwinding of past diversion of US imports from Mexico to higher-cost Canada (due to the Canada-US FTA) with the inclusion of Mexico in a NAFTA. Lastly, he cites the possibility that an FTA may lower the resistance to multilateral liberalisation because the exposure to intra-regional competition makes members better prepared to confront world competition not only in its domestic but in the regional export markets as well.

The view that any source of liberalisation is good is shared by a number of RIA proponents (Bergsten, 1996; Destler, 1995). Wei and Frankel (1994) for instance, consider the hypothesis that the act of liberalisation (through an RIA) can help build and mobilise pro-liberalisation political constituencies. Using the framework of the Fernandez-Rodrik status-quo bias, they show that under certain conditions, a government might be unable to garner a majority vote in favor of multilateral liberalisation, and yet might be capable of having regional liberalisation passed by majority vote. The RIA when completed can then shift the economic incentives in such a way as to urge the majority to vote for further liberalisation.

Here attention is once again shifted to the importance of the origins of the liberalisation motive of a government. It could be more appropriate to state that while the incidence of trade diversion may have liberalising by-products, the actual practice of open regionalism may still have more to do with the underlying reasons why governments would want to reduce trade barriers.

The idea that trade (creation or diversion) is <u>not</u> the principal driving force behind an RIA and open regionalism is formalized by Ethier (1998). He assumes a reform-

minded government with a concern for social welfare.[14]   The model considers the following sequence of events: (a) industrial countries (*IC*) undertake multilateral trade liberalisation; (b) lower tariffs makes the global economy more productive, hence, enhancing the less-developed countries' (*LDCs*) chances of instituting successful reforms[15]; (c) *LDCs* compete for *IC* investments; and (d) *LDCs* enter into an RIA with an *IC* because by giving *IC* exports preference, they ensure that *IC* will invest in its partner developing country rather than the other.   The major role of regionalism is therefore to facilitate reform in the less-developed country, by stimulating investments.

Ethier's is a many-country, specific-factors model with *N* industries and *M* countries endowed with human capital (*H*), skilled labor (*L*) and unskilled labor (*U*). There are two stages of production, *a* (more sophisticated process) and *b* , to produce the final output $x = f(a_i, b_i)$, where $a_i = H_i$, and $b_i = kL_{bi}$ (L_{bi} is the amount of *L* allocated to stage b production). That $k = k(\Sigma^N_{i-1} L_{bi})$, means that the increasing returns to scale is dependent on the size of *L* worldwide employed in producing b_i.

Let *R* denote the social welfare benefit of reform. Then there is *r** which is the minimum expected value that *R* must attain for government to give up autarky for reform. Ethier depicted *R* (i.e. success of reform) as being determined by investments from the *IC*, that is, by both *k* and L_b . However, since direct investments will entail trade in *b*-stage products,   the level of trade barriers in the *IC* for such trade plays a decisive role. A lower tariff in *IC* for *b* products, for instance, lowers the cost of obtaining a marginal unit of *b* through the establishment of a foreign subsidiary, relative to the cost of producing the same product at the *IC*. Unilateral liberalisation on the part of *IC* therefore encourages direct investments, which (due to higher *k* and L_b) in turn will induce more *LDCs* to reform.

In a world where several *LDCs* decide to reform simultaneously, none can guarantee that they will actually get the foreign investments. By forming an RIA with an *IC*, the partner *LDC* is differentiated from the rest and attracts *IC* investments, which ensures the success of its reforms. The *IC,* on the other hand is assured that it will not

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[14] Ethier claims that governments would have no incentive to enter into multilateral trading arrangements, otherwise.

[15] Successful reform by the LDCs, in turn, will influence the international equilibrium, and provide new stimulus for liberalisation.

find itself facing a tariff (hence, higher production costs), when it re-exports its *b*-stage product. Regionalism, in this sense, serves as a mechanism for coordination by removing uncertainties on future behaviours of both the *LDC* and *IC*.

There is clearly a compatible and even supportive relationship between multilateralism and regionalism in this model. In fact, it captures the virtuous cycle of increasing openness as one step of liberalisation moves countries to a new international equilibrium that creates incentives for further trade barriers reduction.

The notion of *competitive liberalisation* as described by Bergsten (1995) runs on a similar vein. In a race to win foreign capital, RIA members will seek to dismantle trade barriers faster than the other. In the event that an RIA is formed by small countries in order to differentiate and make themselves more attractive as investment sites, the fact that the investing developed country is outside the regional scheme makes the imperative even stronger to simultaneously lower nonpreferential tariffs as well. Moreover, competitive liberalisation can have demonstration effects that could lessen the uncertainty which accompanies any reform. Liberalisation is said to be made easier in a country which is part of a group with other liberalising economies, because each can observe its neighbours' prosperity (Drysdale & Garnaut, 1993).[16]

Empirically, the nature of the relationship between RIAs and global liberalisation is not definitive. It does show, however, that at least for some regions, trade barriers against nonparticipating countries, and hence, the scope for trade diversion, has gone down throughout the years. Wei and Frankel (1995), referring to the bilateral trade data during 1970 - 92, pointed out that there were regions that while exhibiting an inward bias, nonetheless conformed with the notion of open regionalism. In a gravity panel regression with dummies representing intra-regional groups (explicit and implicitly formed), they found that both Western Europe and East Asia groups were "open" in the sense that their trade was in general higher than what one would have expected from their economic, geographic and cultural characteristics. East Asia, for example, despite a very high intra-regional bias, tended to trade 100% more with a country outside the region than two random countries both outside East Asia. Upon further division of East Asia into ASEAN countries and others, both show highly significant openness. When

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[16] The authors call this the "prisoners' delight."

Western Europe is classified into the EC countries and others (i.e., the former EFTA), it is the EC countries that display positive openness. In contrast, there were signs of trade diversion for both the Western Hemisphere and APEC countries. Over the same period, their respective outsider trade was 8% and 25% less than what is expected based on their economic and geographic characteristics. Overall, the estimates of openness (see table 2.3) do show that the greater intra-regional trade was not necessarily at the expense of countries outside the region. At the same time that countries have opened with respect to their neighbours, the level of openness (i.e. Netherlands, United Kingdom, Belgium, Singapore, Chile, United States [adjusting for population and GDP per capita]), and the increase in openness (i.e. Argentina, Brazil, South Korea, Malaysia, Mexico, Paraguay, Thailand) that was observed in RIA-member countries remained significant.

2.5 Conclusions

In the extreme scenario that national political leaders are totally captured by vested interests, any channel for liberalisation, whether regional or global, will be blocked. Such assumption of capture pervades a large part of endogenous protection literature and brings the focus of analysis to the profit motives of producer groups. Government is therefore seen as a 'notional' decision-maker or an arbiter who takes the results of the political contest as given. The primacy of the import-competing producer may be tempered whenever the government's mercantilists motives confer exporting producers increased political weight as well. Hence, in the event that an RIA is exogenously proposed, either for security, or political reasons, the institutional rules and post-RIA tariffs will be set so as to promote export interests with the least possible harm to locally-oriented producers. Trade diversion is an inevitable consequence of RIA formation.

The history of economic cooperation among neighbouring countries does provide a number of examples to support such rather sombre view on regional integration. Exclusions of sensitive sectors, particularly in agriculture and textiles & clothing, long transition periods, the resort to non-tariff measures and other technical barriers, etc., all work to preserve the protection enjoyed by domestic producers. Moreover, the strategic exchange of preferences, industrial complementation schemes, and even the design of

rules of origin that favour regional input suppliers, only further demonstrate the pervasiveness of the trade-diversion motive in regional arrangements.

Progress in regional integration in more recent years, however, also show episodes where a marked shift in policy towards openness is evident. The scope of product exclusions have significantly narrowed down, especially in manufacturing goods, and while tariff peaks and other non-trade protective measures persist, the overall trend towards liberalisation, even in the realm of MFN tariffs, is difficult to ignore. Moreover, there exist empirical evidence favouring the conclusion that what characterizes the recent surge of preferential trading agreements is in fact, trade-creation, and not trade-diverting results.

'New regionalism' as Ethier (1998) calls it, is largely driven by scale economies and foreign direct investments motives, which render a purely Vinerian approach inadequate in explaining the dynamics of RIAs today. However, in endogenous protection models on regionalism, trade creation and trade diversion are still the main channels through which an RIA could affect the size and distribution of incomes. Hence, they remain the principal determinants of the political strategies chosen by firms and governments alike.

To further our understanding of current RIA initiatives, what seems to be needed is an analytical approach that takes into account the role of agglomeration and scale economies (which are perceived to be driven by FDIs) on the political feasibility and sustainability of RIAs. As a first step, the effects of market size and variable returns to scale on the political costs and benefits of protection must be better scrutinized. From the literature on variable returns to scale, it is evident that the expected welfare effects of trade policy differ depending on the assumptions made about the kinds of goods (intermediates or final); market structure; source and scope of externalities; and initial market size. The preferences of political actors over trade policy would thus vary accordingly as well. Import-competing interests, for instance, are not always necessarily served by rising protection, nor is free trade always the optimal policy that promotes overall efficiency and welfare. The latter implies that circumstances exist wherein increasing the supply of protection do not inescapably lead to increasing political costs on the part of governments. Moreover, since trade policy can potentially lead an economy to move from a low to a high-growth equilibrium and vice-versa, the politically

optimal level of protection can be expected to change as patterns of trade and production correspondingly shift.

Once scale economies and agglomeration are taken into account, then market size no longer becomes a marginal element in the analysis. In current literature, the importance of size is merely conditional on the amount of lobbying or its implication on the voting power of an industry. In an increasing-returns-to-scale framework, market size assumes a pivotal role as it determines the strength of scale effects and the effectiveness of trade policy in effecting a break-point that could potentially cause the economy to leap towards a more superior equilibrium.

In this context, formation of a bigger regional market by neighbouring countries through an RIA could be seen as an effort to enhance the growth effects brought on by larger scale of production. Since the entry of foreign firms could introduce the desired agglomeration effects of increased manufacturing output, the decision to create a free trade area could also be seen as a strategic move to affect the locational decision of foreign firms. Coordination among countries intensely competing for FDIs possibly leads to higher pay-offs as compared to a non-cooperative outcome. In so far as expectations also determine the equilibrium position of an economy with scale economies, then forming a RIA is likewise a probable means to reduce whatever uncertainties foreign and local producers might have. On the one hand, entry in a RIA acts as a signal that the necessary economic conditions exist to induce efficiency and competitiveness in firms. And on the other hand, a bigger market increases the likelihood that a critical mass of manufacturing activity could develop in the region, thereby bolstering the confidence of foreign and local investors alike.

While liberalisation may imply significant political costs, the costs of being left in the periphery may be perceived to be more substantial. Moreover, since the benefits of agglomeration and scale economies cumulate through time, this means that the productivity differences between the core and peripheral countries likewise increase. Maintaining status quo protection thus entails greater lobbying expenditures, and it is conceivable that a critical point is reached wherein the costs overtake the benefits of higher protection. This is one probable driving force behind the fall in the tariff equilibrium in political markets observed in the last two to three decades.

43

One interesting question is what consequences can be expected in the RIA when agglomeration does not take place, or when expectations are not met regarding the integration of markets. Intuition would suggest that a total collapse of partnerships would occur, since political costs were incurred without the corresponding benefits. However, we observed other responses as well, such as the seeking of alternative partners, as what is observed in ASEAN in recent years. This is the bicycle theory of regionalism, which states that countries continuously seek the momentum for liberalisation or regionalism since a still-stand would inevitably lead to failure. This turns the standard tenet of endogenous protection on its head, as this would suggest that while protection may be the politically rational choice, countries opt instead for freer trade. This is as good reminder as ever that a general endogenous protection theory is yet to be formulated, and the same is true for a general customs union theory, even half a century after Viner's (1950) seminal work.

Appendix 2.1

A simple but fully-specified model (i.e., describes both the supply and demand side of protection) is provided by the **median-voter approach** pioneered by Wolfgang Mayer (1984). It is the simplest model of trade policy determination where citizens in a referendum directly vote on the level of tariffs. Given single-peaked preferences, the resulting protection rate is the one picked by the median voter. Using the Heckscher-Ohlin model, it shows that trade policy is determined by the relationship between the country's aggregate endowment ratio and the factor endowment of the median voter.

Assume a small economy producing two goods, X and Y, with individuals sharing identical, homothetic preferences.[17] Every individual is endowed with the same fraction of labor, l_i^j , and a varied fraction of capital, γ_i^j. Both factors are infinitely divisible and perfectly mobile between the two sectors and tariff revenues are distributed by the government in a lump-sum fashion. It is further assumed that imports are relatively more capital-intensive than exports.

With preferences assumed to be Cobb-Douglas, an expenditure function can be specified in the usual form: $e(P_i, u) = \min[Y + P_i X]$; for $u = u(Y, X)$. Revenue functions can also be defined in terms of prices, P_i , tariffs, t, and factor endowments, so that $\Psi : \varsigma(P_i, t, \Psi) = \max[Y + P_i X \mid (Y, X, \Psi)$ feasible]. Setting world prices equal to one, economy-wide equilibrium can thus be summarized by:

$$(1) \qquad e(P_i, u) = \varsigma(P_i, t, \Psi) + I(t);$$

where I , represent imports and defined as: $I = e_p - r_p$. Aggregate income is then just the sum of real wages, $\tilde{\omega} = e_u^{-1}\omega$, real capital returns, $\tilde{r} = e_u^{-1}r$, and total government revenues, $\tilde{G} = e_u^{-1}t(I)$.

Let the indirect utility function of each individual j be expressed as

$$(2) \qquad v^j(\tau, \gamma_i^j) = n^{-1}[\tilde{\omega} + \tilde{r} + \tilde{G}] + (\gamma_i^j - n^{-1})\tilde{r} ;$$

where τ_i is one plus the tariff rate t, and $(\gamma_i^j - n^{-1})\tilde{r}$ refer to the extra share of rent earned, which corresponds to the individual's extra ownership share of total capital stock.

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[17] The formulation of models here is based on chapter 4 of this book.

In a direct democracy model, voter j chooses τ_i that maximizes v^j, that is, by differentiating equation (2) with respect to tariffs and setting it to zero, equilibrium tariffs are derived:

(3)
$$t_i^m = -\frac{\left(\gamma_i^m - 1\right)X}{\left(\partial I/\partial t\right)} \, .$$

Under the political structure assumed by **Magee, Brock and Young**, trade policy is determined by the strategic interaction of pressure groups in their choice of contribution spending and the electoral competition between parties. A two-stage game is depicted wherein parties first choose the policies which maximize the probability of their being elected, followed by the response of pressure groups in the form of financial support for the campaign of the party whose electoral platform carry the desired policy of the lobbies.

The model is set in a modified Heckscher-Ohlin world of 2 factors and 2 goods, capital-extensive X and labor-intensive Y. There are two competing political parties waging an electoral campaign and two lobby groups offering financial support in order to influence the electoral victory of their favoured parties. While lobbies are divided by factor ownership (i.e., capitalist and labor lobby), political parties are distinguished by their trade policy orientation (pro-trade and pro-protection). The probability of winning, q, rises with the amount of campaign resources, $\$^{K,L}$ at a party's disposal, and falls with the amount of overall distortions the public expects from its policy interventions, given by the level of $\tau^{A,B}$. The problem faced by parties is therefore to choose $\tau^{A,B}$, that maximizes $q = q(\$^K, \$^L, \tau^A, \tau^B)$.

Interest group lobbies, on the other hand, have to decide on the level of campaign contributions that maximize their expected incomes net of these financial contributions. Formally, the optimal $\$$ level is the attained Nash equilibrium of a non-cooperative game played by lobbies, and is derived by solving:

(4)
$$\max_{C^K} \left[q\left(\$^K, \$^L, \tau^A, \tau^B\right) W^K\left(\tau^A\right) + (1-q)\left(\$^K, \$^L, \tau^A, \tau^B\right) W^K\left(\tau^B\right) \right] - \$^K \, ,$$

where $W^K(\tau^A)$ is the benefit function of lobby K when τ^A prevails. A reduced probability function, $q(\tau^A, \tau^B)$ is then derived by substituting the solution above to q (·). Each party then chooses a trade policy in order to maximize their probability of winning, i.e., party A chooses τ^A to maximize $q(\tau^A, \tau^B)$ while party B chooses τ^B to maximize $(1-q)(\tau^A, \tau^B)$.

Parties, by pre-announcing their platform and policy intervention assume the Stackelberg leadership. The lobbies subsequently move in a two-stage sub-game perfect equilibrium. The outcome of the Nash game played by the political parties produces the equilibrium tariff rates.

In the **political support function approach** largely attributed to Hillman (1989), Government is a distinct part of the bargaining process, and hence, the preferences of politicians are explicitly described. While policymakers are still influenced by lobbying, they likewise weigh the profit gains of particular industries against the efficiency losses borne by society as a result of protection. Political support therefore rises with profits, but fall with the upsurge in deadweight losses.

The policymaker's welfare function is expressed by Hillman as follows:

(5)
$$W = P_i \big(\Pi_i(p_i) - \Pi_i(p_i^*), \; p_i - p_i^* \big),$$

where p stands for the relative price and $\Pi(p)$ for the lobby's profit function. Political support is increasing in the first argument, representing protection-induced profit gain, and declines with the second. Government must therefore choose a tariff level that maximizes its aggregate support.

The summation of individual welfare functions over the entire population gives the aggregate welfare function, which can be expressed in a similar fashion as in (2):

(6)
$$V(\tau) = \varpi + \tilde{r} + \tilde{G}.$$

The political support function of the government described above can then be expressed as:

(7)
$$V(\tau) = \frac{1}{a_{pi}}[\tilde{r}(\tau_i) - \tilde{r}(1)] + \big[(\varpi(\tau_i) + \tilde{r}(\tau_i) + \tilde{G}(\tau_i)) - (\varpi(1) + \tilde{r}(1) + \tilde{G}(1)) \big];$$

with a_{pi} representing the weight government attaches to overall welfare, or the marginal rate of substitution between aggregate welfare and industry profits. The optimising behaviour of the government leads to a tariff rate that maximises its political support, that is,

(8)
$$t_i = -\frac{1}{a_{pi}} \frac{X}{(\partial I / \partial t)}.$$

In the electoral competition approach put forward by Magee, Brock and Young, contributions are committed by the groups after parties have made their policy stance known. Financial transfers are therefore used to increase the election chance of the parties of their choice. In the **political contributions approach**, financial contributions are meant to directly influence the policy choice of an incumbent government, or to acquire some influence over policies once the sponsored party wins. Grossman and Helpman (1994) model lobby groups as announcing their contribution commitment before the decision on policy is made, but paying only after the policy is actually chosen.

In this game, the lobbies move first by presenting the incumbent with a donation contract of contribution schedules that state the level of donation for each possible policy stance taken. Lobbies aim to maximise their member's net welfare which can be expressed as:

(9)
$$V_i = \varpi_i + \phi_i \left[\varpi + \tilde{r}(\tau) + \tilde{G}(\tau) \right] + (1 - \phi_i)\tilde{r}_i(\tau_i) - \$_i \ ;$$

$\$_i$, being the contribution of lobby i to the electoral campaign funds. In the welfare function, ϕ_i is the fraction of the population who own the sector-specific input, so that the second term in (9) represents their share in tariff revenues and consumer surplus. The lobby group's selection of $\$_i$ is made in anticipation of the policy stance of the government, and after having taken the contribution schedules of other lobbies as given.

The incumbent in turn, take these contributions as given and proceeds to maximise its welfare which is linear in campaign donations and welfare:

(10)
$$V^G = \$ + a \left[\varpi + \tilde{r}(\tau) + \tilde{G}(\tau) \right];$$

where **a** is again the weight placed on the welfare of voters or consumers relative to campaign contributions.

The lobby group's selection of $\$_i$ is made in anticipation of the policy stance of the government, and having taken the contribution schedules of other lobbies as given. This implies that it must offer a contribution function that provides the right level of incentive for government to implement τ, and at the same time take into account that other lobbies have also contributed to gain some policy influence. It must therefore offer a contribution schedule such that:

(11)
$$\$_i(\tau) \geq V_{-i}^G - \left[\sum \$_i(\tau) + a(\tilde{\omega} + \tilde{r}(\tau) + \tilde{G}(\tau))\right];$$

In turn, the trade policy that maximises the lobby's welfare function is:

(12)
$$\tau_i \in \arg\max V_i(\tau) + \left[\sum \$_i(\tau) + a(\tilde{\omega} + \tilde{r}(\tau) + \tilde{G}(\tau))\right];$$

The model then considers all the contribution schedules that are differentiable around the equilibrium, and restrict that equilibrium to the form specified by the Berheim and Whinston (1986) notion of a "truthful Nash Equilibria".[18] The equilibrium tariffs therefore take the following form:

(13)
$$t_i = \frac{1 - \alpha_i}{a + \alpha_i} \frac{X}{(-)(\partial I/\partial t)}.$$

In this formulation, protection is increasing in the level of organisation of a sector, the amount of sectoral output relative to imports, and decreasing in the ownership of the sector-specific input and in the price elasticity of the corresponding trade flow.

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[18] The adjective "truthful" comes from the fact that in the principle-agent set up, these contracts imply that the principles pay the agent her full marginal product minus some fixed amount. This means that the incentives of the agent to change her behaviour on the margin truthfully reflect the worth of such changes to the principles.

Chapter 3

Agglomeration and Endogenous Protection[*]

Abstract: We analyze general equilibrium relationships between trade policy and the structure of production in the presence of agglomeration effects, also known as industry-wide scale effects. Scale economies at the sector level imply multiple equilibria in the real markets for factors of production and goods. This in turn implies a potential multiple political equilibria as well. In both median voter and lobbying models, this leads to linkages between concentration of asset ownership, the dynamics of shifting production patterns as an economy industrializes, and the potential for low-level development traps anchored both economically and politically.

3.1   Introduction

The shortcomings of import-substitution and heavy government industrial intervention have all been well documented, and as development strategies, they have long fallen into disgrace. Nonetheless, the attraction of pursuing some form of industrial policy, of 'targeting' certain industries, or of creating 'national champions' persists even today, and not only among the developing world, but also among industrial giants such as France and Germany. The means certainly differ from those employed 50 years ago, but the basic notion that some production activities are more conducive to growth than others, and that governments may have a role to play in steering comparative advantage towards these sectors, still manage to inspire a good number of policy architects.

From a political economy perspective, the inclination to intervene and/or protect key industries then and now is largely attributed to the politicians' pursuit of self-interest,

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[*] **This chapter is based on a paper co-authored by J.F. Francois.**

making them particularly vulnerable to lobbying pressures. Government intervention is, in fact, seen as anti-growth, so that the creation of an industrial policy, often packaged to the public as a means to pursue higher national ambitions, actually serves to cloak government's real intent to extract rents. The same cynical view greets the politician's attempts to justify protection as a means to expand markets, increase productivity and improve overall economic performance. In the constant-returns-to-scale world of standard endogenous protection models, the marginal rise in profits is, after all, neutral to any change in industry size.

It is well known, however, that once the role of scale economies is acknowledged, the government's propensity to intervene can no longer be interpreted solely in rent-seeking terms. At the competitive equilibrium, prices are known to exceed the private valuation of marginal costs resulting to the underproduction of the increasing-returns-to-scale (IRS) good. At constant terms-of-trade, any stimulus that pushes up production therefore improves overall welfare, prompting the view that an activist government policy may have a useful and beneficial role. Moreover, nonconvexities in production technology that typically accompany IRS output imply the presence of multiple equilibria that have very clear welfare ranking. In such a context, the popular practice of governments to pick industrial winners or 'jump-start' the economy could at least be theoretically seen as being consistent with overall national interest.

More often than not, however, the policy prescriptions associated with the IRS literature, eventually turn back towards the old and trusted road of free trade. The notion of a benevolent, Bergsonian-social-welfare maximising government is after all, a figment of the theorist's imagination, and the prospect of government failure is seen as a far greater menace than the market failures which policies claim to address. The informational requirements for effective intervention are also often out of the policymaker's reach, while lobbyists are only too eager to supply the data beneficial to their specific causes. Even if one assumes away the infirmities of government, the constraints of small and weak domestic markets might preclude less developed economies from taking off via interventionist industrial regimes, while 'de-industrialise-your-neighbour' policies might lead larger countries towards a zero-sum game of pure conflict. Still more importantly, the virtue of intervention hinges on a host of variables, in particular, on the source and scope of externalities. It is amply known that the merits

of industrial policy and protection of IRS sectors only apply whenever the benefits of expansion can be contained within national boundaries (Francois, 1992). As these sectors integrate into global production and scale economies become international in scope, the optimal policy, especially for small or developing countries, is free trade and zero subsidies.

Despite such warnings, industrial policies remain established in many governments' menu of priorities. For developing countries, in particular, the historical examples of the Asian tigers who have industrialised through the unorthodox mix of export subsidies, directed credit and selective protection, fuel even greater ambitions for growth, while the prospect of getting stuck in a low-equilibrium trap makes a laissez-faire approach unattractive. Rodrik (2001) also points to the historical fact that most of today's rich states who now maintain low levels of protection, attained their industrial ascendancy behind tariff fortresses. On the other hand, global integration is likewise seen as a channel to enlarge markets and 'leap' over several stages of industrial development. As earlier mentioned, whenever externalities are international of origin, the opportunity costs of adhering to a low-yield nationalist growth path magnifies the standard costs of protection associated with mere deadweight losses.

These competing visions and strategies reflect the complexities surrounding the joint themes of industrial growth, economies of scale and policy-making. The impact of policies on welfare in the presence of scale economies depend on a host of variables: such as the nature of the products: final or intermediate; on the scope of externalities: national or international; or whether intermediates are traded or not. The policy formation process, in turn, accommodates goals other than those assumed in standard trade theory, and give rise to policy sets that are influenced by the preferences of key private political actors. Clearly, the dynamics of the product and political market interact. Analytically, however, they are often studied in isolation of the other. For instance, the aim to improve productivity by enlarging markets regularly features in popular debates on trade policy, yet in standard political economy literature, scale economies play no role in the determination of government choice. Studies on IRS production and the welfare effects of policy instruments, on the other hand, rarely pose the issue of whether such policies would be politically feasible to begin with.

The present chapter argues that some added value might be generated by investigating the political economy underpinnings of industrial and trade policies in the context of increasing returns to scale. Of particular interest is the manner in which multiple equilibria in IRS goods production impact on the political market, and how the political equilibrium in turn, constrains the real sector. Understanding such interaction then enables one to examine some of the aspects of the role of politics in the process of industrial transition. We know for instance that scale economies magnify the income effects of price changes in standard models, and hence can be expected to push up the level of equilibrium tariffs. But whether protection pushes the country over the threshold of agglomeration or not, may depend on the relative strength of the forces of demand and supply in the political market. This line of reasoning seems to suggest that the nature of political interactions may alter the growth trajectory of an economy, so that an understanding of such process could provide additional information as to how a certain equilibrium is selected in the presence of multiplicity.

One of the key arguments in the literature against interventionist policies even when scale economies would justify it, is the ominous presence of private sector lobbying. The implicit assumption is that (import-competing) producer interests are most likely to run counter to that of the general public, so that their influence on government policy could not possibly be anything but detrimental to overall efficiency. But even if there exists a case for protection in welfare terms, lobbying can still shield and/or deviate scarce resources to the wrong (non-IRS) industries. However, one immediate effect of scale economies on lobbying behaviour, especially in the early stages of manufacturing growth, is to increase the capacity and incentives to expend resources in influencing policy. It is thus conceivable that lobbying helps signal government attention towards the sectors where IRS are strongest, so that once again, a virtuous form of lobbying can be envisioned, at least in theory.

Needless to say, taking into account the multifaceted and complex process of both industrialisation and policymaking is a difficult task. The ambitions of this paper are therefore modest, and its scope is initially limited to the national external economy formulation and final goods-only trade. It addresses the above issues by combining a standard model of specific factors under IRS, with modified versions of the political economy models of Mayer (1982) and Grossman and Helpman (1991). A brief survey of

the effects of trade policies on welfare under variable returns to scale is given in the following section, to be followed by an illustration of an IRS production model in section three. The endogenous protection models with externalities are set out in section four, while section five discusses the implications of politics on the production structure and vice-versa. The last section provides a summary of results and concludes.

3.2 Economies of scale, trade policies, welfare and endogenous protection

In the presence of scale economies, the welfare and efficiency gains due to commercial policies are associated with the expansion of the production of the IRS sector. Even in autarky, some form of direct subsidies may be called for to close the gap between the private and social valuation of marginal product, enabling the country to realize the pareto-optimal level of output. Once markets are opened to trade, however, further intervention may be needed to address the scale and price advantage of the trading partner, if the contraction of the IRS sector is to be prevented. Under national IRS, Panagariya (1981) argues that particularly for small countries, welfare maximization entails a permanent production-tax subsidy scheme. The intervention required is greater, the more capital abundant the partner relative to the home country. But even if capital-labor endowment ratios are similar, a smaller scale of production imply higher (lower) costs of manufacturing the IRS (DRS) good, so that subsidies also need to correspond to the size differential between the trading countries. As for the large country, Eaton & Panagariya (1979) stress that since the negative price-output response is likely to be a stable equilibrium, such adverse supply behaviour must be taken into account in evaluating the welfare impact of any price policy. It is conceivable, however, for terms-of-trade gains to exceed the cost of inefficiency, so that countries large enough to influence world prices could still see their welfare improve despite the contraction of the IRS industry.

Ethier (1979, 1982) asserts the view that scale economies generated by international specialisation are particularly significant in a world where trade in producers' good dominate and where the ease in transport and communications over the years have further facilitated the globalization of production. Once externalities become

international in origin, the relevant point of reference is no longer the size of the domestic market but the scale of IRS production worldwide. This implies, for instance, that the smallness of a country is no longer as vital in determining the welfare consequences of openness and trade policies. Francois (1992) illustrates that contrary to the conclusions reached under national IRS, small countries gain nothing in subsidizing the productive sector, as benefits merely spill-over to other foreign producers. Protection, on the other hand, obstructs the integration of local producers to higher-yield production processes abroad, and therefore reduces efficiency. For large countries, the optimal amount of intervention would depend on the balance between the benefits of expansion and the possible adverse terms-of-trade effects.

The presence of multiplicity implies that welfare effects must be gauged not only on efficiency grounds, but on the basis of growth as well. As Markusen (1990) points out, the optimal government intervention is dependent on which point of the production frontier a country may find itself in. While traditional Pigouvian taxes and subsidies may be appropriate in the neighbourhood of high level equilibrium, a more dramatic 'big push' undertaking may be needed to propel the economy towards industrialization. Matsuyama (1991) considers an economy's dynamic process of adjustment over real time and examines the role of history and expectations, on one hand, and the policy implications of being in a high or low manufacturing growth path. With low initial industry employment and weak scale economies, history is the driving force, and without government intervention the economy is trapped in a zero level stationary state of industrialization. If the initial level of manufacturing activity is sufficiently large, however, then expectations play a vital role, and intervention should then be centered on the coordination of agents' expectations. The problem when the initial employment is small but scale economies are strong, is essentially that of coordination failure, so that the promotion of confidence and animal spirits is more crucial than any government subsidies or heavy intervention.

As earlier mentioned, politics, too may affect the set of equilibria, such that one could speak of either creating a politically desirable equilibrium or deleting one that is seen as being politically unacceptable. Clearly, the existing political economy literature, being CRS-based, can offer very little guidance in this regard. Another obstacle pertains to Rodrik's (1996) critique about the assumption of myopic behavior on the part of

political players implicit in many political economy models. That is, firms and policymakers often fail to take the effects of inefficient policies on long-run profits and re-election chances. A consistent application of these models to an IRS case would imply that agents act locally, thereby reducing or eliminating the ability of politics to 'choose' the pareto-optimal equilibrium.

In a recent paper by Baldwin, et al (2003), the political economy of protection in an IRS economic geography model is highlighted. They show how costless and free foreign entry can eliminate the incentive of domestic firms to lobby for protection since capital incomes are driven down to pre-protection levels. Their results suggest that special interests at home, resources permitting, do have the incentive to lobby for entry restrictions and increase in protection, as this combination will always raise real capital rewards. However, they take productivity levels constant and as a result, the expansion of domestic output due to foreign entry does not lead to a shift towards a higher production equilibria and thus, higher profits for all. Once again, the presence of externalities is not fully accommodated in the private assessment of benefits, and hence plays no significant role in policy determination.

The present paper is thus an attempt to examine how variable scale returns alter the standard results of endogenous protection models, and how politics in turn, impact on the pace and nature of industrial agglomeration. The succeeding section takes the initial step of portraying a basic two sectors specific factors model with scale economies, similar to the autarky versions of Ethier (1982) and Francois (1992). By fixing the income effects of price changes, the IRS repercussions can then be instilled in the structure of preference of political actors.

3.3 Production

Consider an internationally small economy, with three factors of production, mobile labour, L and two types of capital, K_b and K_y, each specific to the two sectors, manufactures and agriculture, respectively. Agriculture produces a homogenous commodity, Y, under perfectly competitive conditions and using constant-returns-to-scale technology. Manufactures, M, is likewise homogeneous and uses CRS technology, but is produced using specialised inputs, x. These intermediates are in turn manufactured

using composite factor services; the employment of which gives rise to increasing returns to scale, thus making the intermediates sector monopolistically competitive.

Let intermediates be costlessly assembled to produce the final manufacturing output, M, through a CES production function:

$$(1) \quad M = \left[\sum_i^n x_i^\rho \right]^{\frac{1}{\rho}}$$

where ρ measures the extent of product differentiation, that is, $\rho = 1 - 1/\sigma$; $0 < \rho < 1$; with σ, being the elasticity of substitution among different varieties. As shown in appendix 1, symmetry across the intermediates, x_i (demand consists of parameters and constant across firms), linear relationship between number of varieties, n and the intermediate composite bundle, B, and letting $\alpha = 1/\rho$, permit (1) to be reduced to :

$$(1)' \quad M = B^\alpha.$$

The productivity of specialisation is now indicated by α, that is, the greater is product differentiation (lower values of ρ and σ), the stronger are the gains of division of labour.

Letting the production of B likewise take the CES form, the price of bundles is determined by factor prices, that is, $P_B = f(\omega)$, where $f(\omega)$ is just the unit price of the resource composite, and ω is the vector of factor incomes. Thus, the relative supply price of the final manufactures, M, in terms of the numeraire, Y, is, $P_M M = P_B B$, and using (1'), this can be alternatively stated as:

$$(2) \quad P_M = P_B B^{1-\alpha}.$$

The supply price of M is expressed by equation (3) as a function of B, so that an increase in the employment of the composite factor leads to a rise in the final M price. However, a so-called *scale effect* is also introduced since greater specialisation in the production of intermediates brings about reduction in costs.

The impact of scale economies on factor incomes and voters' welfare can be gauged by first deriving the equilibrium in the goods sector. As earlier said, intermediate bundle, B, is produced according to a CES production function:

(3) $B = A_B \left(g_b L_b{}^{\rho_b} + (1 - g_b) \overline{K}_b{}^{\rho_b} \right)^{\frac{1}{\rho_b}}$.

The production of the numeraire good, Y, can be similarly expressed:

(4) $Y = A_Y \left(g_y L_Y{}^{\rho_y} (1 - g_y) \overline{K}_Y{}^{\rho_y} \right)^{\frac{1}{\rho_y}}$.

Setting $P_M = P_M^* T$, where P_M^* the foreign price of manufactures and T is equal to one plus the tariff rate, t, and using equation (2), the price of bundles can be written as:

(5) $P_b = P_M^* T B^{\alpha-1}$.

Substitution of eqn. (3) into (5) and using the equilibrium conditions for competitive markets, $w = MPL_b P_b$, $r = MPK_b P_b$, one can derive the equilibrium factor incomes in terms of inputs and tariffs:

(6) $w_b = A_b^\alpha \left(g_b L_b{}^{\rho_b} + (1 - g_b) \overline{K}_b{}^{\rho_b} \right)^{\frac{1+(\alpha-1)\sigma_b}{\sigma_b-1}} g_b L_b{}^{\frac{-1}{\sigma_b}} P_M^* T$;

(7) $r_b = A_b^\alpha \left(g_b L_b{}^{\rho_b} + (1 - g_b) \overline{K}_b{}^{\rho_b} \right)^{\frac{1+(\alpha-1)\sigma_b}{\sigma_b-1}} (1 - g_b) \overline{K}_b{}^{\frac{-1}{\sigma_b}} P_M^* T$.

Agricultural wages and capital incomes can be derived in a similar fashion:

(8) $w_y = A_y \left(g_y L_y{}^{\rho_y} + (1 - g_y) \overline{K}_y{}^{\rho_y} \right)^{\frac{1}{\sigma_y-1}} g_y L_y{}^{\frac{-1}{\sigma_y}} P_y$;

(9) $r_y = A_y \left(g_y L_y{}^{\rho_y} + (1 - g_y) \overline{K}_y{}^{\rho_y} \right)^{\frac{1}{\sigma_y-1}} (1 - g_y) \overline{K}_y{}^{\frac{-1}{\sigma_y}} P_y$.

Figure 1 illustrates, along the lines of Mussa (1974), the determination of optimal labour allocation between sectors given the value of the marginal product of labour (VMPL) in B and Y (defined by eqn. 6 and 8, respectively), with wages being measured in terms of the numeraire good, Y. As expected, the introduction of scale economies results in nonconvexities and spillovers which give rise to multiple equilibria. Closer examination of the slope of the VMPL curve for bundles reveal the competing forces that account for the three equilibrium, L_1, L_2, L_3, observed in figure 1:

(10) $\dfrac{dw_b}{dL_b} = A_b^\alpha P_M^* T \left\{ \begin{bmatrix} \left[-\dfrac{1}{\sigma_b} \left(g_b L_b{}^{\rho_b} + (1 - g_b) \overline{K}_b{}^{\rho_b} \right)^{\frac{1+(\alpha-1)\sigma_b}{\sigma_b-1}} g_b L_b{}^{\frac{-1+\sigma_b}{\sigma_b}} \right] \\ + \left[\dfrac{1 + (\alpha-1)\sigma_b}{\sigma_b} (g_b)^{\frac{\alpha\sigma_b}{\sigma_b-1}} L_b{}^{\alpha-2} \right] \end{bmatrix} \right\}$.

The region to the left of L_1, region I, displays the expected inverse relationship between the marginal productivity of labour and the labour-capital ratio. This is mirrored by the negative term in the RHS of eqn. 10, the so-called 'factor-intensity effect', or the 'intersectoral effect' as referred to by Ethier (1982). In region II, however, the positive second term which captures the 'scale effect' begins to dominate.[19] In a small country setting, L_1 and L_3 are stable equilibria.

Figure 1

As far as return to capital, r, is concerned, any increase in labour employed in bundle production, or the reduction in the capital-labour ratio can only lead to a hike in r_b, with the slope of $VMPK$ further rising with the strength of scale economies.

With L_1 as the starting point, consider now the effect of tariffs on overall welfare. The ambiguous effect of a price rise on real incomes is well known: real wage rises in terms of Y and falls in terms of B, but changes in welfare change depends on the composition of the individual's consumption basket; in contrast, rental income rise for

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[19] This scale effect may eventually be so strong, i.e. $\alpha \geq 2$, that the slope of V_b exceeds that of V_y, in which case, a negative price-output relationship arises. Thus region III is reached, and lower prices lead to greater output and thus, higher wages.

K_b, but fall for K_y.   Departing from the other stable equilibrium L_3, however, wage rises proportionately more than the rise in P_b, so that tariffs augment wages in both sectors.

3.4   Political economy of protection

Consumption & Individual preferences

We turn now to the structure of the political market, keeping the assumption of a small economy, with individuals sharing identical, homothetic preferences. Every individual is endowed with the same fraction of labor, l_i^j , and a varied fraction, γ_i^j, of capital, k_i . Labor is perfectly mobile while capital is sector-specific. Tariff revenues are equally redistributed by government in a lump-sum fashion.

   With preferences assumed to be Cobb-Douglas, an expenditure function can be specified of the form: $e(P_i,u) = \min\left[(Y + P_i X) - (l_i \tilde{\omega} + k_i \tilde{r}_i)\right]$; for $u = u(Y, X)$. Similarly, revenue functions can also be defined in terms of P_i , and factor endowments, Ψ , so that: $\varsigma(P_i, T, \Psi) = \max[Y + P_i X \mid (Y, X, \Psi)$ feasible].

   The small-country faces exogenously given world prices which are then set to one, so that equilibrium can be summarized by:

(11) $e(P_i, u) = \varsigma(P_i, T, \Psi) + I(T - 1)$;

where I , represent imports and defined as: $I = e_p - r_p$, and T, stands for tariffs.

   Total income in the economy is therefore the sum of real wages, $\tilde{\omega} = e_u^{-1}\omega$, real capital returns, $\tilde{r} = e_u^{-1}r$, and total government revenues, $\tilde{G} = e_u^{-1}t(I)$.

   In a *direct democracy model*, the optimum tariff is entirely determined by the median voter's preferences, which can be represented by an indirect utility function specified in the form of:

(12) $v^j(T, \gamma_i^j) = Z^1 + Z^2$,

where $Z^1 = n^{-1}[\tilde{\omega} + \tilde{r} + \tilde{G}]$; and $Z^2 = \left(\gamma_i^j - n^{-1}\right)\tilde{r}$, which refers to the extra share of rent earned, corresponding to the individual's extra ownership share of total capital stock.   As in Mayer (1984), changes in welfare occur through shifts in the value of

imports and the capital income share of the specific factor, over and above the average ownership. In equilibrium, the marginal cost of protection to the median-voter, in terms of dead-weight losses, should just be compensated by the marginal benefits in terms of any rise in income. That is, $Z_t^1 = Z_t^2$, where

(13) $Z_t^1 = (-)P_m t (d I)$; and

(14) $Z_t^2 = (\gamma_i - 1)(1 - g_b)P_m \dfrac{B^\alpha [\alpha(B_t / B)(1+t)+1]}{\Gamma \bar{k}_b^{1-\rho_b}}$;

with $\Gamma = \left(g_b L_b{}^{\rho_b} + (1 - g_b)\overline{K}_b{}^{\rho_b} \right)$.

Solving for t, the level of optimal protection is derived:

(15) $t^m = \left[\dfrac{(\gamma_i - 1)(1 - g_b)\left[1 + \alpha\left(B'\!/\!B\right) \right]B^\alpha}{(-)P_m \xi \left(\Gamma \bar{k}_b{}^{1-\rho_b} \right) - \left[(\gamma_i - 1)(1 - g_b)\alpha B' B^\alpha \right]} \right]$.

As expected, tariffs rise with the median voter's ownership share of the specific factor, the capital intensity of, and the degree of scale economies realized in B production. On the other hand, tariffs are dampened by level of imports, the elasticity of import demand, the level of capital stock and the extent of scale economies. Note that in the absence of scale economies, that is, $\alpha = 1$, equation (14) is simply $Z_t^2 = (\gamma_i - 1)(1 - g_b)BP_m(1+t)/\Gamma \bar{k}_b{}^{1-\rho_b}$, and equation (15) is transformed into the median-voter equilibrium tariffs which approximates the formulation found in Helpman (1995):

(16) $t_{CRS}^m = \dfrac{(1 - g_b)}{\bar{k}_b{}^{1-\rho_b}} \dfrac{(\gamma_i - 1)}{(-)(dI)} B$.

Equilibrium protection in the presence of scale economies is therefore higher relative to the constant-returns-to-scale case due to larger marginal income gains. However, as equation (15) shows, there is a critical level of scale economies which could tip the political equilibrium towards free-trade or export subsidies. This would suggest the presence of multiple equilibria in the political market, which will be discussed in the succeeding section.

Trade policy is thus completely determined here by the median-voter's evaluation of the tariff's net effect on her income. However, Mayer also took note of the possibility of

participation costs altering the identity of the median-voter. In the tariff-formation function and political contributions approaches,[20] for instance, where 'voting' can take the form of offering campaign contributions to an incumbent government, the median-vote belongs to the individual or group of individuals who provide the highest possible financial bid for their desired policy. Owners of sector specific factors, in fact, possess a powerful incentive to pool their votes and raise the funds that could induce politicians to set the tariff policy that maximizes the group's joint welfare. However, the effectiveness of the median-vote also depends on the willingness of government to represent the interests of consumers that are non-participants in this lobbying game.

The political support function (Hillman, 1989) and the political contributions approaches assume that governments do attach some weight to overall welfare, perhaps originating from the politicians' sense of civic duty, or from the political calculus that its electoral future ultimately depends on the voting support of this group in the general election.

In a generalized form, the government is thus formally depicted as one that sets the trade policy that maximizes its preference function consisting of aggregate welfare (weighted by a) and campaign contributions, $\$$, (weighted by b):

(17) $\quad G = aW + b\$$;

where, W is defined over the utilities of all individual as given by equation 12, and the level of lobbying-induced political support; $\$$, is equal to the welfare gains accruing to lobbies due to the shift from free trade to a protectionist regime, $W^{L,t} - W^{L,0}$. Equation (17) can therefore be rewritten as:

(18) $\quad G = aW + b(W^{L,t} - W^{L,0})$.

The greater is the weight attached to overall public well-being and the greater the deadweight loss attached to a given policy, the weaker is the power of the cash-sustained median-vote. In the political contributions approach, however, the analysis proceeds as if the opposite is true, that is, that protection is in fact, for sale, thus assigning a far

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[20] The tariff-formation approach is associated with the works of Findlay and Wellisz (1982), Brock and Magee (1978) and Feenstra and Bhagwati (1982), while the political contributions model is pioneered by Grossman and Helpman (1994).

greater weight to political contributions.[21] Still, the concern for overall welfare implies that the government incurs a cost in the supply of protection so that in equilibrium it must be true that the marginal increment in $\$$ just compensates the marginal rise in social costs:

(19) $\$_T = -aW_T$.

Lobbies, on their part, recognize the welfare-maximizing behaviour of government and anticipate that other interest groups likewise have the motive to contribute. Taking the financial offers of these groups as given, the optimum contribution schedule of sector i's lobby therefore allows government to maximize equation 18, which then induces it to produce the policy that maximizes the joint net-of-contribution welfare of lobby i:

(20) $V^L = \left(W^{L,t} - W^{L,0}\right) - \$^L$;

where:

(21) $W^L(t) = \phi_i\left(\tilde{\omega} + \tilde{r} + \tilde{G}\right) + \left(1 - \phi_i\right)\tilde{r}_i$.

A critical assumption made in this model is that of high concentration of the ownership of the specific factor, ϕ_i, in the non-numeraire sectors, so that the share of the lobby in total deadweight loss is negligible. This implies that groups are interested only in maximizing income r, and have no incentive to influence the prices of the other consumption goods with the view of reducing deadweight loss. Despite non-competition among lobbyists to influence t_i, total contributions remain positive due to the threat of free trade in sector i. If lobby i chooses not to contribute, for instance, then with $\sum_{i=1}^{n}\$_i = 0$, government will set the level of tariffs that maximizes overall welfare, that is $t_i^* = 0$.

In equilibrium, the marginal cost of protection incurred by government, must be compensated by contributions, and the marginal level of contributions, in turn, must just be equal to the marginal benefits accruing to the lobbies. That is,

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[21] Grossman-Helpman (2002) provides a discussion of the determinants of a, citing for instance the number of informed relative to the uninformed   voters in the population, and the effectiveness of campaign expenditures in influencing the choice of the impressionable voters.

(22) $\$_T = W_T^L$.

The marginal cost and benefits could thus be expressed in a similar way as equation 13 and 14:

(13)' $Z_t^{1\prime} = (-) a P_m t (d I)$; and

(14)' $Z_t^{2\prime} = b\left[\phi_i P_m t (dI) + (1-\phi_i)(1-g_b) P_m \dfrac{B^\alpha [\alpha(B_t / B)(1+t)+1]}{\Gamma \bar{k}_b^{1-\rho_b}} \right]$.

In the special case presented by Grossman and Helpman, contributions are assumed to be "truthful" in the Bernheim and Whinston (1986) sense, so that campaign contributions, $\$$, reflect the full and true worth of protection for the lobbies, that is,

(23) $\$ = W^{L,t} - W^{L,0}$.

Consequently, one can arrive at a closed form solution, where political rents are passed on fully to government who then sets the tariff that maximizes its welfare. Government welfare can now be expressed as the sum of aggregate and lobby group's welfare:

(24) $G^{GH} = aW + b\left(W^{L,t}\right)$.

Substituting equations (12) and (18) into (21), the government's objective function can now be stated as:

(25) $V^{GH}(T, \gamma_i^j) = a\left(\tilde{\omega} + \tilde{r} + \tilde{G}\right) + b\left[\phi_i\left(\tilde{\omega} + \tilde{r} + \tilde{G}\right) + (1-\phi_i)\tilde{r}\right]$.

The first-order conditions produce the following equilibrium tariffs:

(26) $t^{GH} = \left[\dfrac{(1-\phi_i)(1-g_b)\left[1+\alpha\left(B'\big/B\right)\right]B^\alpha}{(-)P_m\xi(a/b+\phi_i)\left(\Gamma\bar{k}_b^{1-\rho_b}\right) - (1-\phi_i)(1-g_b)\alpha B' B^\alpha} \right]$.

As in the CRS case of the original Grossman-Helpman model, equilibrium tariffs are higher, the greater is the concentration of ownership of the specific factor, the bigger is output, the less government care about aggregate welfare, and the smaller are the deadweight losses as implied by the import elasticity of demand. And similar to the tariff equilibria in the Mayer model, the presence of variable returns to scale leads to higher equilibrium levels of protection relative to the CRS case.

3.5   Political equilibrium with economies of scale

The presence of scale economies is known to magnify the standard impact of goods prices on incomes. These income effects, in turn, are central to the shaping of voters' preferences in the political economy literature. Hence, increasing returns to scale in *B* production can only be expected to shift the political equilibrium upwards. This is evident in equation 15 and 26, with political tariffs being positively correlated with the scale parameter, α, and the size of output *B*. The scale effect works to increase the marginal productivity of factors as output expands, thereby boosting the marginal benefits of protection, and reducing its marginal costs.

Beyond stating the obvious, however, the exercise of allowing variability in returns to scale enables us to observe the effects of tariffs on the growth trajectory of the economy, which in turn, feeds back into the determination of the voting equilibrium. Scale economies can reach a critical point, for instance, where any upward movement in tariffs can usher the economy towards a break point, catapulting it to a higher level of industrialization. Once there, the valuation of political pay-offs can also be expected to change, leading to another optimal policy set.

To examine the impact of IRS manufacturing on both the real and political sectors, figure 2 presents a graphical composite of the production and political equilibria as described in sections 2 and 3.

The lower left quadrant of figure 2 yields the equilibrium employment level as function of tariff, *t*. As we impose tariff on the system, the *VMPL* curve shifts leading to greater allocation of labour in the *B* manufacturing sector. The labour allocation curve *A* and *B*, correspond to the Mayer (median-voter) political equilibria depicted in the upper right hand quadrant of figure 2. Recall that in the region around L_1, scale effects are weak so that the economy moves along the production possibility frontier only marginally with protection. The marginal benefit curve, $\mathbf{Z}_2^{L1}$, slopes upward due to Stolper-Samuelson effects, but at a falling rate, as expansion of *B* output results to diminishing returns in the increased employment of L_b. The marginal cost curve, $\mathbf{Z}_1^{L1}$, is also positively sloped to a degree dependent on the elasticity of demand of imports and the intensity of factor use in both *B* and *Y* production. Exactly where the marginal cost curve is positioned relative to the free-trade origin depends on the share of the IRS good in overall consumption.

Figure 2   Median-voter tariffs and IRS
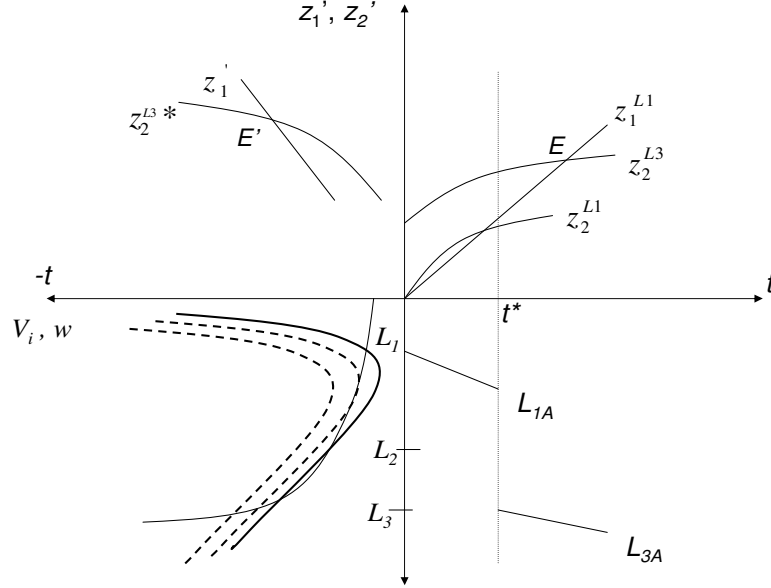
To the left of t^*, any interior solution in the political market corresponds to a stable production equilibrium.[22] Note that beyond t^*, any rise in tariff leads to a break in real equilibrium which brings the economy to L_3 and along the allocation curve L_{3A}. Scale economies begin to dominate at this point, causing an economic take-off, and pushing the economy further up in its production frontier, towards a high-manufacturing output equilibrium.   Once import-substitution gives way to production for exports, political preferences could be expected to shift towards trade liberalisation and/or export subsidies. This coincidence of multiple production and political equilibria can be shown by the Mayer and Grossman-Helpman equilibrium tariffs in eqn. 15 and 26. There is a high tariff equilibrium coinciding with weak scale economies, and a low tariff equilibrium, whenever scale effects exceed the product of import demand elasticity and the amount of capital stock, $\xi \Gamma \bar{k}_b^{1-\rho_b}$.

The political and production break-points, however, need not necessarily occur simultaneously. The tariff equilibrium, E, depicted in figure 2, for instance, assumes that

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[22] Marshallian stability conditions requires that the marginal benefit cuts the marginal cost curve from above.

the *IRS* good remains an import good, despite the leap into the high-growth path, *L3*. The result is therefore a further rise in equilibrium protection since every hike in tariffs yields higher marginal benefits due to scale economies. At point, *E'*, on the other hand, the political break-point is attained simultaneously with the manufacturing take-off, so that the median-voter produces for exports and her political preferences are reversed in favor of free-trade, or in favor of export subsidies at the limiting case. As in the previous setting, the marginal benefits of subsidies are increasing but at a decreasing rate in this case. The marginal cost curve is also positively sloped as the tax burden rises with the level of optimal subsidies, which in turn, is a function of the elasticity of demand for the country's exports.

Notice, too, how higher concentration of capital ownership, $\left(\gamma_i - n^{-1}\right)r_b$, shifts demand, $\mathbf{Z}_2^{L3}$, upwards, pushing the political equilibrium more quickly through and past the breakpoint. This may imply that greater deviation in capital endowments among the population correspond to a faster pace of agglomeration. Country size also does matter; it shifts $\mathbf{Z}_2^{L3}$ so that protection becomes more effective in transforming a bigger economy from an agricultural to a manufacturing good producer. Moreover, one can also imagine how a terms-of-trade shock could, for instance, shrink the resource base to finance the expansion of the *IRS* sector, increasing the slope of the *VMPL* curve (eqn. 10), and reducing equilibrium tariffs (eqn. 15).

The conjunction of the real sector equilibria with lobbying-driven optimum tariffs is shown in figure 3. As in the Mayer direct-democracy model, the demand and supply of protection is derived from the tariff's marginal benefits and costs (eqn.s. 13' and 14'), but in this case, the demand schedule represents the lobby's willingness to contribute or bribe for every level of tariffs, while that of supply depicts the weighted marginal increment of societal costs. We depict here the special Grossman-Helpman case where lobbies are assumed to be truthful in their contributions, thereby allowing politicians to capture the rents produced by the 'sale' of government policies.

Figure 3 Grossman-Helpman tariffs and IRS
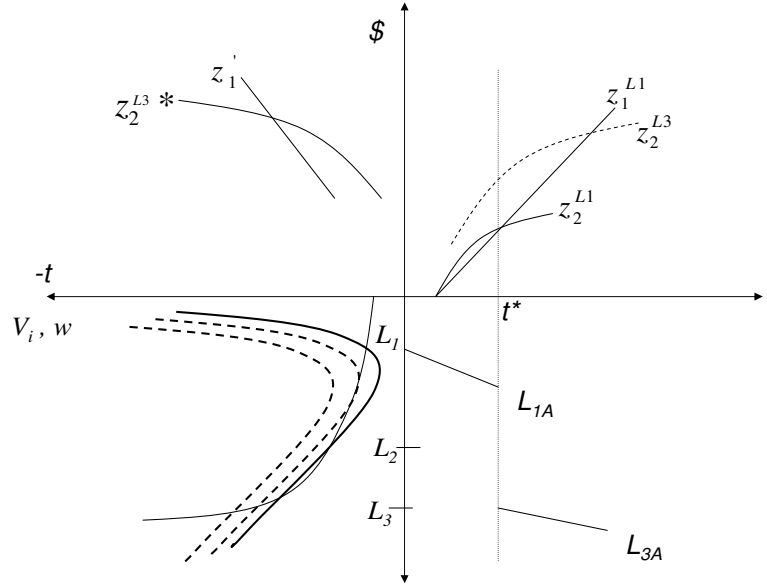
$\$$

$z_1^{'}$

$z_2^{L3} *$

z_1^{L1}

z_2^{L3}

z_2^{L1}

$-t$

t

t^*

V_i, w

L_1

L_{1A}

L_2

L_3

L_{3A}

Size is once again crucial in determining whether protection keeps the economy in the status quo or moves it to a higher growth path. A bigger industry is obviously more likely to realize the scale economies that amplify the impact of higher prices on incomes, hence, raising the productivity of every single dollar spent on lobbying and shifting its demand curve, $\$_b$, upwards. Producers could also be seen as acting with foresight, that is, they increase their level of contributions knowing that the jump to L_3 would result to an income level still higher than that earned at t^*. Once again, the interior solution in the political market is ambiguous once the production break-point is reached, since the reversal of policy preferences depends not only on where in the production possibility frontier the economy is catapulted, but also on the weights attached by government on overall welfare relative to industry profits. As in the Mayer case, a high-manufacturing output equilibrium could sustain an even higher level of protection if local production costs remain higher than world prices, and free trade or negative tariffs whenever the composition of politically powerful lobbies is dominated by exporters.

Politicians may likewise attach a political value to agglomeration. In practice, in fact, governments often cite the creation or maintenance of a critical industrial base an important policy objective. It is a source of prestige and economic stimulus which

augments the welfare of the policymaker, so that even in countries without active private sector lobbying, high industrial tariffs can still be explained by government welfare-maximizing behaviour. In this case, the incumbent politician could be described as being vision-growth-prestige oriented, attaching a weight on manufacturing incomes, independent from the desire to accumulate financial receipts. Equation 17 can thus be modified to:

$$(27) \quad V^{\tilde{G}} = a_1 W + a_2 NIC + b\$.$$

The imposition of positive protection even in the absence of campaign contributions in Figure 3, takes the industrialization motive, *NIC*, of politicians into account. Alternatively, there may be significant political costs attached to a free trade policy that embeds the economy into a low-growth poverty trap. Rationality dictates that lobbies, who are perfectly informed about the motives of politicians, will begin paying for tariffs only beyond that minimum level of protection which is voluntary and independently supplied by government due to reasons cited above.

An alternative interpretation of the Grossman-Helpman model in the presence of a growth-minded incumbent, is to consider the level of protection as being positively linked to the level of investments domestic firms are willing to undertake for expansion. One can thus maintain the original formulation in equation 17, but re-label contributions as investible funds. Such a view is parallel to political economy models where the provision of protection is dependent on a foreign firm's readiness to invest on the local economy. It is likewise consistent with several recent episodes of reform, where governments agree to maintain protection, or exclude sectors from liberalisation on the condition that firms display their growth potential by means of immediate investments or by tapping foreign alliances that would ensure the availability of investment capital.[23] Clearly, the strength of scale economies would in turn determine the ability of lobbies to meet such demands. Under these circumstances, a tariff-ridden equilibrium augments IRS production, and lobbying is virtuous as it moves the economy towards pareto-optimality.

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[23] The Philippine government, for instance, agreed to place petrochemicals in the temporary exclusion list of AFTA.

The conclusion reached so far should however be tempered by the likelihood that protection may still lodge the economy into a low-growth path. Some of the critical factors determining whether this takes place or not, are the nature of the political interactions that brought about the policy choice, and the inherent structure of the economy. Whenever the political equilibrium, for instance is solely or predominantly demand-driven, the probability of being trapped in the no-industrialisation path is likely to be greater. This is simply because national scale economies thrives in an environment where public resources are invested in activities, such as infrastructure, human capital formation, creation of an efficient bureaucracy, etc., that facilitate, or lower the costs, of private enterprise. Clearly, such an environment is forthcoming only when national growth and industrialisation ranks highly in the preferences of public leaders. On the other hand, even if the policy suppliers possess the proper attributes, the production structure and size of the economy may be such that only with great and costly leaps in tariffs can the breakpoint be reached. This may not be the case when industrial ambitions are proportional to the nation's means. There are historical illustrations however, of over-shooting industrial targets (i.e. development of an aircraft building industry in Indonesia, or the space program of China) which have had crippling effects and diverted scarce capital resources away from activities less incompatible with the country's comparative advantages.

3.6 Summary and conclusions

Scale economies have always featured prominently in the public debate surrounding the desirability and the conduct of industrial and trade policies. Yet the way policy choice is traditionally depicted in political economy literature seems to negate the importance of returns to scale and its weight on voters' and leaders' preferences. This paper is an attempt to capture at least some aspects of the policymaking process in the presence of economies and diseconomies, looking at how the behaviour of political players changes and the potential role of politics in industrial transition. The analysis shows the manner in which political interactions can comprise as a shock in the real sector, pushing the economy towards a breakpoint and into a higher level of manufacturing activity. Multiple equilibria, however, imply that the political equilibrium may not be global, so

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that no guarantee exists that the lobbying that leads to higher tariffs leads to higher incomes as well. The larger is the initial size of employment, and/or the higher the returns to scale (i.e. via higher public expenditures in infrastructure, etc.), the greater is the likelihood of lobbying-driven agglomeration. Changes in the real sector, on the other hand, such as a terms-of-trade shock may likewise lead to permanent political changes. It reduces the net returns of lobbying (through lower scale effects) and raises the costs of higher protection, causing a reduction of equilibrium tariffs.

One trajectory possible in our model fits Rodrik's (2001) observations. Countries may be endogenously protectionist as they industrialize, shifting from a protectionist to a free trade stance as they become exporters of manufactured goods.

The distribution of factor endowments across the populace seems to matter, too, with a greater concentration of ownership potentially spurring a faster pace of agglomeration.[24] In addition, the results imply that larger countries can be expected to be more protectionist in manufacturing sectors where they remain net importers. Some attention is also placed on the crucial role of the supply side of the political market. The nature of the incumbent government, that is, whether it is vision-growth-oriented, or passive/kleptocratic, on one hand, determine the level of public investments poured into overall nation-building, and consequently, the potential scale economies that can be generated by domestic entrepreneurs. On the other hand, it sets the pattern of, and the rules governing the political interactions between lobbyists and public officials. Lobbying may come in the form of investment pledges, for instance, whenever a government has a predominantly industrialist agenda. This is because the decision to protect an industry could be conditioned on the ability of firms to display its growth potential or its contribution to industrial employment.

What the results also illustrate is that although the presence of scale economies could intensify the demand and supply of higher industrial tariffs, it may also help ensure that protection stays temporary. As production and productivity expands, the economy could shift to a higher growth path but with lower or zero incidence of protection. The model discussed here shows that even when strong industrial lobbies are politically

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[24] However, the distributional burden then faced by the government is also likely to rise, so that public resources are diverted away from IRS-enhancing investments, stifling overall growth in the process.

active, one could expect downward shifts in tariffs, as soon as the critical industrial scale is reached, and the role of trade policies in output expansion is reduced or becomes redundant. Put in an alternative way, while tariffs may finance industrialisation, growth in manufacturing could eventually exert a downward pressure on protection. This corresponds to historical trends of higher manufacturing growth and lower levels of protection through time, not only in industrialised economies but also recently among the newly-industrialising countries, or NICs. The period of rapid liberalisation in ASEAN countries in the late '80s, for example, was preceded by almost two decades of significant growth in manufacturing.[25] The increased pace of international specialisation and foreign direct investments clearly played critical roles as well, so that the natural extension of the present analysis points towards the implications of international scale economies on the political determination of industrial protection.

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[25] Indonesia's share of manufacturing in total GDP rose from 11% - 21% from 1975- 1992, while that of Malaysia and Thailand increased from 16% to 29% and 20% and 28%, respectively (ADB, *Key Indicators*, 1994, Manila).

Appendix 3.1

It is commonly assumed in literature that there are a large number of (symmetrical) intermediate firms (i.e. $x_i = x \forall I \in n$) so that equation (1) can be simplified to:

(1) $M = n^{1/\rho} x$.

The production of x involves a fixed, F, and a variable, h, component, so that the total cost function is given by:

(2) $c(x) = (F + hx) f(\omega)$,

where ω is a vector of factor returns and $f(\omega)$, is the price per unit of the composite factor services. Firms set marginal set marginal revenue to marginal cost, and free entry drives profits to zero, hence, the profit maximising price:

(3) $P_x = f(\omega) h / \rho$.

The assumption of symmetry across x producing firms, implies that P_x is the price of each variety of input that is produced. Using (1.c), one can then derive the supply of x:

(4) $x = (F/h)(\sigma - 1)$.

Since each variety of intermediates is produced by only one firm, the variations in industry size is caused by the entry and exit of firms producing identical output of x.

Let B denote the bundle of intermediate produced by each firm, that is,

(5) $B = \sum_{i=1}^{n} B_i = nx^\rho$.

Using (1.b), (1.d), and (1.e), one can derive the unit cost of producing the intermediate bundle B:

(6) $c(\omega) = f(\omega)(F\sigma)$.

With equation (1.e) and (1.f), the model can be expressed in reduced form, so that it is possible to rewrite equation (1.a) as:

(7). $M = n^Z x = B^Z$; where $Z = 1/\rho$.

Chapter 4

The Political Economy of Protection in a Customs Union: What Drives the Tariff Structure of the EU?[*]

Abstract: We examine the political economy underpinnings of EU import protection. This includes the relatively standard approach of examining the pattern of tariffs. However, we also introduce the use of general equilibrium estimates of the direct and indirect marginal impacts of protection at the sector level for econometric estimation of the revealed pattern of policy weights. This GE approach yields estimates of political weights based on economic effects. The resulting weights lend insight into relative protection of agriculture and manufacturing. We also find that the strength of downstream linkages matters for policy weights and rates of protection, as does the national posture of industry.

4.1   Introduction

The current structure of trade protection in the EU has several determinants that can be traced to historical factors, resource constraints, and political economy arguments. Analyses involving the latter, however, have been relatively scarce due to the complexities inherent in a process that engages a multitude of actors not only from Member countries, but also from the central institutions such as the European

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[*] **This chapter is based on a paper co-authored by J. F. Francois and D. Nelson.**

Commission. The literature has instead focused attention on the determination of trade policy in the US.

In the context of the European Union, policies are influenced by both national and regional factors in ways which are hard to detect. Explicit lobbying behaviour in the Union, for instance, is particularly difficult to track. Unlike in the US, campaign contributions in most EU countries are heavily restricted, if not forbidden, so that lobbying comes in much less overt forms. This is crucial because in standard endogenous protection models, the amount of lobbying directly translates into weights attached by government to industry interests. As government choice hinges essentially on the issue of trade-off between competing societal and private interests, these weights determine where the policy chips will fall.

Even when data on campaign contributions are available, recent empirical work on US trade protection illustrates the various problems involved in capturing the extent of lobbying activities. In a survey of empirical approaches on endogenous protection, Gawande and Krishna (2001) discuss the Goldberg and Maggi (1999) and Gawande and Bandyopadhyay (2000) tests of the Grossman-Helpman model, where data on political contributions of corporate institutions are used as lobbying indicators. Problems pointed out by Krishna and Gawande include the difficulties inherent in isolating that part of the total financial support particularly aimed at influencing trade policy, and the exclusion of non-corporate sources of electoral financial support, such as labor unions. This may have resulted in misspecifications and underestimation of the political strength of private interests, and thus may account for some curious results found in the literature. One such result is the extremely high estimate of the weights government attaches to overall welfare relative to industry rents, spanning from 100 to 3000, and the other is the very low value of total political contributions (in the range of $30 million) relative to the large deadweight loss and producer surplus stemming from protection. The former counters the expectations of the theoretical model while the latter hints to the magnitude of underreporting of private sector lobbying, and to the amount of indirect influence peddling never observed directly at all.

Given the prominent role assigned to lobbying, attempts must nonetheless be made to indirectly craft acceptable lobby indicators if the Grossman-Helpman test is to be extended to more countries. Several approaches emerge. One is to simply assume that

industries fulfilling a certain set of criteria are more likely to be politically organized than others. In Gawande, Sanguinetti and Bohara (2001) work on Mercosur, for instance, they take industries whose imports surpass the sample mean as actively lobbying for protection. Another method is to equate membership in any industry-related organization with lobbying, as in Mitra, Thomakos and Ulubasoglu (2004) in their study of Turkey. Cadot, Grether and de Melo (2003) instead illustrate an approach where the classification of industries as being politically active or passive is endogenized in a multi-stage iterative procedure. Here once again, the extent of import penetration faced by sectors takes central stage.

One problem raised by Eshafani and Leaphart (2001) refers to the manner in which the coefficient of the output-import ratio is specified as function of political organization alone, thereby giving the lobby indicator all the chances to prove significant. It becomes even trickier in cases where certain industry characteristics such as industrial concentration and import penetration are used as proxies for lobbying activity, given the many alternative channels by which these variables may affect the policy preferences of government. Also, the dilemma posed by the high weights attached to overall welfare remains, because even taking the lowest estimates derived by Cadot, Grether and de Melo,[26] the weights are such as to make any lobbying prohibitive. The question then lingers, what drives protection?

We re-examine this problem in this paper, and follow an alternative route to our goal of assessing the relative importance of industry against overall interests in the determination of trade policy in the EU. We adopt the Hillman (1989) and Grossman-Helpman (1994) notion of a government trading-off the industry rents stemming from protection against the losses accruing to the general population, and attempt to approximate this ordering of preferences by looking at the economic impact of actual government action as revealed by the structure of protection. Specifically, we back out the weights implied by the marginal welfare effects of the set of import policies in the EU, building on the partial equilibrium approaches of Gardner (1987), Tyers (1990) and

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[26] They find, for instance, that the weight given by government to social welfare relative to contributions is 5.1. This implies that each lobby should contribute $5 for each dollar of deadweight loss.

Anderson (1980), as well as the general equilibrium approach of Tyers (2004).[27] Employing a numerical general equilibrium model of the EU, we estimate the direct marginal effect of sector-level protection on protected industries, the indirect effect on upstream and downstream industries, and the effect on overall welfare. With these marginal effects as a starting point, we then econometrically calculate the apparent weights of industry in policymaking given the current tariff structure. We also aim for a more detailed view of the EU political market by further deconstructing these weights along the lines of industry nationality and other related sector characteristics. Unravelling national preferences is particularly important in the EU context, because while the supply of regional protection obviously corresponds to the sum of individual national demands, the common trade policy in the EU and the complexities surrounding it conceal the interplay of private, national and aggregate regional interests.

This approach has a number of clear advantages. First of all, the effects of protection on overall welfare are fully captured, and are not solely limited to tariff revenue effects as implied by import demand elasticities. Hence, the valuation of the marginal costs and benefits of protection more adequately takes into account the economy-wide repercussions of sectoral policies. The policy weights are also backed by data. Consequently, unlike previous empirical studies, the values we obtain for these weights tie in with theoretical expectations: revealed policy weights given to industry profits, in general, tend to be around 2 to 3 times that assigned to national income or welfare. We also find that the high protection received by an industry is not necessarily always explained by greater political value attached to that sector. Indeed, our results show that the policy weights of less protected sectors are comparable to those that enjoy high protection. Once again, these outcomes may have been the product of a better coverage of aggregate welfare effects, so that tariffs are not only explained by sectoral profit gains but by the societal costs of protection as well. In the context of a customs union such as the EU, we also find that nationality matters, so that industries important to certain Member States in terms of relative output shares, consistently acquire higher levels of protection. Finally, the agricultural bias of EU protection emerges as a by

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[27] In general, the partial equilibrium and general equilibrium computational literature has used numerical models to calibrate policy weights for use in numerical modelling. In contrast, here we use a numerical model to estimate raw marginal policy impacts, but then turn to econometrics for analysis.

product, in part, of a tendency to assign importance to the strength of intermediate linkages, with upstream industries receiving relatively lower tariffs weights for a given policy weight.

We have organized the paper as follows. Section 2 provides background. In Section 3 we examine basic patterns of EU import protection, using a relatively standard political economy framework for testing the relationships between sectoral tariff variations and selected industry characteristics identified as determinant by theory. In Section 4, we then examine what drives the observed patterns by employing a computational model to produce estimates of the general equilibrium marginal income effects given the actual rates and pattern of protection and production across the EU. From these marginal estimates, we estimate econometrically the implied weights for individual sectors relative to the weight assigned to overall economic welfare. This allows a ranking of industries according to the assigned relative weights. In Section 5 we explore how national and EU-wide industry characteristics, especially the nationality of various industries, bears on the determination of the EU-wide industry coefficients. This provides some indication of the individual policy preferences of Member States. In Section 6 we offer some final observations, and then conclude.

4.2   Background

The evolution of European tariffs, as shown in Figure 1, reveals not only trends in trade protection, but also gives some indication of the liberal and protectionist forces at play across the continent. The 1968 common external tariffs (CET) of 10.4% is the arithmetical average of the Italian and French high tariffs (16.8% and 15.3%, respectively), and the lower ones of Germany and the Benelux countries (5.8% and 8.7%). The same differentiation can be seen in the old EFTA as well, with the UK and Austria being relatively more protectionist (14.9%, 11.4%), compared to their Scandinavian counterparts (Sweden, 6.3%; Denmark, 5.2%).

After four and one-half decades, tariff protection in industrial goods has markedly declined in importance, with the simple average CET posting at a historically low 4.1% in 2001. However, aside from tariff peaks in chemicals, footwear, transport vehicles, more opaque protectionist instruments have been introduced, so that when these non-tariff

barriers are accounted for, the rate of overall protection almost doubles to 7.7% (Messerlin, 2001).

Agricultural protection is typically a different story, and in the European case, it even merits a distinct Community-wide sectoral policy, the Common Agricultural Policy (a.k.a. the CAP). Free internal agricultural trade has been accompanied by a substantial increase in external protection that for years has proven to be resistant to any reform. Liberalization did make some headway in the 1990s[28], but Messerlin still reports a high overall protection rate of 31.7%.

Figure 1 Evolution of tariffs for selected EU-12 countries
(Simple Average MFN tariffs for industrial goods)
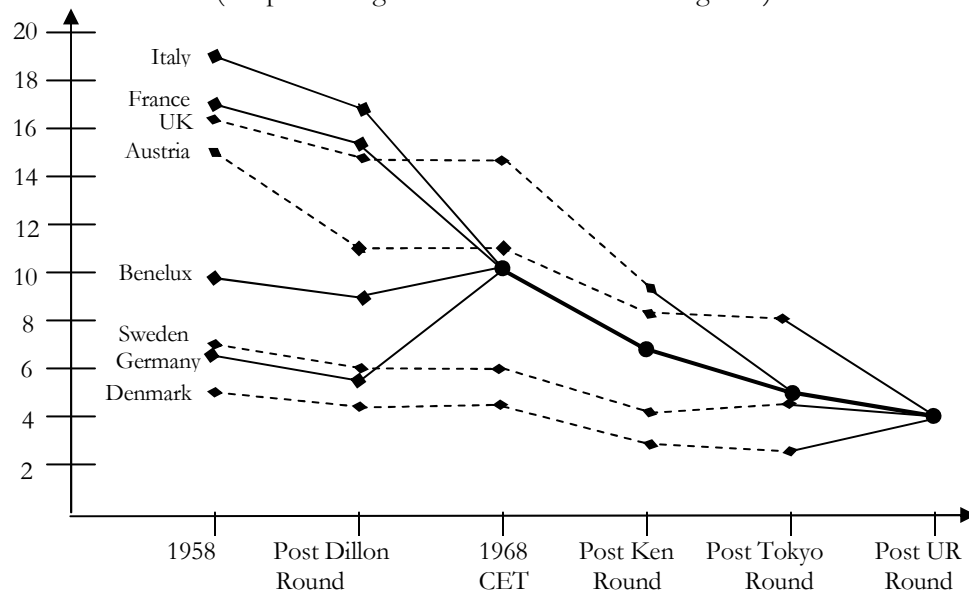
Source: Data from 1958 – Post Kennedy Round, compiled from Resnick and Truman (1975|), p. 63;
post-Tokyo Round tariffs from Greenaway, 1983, p. 95, post- UR tariffs from Pelkmans, 2001, p.250.

Table 1 in the Appendix presents data on EU applied import protection, import shares, and output shares for 2001.[29] Processed sugar and dairy products, which were excluded from the 1992 CAP Reform, register some of the highest rates of protection, at 110%, and 38% respectively. Processed rice production is likewise heavily protected

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[28] See Pelkmans (2001), chapter 11, pp. 219 -222.

[29] The source of these data is discussed below, in Section 3.

(108%), as is beef (46%). Tariff peaks in the manufacturing sector are fewer in number (and except for trucks, mostly agro-related: processed foods, beverages and tobacco) and at much lower rates.

In terms of output shares, services dominate the EU, with 62 percent of output by value. In manufacturing, the four largest sectors in the EU, in terms of the sectoring scheme of our data, are chemicals, other machinery, motor vehicles, and electrical equipment. They account for almost 50% of manufacturing output value and 16% of all output. In each of these sectors, Germany is the largest producer. However, Germany is likewise a major producer of some important agricultural sectors: it supplies 22% of total production of milk and dairy products, 44% of oil seed oils, 25% of other grains and 23% of the most politically sensitive product, sugar. Italy's interest is particularly concentrated in textiles (supplying 24% of output), apparel (35%) and leather (includes footwear, 43%). However, compared to other EU Members, these industries account for a greater share in Portugal's total output. In other tariff peak products such as rice, Italy (supplying 54%) and Spain (31%) greatly benefit, while in meat, the four big members: France (18%), UK (16%), Germany (16%), and Italy (12%), receive the most producer surplus from protection.

Early empirical tests on the European pattern of protection have shown that despite the differences in the market and production structures across members, the level of Community tariffs did not significantly change the relative protection between different sectors. Constantopoulos (1974) noted that while European countries have followed different tariff regimes, the national structure of protection in the 6 original EEC countries did not actually differ very much. Her results also show that extra-EEC protection displayed positive correlation with the relative share of unskilled labor and the level of R&D content. This implies that regardless of differences in specialization, the same Stolper-Samuelson effects seemed to be at play in the determination of trade regimes, and that some congruence of industrial policy goals existed among the original Members.

More recent analytical and empirical work also underscores the role of political economy determinants. Viewing trade protection from a political economy standpoint entails not only an understanding of individual preferences over a range of policy choices, but also information on how these preferences are aggregated and conveyed

through actions or interventions in the political arena. Since most endogenous protection models are demand-driven, this characterization of the manner in which competing interest groups wield influence and express their political demands is a critical element in any analytical exercise. In the absence of sufficient factual data, the approach often taken is to refer to readily observable industry characteristics that may influence the effectiveness of lobbying behavior or strengthen the political weight of sector interests. Examples of properties that map well with political influence, and hence, with protection trends, are those that facilitate collective action among producers. A high concentration of ownership, for instance, implies few players and thus less likelihood of free-riding. Greater industry size, on the other hand, raises the stakes involved in cooperation among producers to secure protection.

There are models of endogenous protection that instead stress the supply incentives, such as the electoral need of governments to win as many votes as possible. In this instance, total employment (i.e. voting strength) of the sector is key. Still others draw attention to the (conservative) politicians´ aversion to changing the prevailing level and distribution of income, so that tariffs are used to compensate for the income shifts brought about by unemployment or surges in import penetration. Thus, it is the changes, not the composition or the absolute levels of employment and imports, which explain the supply of protection. However, evidence on the extent and direction of tariff effects associated with some industry characteristics is ambiguous. Consider for example the case of the role of industry size. Larger industries are said to be politically important because of the votes they deliver. Hence, one can expect to find higher rates of protection in larger industries. (Finger, Hall & Nelson, 1982; Lee & Swagel, 1997). On the other hand, these sectors face more collective action problems, so that tariffs are likely to be lower (Trefler, 1993). Cadot, de Melo & Olarreaga (1999) also predict protection to drop in these industries as a result of general equilibrium adjustment in the labour market[30]. In the Grossman-Helpman model (1994), industry size is not at all important if sector lobbying is zero. There is also an endogeneity problem, as industries that receive protection will then expand.

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[30] Wages, and production costs rise because of the output increase initially triggered by tariffs, so that eventually the demand for protection falls.

In recent empirical work on the EU, Tavares (2004) tests the explanatory power of political economy determinants cited in the literature but embeds these in alternative political economy modelling frameworks in order to determine which model works best to explain the level of regional protection. He formulates different model specifications that reflect the degree of European integration, with lobbying activity being more regionally oriented the more the policymaking process resembles that of a unitary state. The author finds that external tariffs from 1987-1999 correlate highly with the number of firms (-), wage rate (-), labor cost share (+), the import penetration ratio (-) and the export share (-). Results also support the hypothesis that the movement towards deeper integration, ushered in by the 1987 Single Market programme, did lead to a more centralized tariff-setting process. Technically, this means that the specification wherein national size or influence do *not* play a role (i.e. industry characteristics are merely summed up or averaged to form the EU characteristics used for estimation), would seem to explain the structure of protection better than those where the preference of the decisive country voter is what counts. In an earlier work however, Tavares (2001) reported opposite results. He then reported that policymaking reflects bargaining between members who are themselves influenced by national lobbies. In fact, the best specification the author finds in that paper is one where the exogenous variables are weighted according to the share of votes accorded to each country in the Council of Ministers. This implies, for instance, that the preferences of larger countries, having more votes, are given more weight in decision-making.

4.3   Tariffs and Industry Characteristics

As a preliminary step, we now revisit the basic approach of the existing literature with regard to tariff patterns. We focus on relationships between protection and some of the political determinants earlier mentioned, testing for the importance of nationality on the sectoral variation in tariffs. In particular, we examine the role of industry size both EU-wide and with respect to the 12 individual national economies[31] making up the EC12. In

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[31] Namely: Belgium (Bel), Denmark (Den), Finland (Fin), France (Fra), Germany (Ger), Great Britain (GBR), Greece (Gre), Ireland (Ire), Italy (Ita), Luxembourg (Lux), Netherlands (Ned), Portugal (Por), Spain (Spa), and Sweden (Swe). As Austria, Sweden, and Finland were outsiders when current rates were set, we leave them out of the present assessment.

both the adding-machine and in the Grossman-Helpman models, size is expected to enhance the political value of industry rents to national leaders, who collectively exercise tariff-setting powers in the Council of Ministers.[32]   In theory, large industries are hindered only by free-riding in launching an effective lobby. In practice, as long as the stakes are high enough, even with many firms, the collective action problem is solved through industry associations, cooperation across lobbies, and leadership by the very large firms, so that rent-seeking activities extend to influence the regional agenda-setting body (European Commission) as well. Tavares quotes Lehmann's (2003) report that in 2000, about 2,600 interest groups were active in Brussels, composed of European trade federations ($\pm$30%), commercial consultants ($\pm$ 20%), European companies ($\pm$10%), national business (10%), European NGOs ($\pm$10%), labor organizations ($\pm$10%), regional representations ($\pm$5%), international organizations ($\pm$5%), and think tanks ($\pm$1%).

We also include a variable for strength of downstream linkages, INT_SHARE. This variable measures the share of output that goes to intermediate rather than final demand, and is based on the intermediate use matrix included in our social accounting data. As pointed out by Cadot, de Melo and Olarreaga (2004), input-output linkages introduce inter-sectoral rivalries, and it thus becomes a point of interest how government weighs the welfare of upstream against downstream industries.

Tariff and protection data sources

For our estimates, we work with a set of integrated social accounting data that combine import protection with input-output structures, intermediate and final demand, bilateral trade flows, and tariff protection. These are the global social accounting data organized by the Global Trade Analysis Project (GTAP), a research consortium that includes international organizations like the World Bank, OECD, European Commission, and several UN and national agencies. We use the GTAP version 5 and version 6 databases, which are for 1997 and 2001 respectively. (See Dimaranan and McDougall, 2002). Within this database, European industrial production and employment flows are based on sets of Member State social accounting data originating, ultimately, with Eurostat.

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[32] Industry size also impacts on the government objective function through its effect on aggregate welfare, so that protection imposed on larger industries also leads to larger deadweight losses.

These are supplemented by data on bilateral import protection, including adjustments for non-reciprocal preferential import protection and bilateral free trade agreements. In the case of agriculture, the data also include ad valorem equivalents of specific tariffs. The 2001 protection data are based on Bouet et al (2004). The 1997 protection data are from the World Bank and UNCTAD. In the case of both the 1997 and 2001 data, tariffs are drawn from the WTOs integrated database of tariffs and bindings, and well as the UNCTAD TRAINS dataset and national schedules.

A great advantage of these data is that we have a consistent mapping of economic flow data (intermediate demands, final goods production, imports, exports, and final demand) to corresponding trade policy data. In the case of the EU, our focus here, the pattern of protection vis-à-vis external trading partners will, overall, reflect the politics that has driven the EU to leave out sensitive sectors in bilateral negotiations on free trade areas, and also the sensitivity of these same sectors as reflected in MFN tariff schedules.

Results

We rely on the data as outlined above for the 12 European Union Members in 2001. As a measure of protection we use extra-EU trade weighted tariff rates that reflect the pattern of preferential trade arrangements, WTO concessions, and the exclusion of sectors from these arrangements.[33] Industry size is measured by shares in total EU output value, and denoted as *EU_SHARE*. To gauge for the intensity of unskilled labour use, we include it here as *UNSKL*, using the shares of unskilled wages in total wages by sector as a proxy. To capture the nationality of each industry, we once again use industry size, but this time take the deviation of national sectoral output shares relative to the EU average (Δ_{Member}). We assign a dummy to agricultural products, FOOD, given the special historical and political circumstances surrounding its protection that cannot be captured in our estimation.

Variations in sectoral tariffs are tested against the above-mentioned industry characteristics in a straightforward fashion:

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[33] Alternative measures of protection exist, one being the Trade Restrictiveness Index as proposed by Anderson & Neary (1996).

$$(1) \qquad \ln(1 + \tau)_i = C + \beta_1 EU\_SHARE_i + \beta_2 FOOD_i + \beta_3 UNSKL_i$$
$$+ \beta_4 INT\_SHARE_i + \sum_m \beta_m \Delta_{Member} + \varepsilon_i$$

Our dataset contains observations for 12 EU countries, and for 41 agricultural, manufacturing and extraction sectors, and taken for 2001. Robust regression results are reported in Table 2. The results at this stage can be summarized as follows:

- Large sectors have lower rates of protection.
- Controlling for size and nationality of industry, food sectors are not disproportionately protected.
- Unskilled labor-intensive sectors do not receive higher protection rates. Indeed the opposite seems to hold.
- The intensity of downstream linkages matters for protection levels.
- Nationality does matter.

Table 2 Tariffs – ln(1+t) regressed on structural and regional variables

RHS variables	coefficient	t-ratio
Sigma	-0.001	-(0.82)
Size***	-20.110	-(2.79)
FOOD	-0.001	-(0.28)
UNSKL	-0.027	-(1.59)
INT_SHARE	-0.693	-(6.07)
BEL	0.941	(0.15)
DNK	0.272	(0.39)
FRA**	4.931	(2.50)
DEU**	4.589	(2.37)
GBR**	4.429	(2.43)
GRC	0.199	(0.90)
IRL	-0.057	-(0.30)
ITA	1.529	(1.33)
LUX**	1.201	(5.23)
NLD	1.135	(1.51)
PRT**	1.923	(3.39)
ESP*	1.664	(1.90)
Intercept	0.067	(5.58)

Estimates are based on robust regressions
OLS R-sq: 0.48, obs: 42
F(16,25): 7.96, Pr>F: 0.00
**: significant at the .05 level
***: significant at the .01 level.

Our results support the notion that larger sectors are harder to organize in Europe. All other things equal, the sectoral demand for protection is less likely to be accommodated, the larger is the size of its output. Intermediate linkages imply that more deeply integrated sectors receive less protection than do final goods sectors. Contrary to previous results in the literature, however, sectors where unskilled earnings are important do not appear to invite higher tariffs. What is clear from the table is that the nationality of industries is highly correlated with the extent of protection received. For instance, sectors where Germany, Britain, and especially, France, have higher output shares relative to the EU average, also get relatively higher protection, holding importance across other Members constant.

The results in Table 2 represent the standard approach, prior to the recent empirical literature that has emerged following Grossman and Helpman's (1994). In a Grossman-Helpman lobbying framework, tariffs are positive for industries that lobby successfully. They receive the tariff:

(2)
$$\tau_i = \gamma \frac{X_j}{-M_j^{'}} + \varepsilon_i$$

where γ is positive for protected industries *and identical across protected industries*, and the tariff is higher the greater output X and the flatter the import demand curve, represented here by the slope M'. Table 3 presents estimates of equation (2) in logs. Even at our level of aggregation, we have sectors with zero protection. Therefore, we report both equation (2) estimated using OLS, and using a Heckman selection framework to allow for the fact that industries must receive protection first before the level is then determined, in the Grossman-Helpman framework. In the table, the variable SIGMA is the elasticity of import demand (represented by Armington elasticities, as taken from our CGE model data). Broadly speaking, the results are consistent with the mixed results in the literature. As predicted by almost all endogenous protection models, the elasticity of demand has a positive sign. Industry size has a negative sign, which may be more consistent with Olson-type models of organization challenge than the Grossman-Helpman model. We also find that intermediate linkages matter in this setup. This is consistent with Cadot, de Melo and Olarreaga (2004).

4.4   Estimating Industry Weights

We now take a step away from current practice, focusing on explaining observed patterns by explicitly estimating the objective function of the reduced-form regional policymaker, say for simplicity, an EU Über-Commissioner. Our goal is to express the level of EU-wide protection as the outcome of the Commission's maximization problem with respect to this objective function. This has the advantage of capturing the general equilibrium effects of protection, where for example steel protection may hurt motor vehicles, thereby providing more insight into the interaction of policy choice and the cost and benefits that this choice implies.

We proceed by employing a stylized Grossman-Helpman political influence model, specifying the objective function for the Commission as follows:

$$(3) \qquad \Omega = aW + \sum_i b_i W_i$$

where a and b correspond to the weights attached by the Über-Commissioner to Community (W) and industry welfare (W_i), respectively.

Assuming that tariffs (and potentially other policy instruments) are set to maximize this function, the equilibrium tariff rates will map to the following set of first order conditions[34]:

$$(4) \qquad \frac{\partial \Omega}{\partial T_j} = a \frac{\partial W}{\partial T_j} + \sum_i b_i \frac{\partial W_i}{\partial T_j} = 0$$

Rearranging, we then have,

$$(5) \qquad \frac{\partial W}{\partial T_j} = -\frac{b_j}{a} \frac{\partial W_j}{\partial T_j} - \sum_{i \neq j} \frac{b_i}{a} \frac{\partial W_i}{\partial T_j}$$

Our data for the left- and right-hand sides of equation (4) come from the marginal shocks to tariffs in our model of the EU economy for 1997 and 2001. We derive this by applying small (1%) changes in EU external tariffs sector by sector within a general equilibrium model incorporating the data outlined above, and using the model to then

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[34] Note that while we are working with tariffs, one could add other industrial and tax policies to the mix. In theory, for each policy in isolation, the corresponding version of equations (3) and (4) should hold.

estimate the direct and indirect impact of each tariff on overall economic welfare (measured as equivalent variation) and also on capital income within each sector.

The basic modelling framework, as implemented, is quite complex, and we refer the reader to Hertel et al (1997) for the blow-by-blow on algebraic structure.[35] For our purposes, the key features of the numerical model can be summarized as follows. First, we define composite or aggregate goods in each region r that are either purchased as intermediates or consumed as final goods. The set of prices for these composite or aggregate goods within a region $\mathbf{P_A^r}$ will be a function of the set of prices for domestic goods within a region $\mathbf{P_d^r}$ and the set of prices for imported goods $\mathbf{P_m^r}$

$$(6) \qquad \mathbf{P_A^r} = f_A^r \left(\mathbf{P_d^r}, \mathbf{P_m^r} \right)$$

Equation (6) involves a CES composite of domestic and imported goods. The internal price for imports will in turn be a function of the set of tariffs, where $T = 1 + \tau$, and also the set of world prices for imports.

$$(7) \qquad \mathbf{P_m^r} = \mathbf{T'} \mathbf{P_m^*}$$

The domestic price will depend on the price of primary inputs indexed over factors v, $\mathbf{P_v^r}$, as well as the price of composite goods used as intermediates, $\mathbf{P_A^r}$. This is shown as equation (8):

$$(8) \qquad \mathbf{P_d^r} = f_d^r \left(\mathbf{P_v^r}, \mathbf{P_A^r} \right)$$

The cost function in equation (8) follows from CES technologies for value-added, combined with a Leontief-nest between intermediate goods and value added. Given domestic prices for inputs and outputs, the demand for primary inputs $\mathbf{v}$ will be a function of unit input coefficients (determined by relative input prices) and by total demand for domestic output $\mathbf{Q}$.

$$(9) \qquad \mathbf{v^r} = \left(\mathbf{Q^r} \right) \left(\mathbf{c_v^r} \left(\mathbf{P_v^r} \right) \right)$$

The input coefficients $\mathbf{c}$ follow from the CES production technology for value added. Demand for goods will be a function of the entire set of global incomes $\mathbf{I}$ and prices $\mathbf{P}$,

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[35] The actual model files used to estimate the marginal effects are available for download.

(10) $\mathbf{Q} = f_q(\mathbf{P}, \mathbf{I})$

where incomes are an outcome of the full general equilibrium solution across final and intermediate demands within the model. Incomes in each region are the sum of factor incomes and taxes collected Γ. Tax collections are a function of tax rates γ.

(11) $I^r = \left(\mathbf{P_v^r}\right)\left(\mathbf{v^r}\right) + \Gamma\left(\mathbf{P_m^*}, \mathbf{P_v^r}, \gamma\right)$

Finally, welfare u is then defined in terms of an aggregate consumer with standard preferences, such that we can write an expenditure function $e(\,.\,)$ defined over consumer prices and welfare.

(12) $e\left(u^r, P_A^r\right) = I^r$

We apply the model with a two-region version of the dataset, the two regions being the EU and the rest of the world. Conceptually therefore, if we take one of the regions r as the European Union, and we differentiate the entire system with respect to a given EU tariff, we will arrive at a marginal impact of this tariff on reduced form national income (equation 11) and also factor incomes (equation 9). Operationally, we apply 1% changes in the power of the tariff $T = 1 + \tau$ to estimate such marginal changes. In the context of the model, this yields changes to capital income to each sector (where we treat capital as fixed to a sector) as well as changes in overall national income I. This in turn lets us calculate the corresponding marginal impact in social welfare, measured by equivalent variation. Our sectors are those in Table 1. Equipped with an assessment of welfare effects, we are then able to evaluate econometrically the relative weights, b_i/a, given the actual pattern of tariff protection in the EU.

Table 3 Relative Industry Weights

Industry	weights	t-ratio	Applied tariffs
rice	-3.07	-(2.62)	53.49
wheat	-2.06	-(6.22)	0.90
grains	-2.07	-(5.78)	17.95
horticulture	-1.85	-(8.31)	16.55
oilseeds	-2.04	-(5.87)	0.00
cane_beet	-1.17	-(1.36)	9.08
plant fibres	-2.21	-(1.58)	0.00
other crops	-1.58	-(7.37)	2.54
cattle	-1.94	-(6.39)	11.55
other livestock	-1.28	-(4.59)	1.25
dairies	-1.46	-(6.07)	0.00
animal fibres	-1.79	-(0.78)	0.00
forestry	-0.13	-(1.03)	0.04
fish	-0.64	-(4.02)	2.60
coal	-0.08	-(0.24)	0.00
oil	-0.28	-(0.16)	0.00
gas	-1.59	-(1.61)	0.00
other minerals	0.43	(1.90)	0.00
beef products	-3.50	-(7.14)	46.32
meat products	-2.74	-(5.82)	18.77
vegetable oils	-0.95	-(5.96)	11.89
milk products	-2.25	-(6.64)	38.05
processed rice	-2.91	-(2.01)	108.43
processed sugar	-1.95	-(5.19)	110.09
other foods	-2.33	-(7.90)	8.16
beverages_Tobacco	-0.63	-(3.53)	7.43
textiles	-4.21	-(6.08)	3.76
apparel	-3.02	-(7.07)	4.70
leather	-4.48	-(8.10)	5.04
lumber	-1.25	-(3.15)	0.35
paper, pulp, plastics	-1.15	-(2.35)	0.23
petrochemicals	-0.91	-(1.35)	1.13
chemicals, rubber, plastics	-1.03	-(3.69)	1.68
non-metallic minerals	-0.56	-(2.34)	2.09
iron, steel	-3.27	-(4.72)	4.67
nonferrous metals	-2.77	-(5.45)	0.75
fabricated metals	-1.36	-(4.26)	1.28
motor vehicles	-1.64	-(2.39)	4.00
other transport	-1.96	-(6.81)	1.41
electric machinery	-0.62	-(1.27)	0.78
other machinery	-1.55	-(2.92)	0.90
other manufactures	-1.54	-(4.72)	1.22
Iterated SUR based ; chi2(57,49): 91836.61, Pr>F 0.00 ; obs: 106			
Joint test that all negative coefficients are equal: Chi2(18): 1113.46, 0.00			
Joint test that all primary coefficients are equal: Chi2(9): 61.5, 0.00			

The estimated relative industry weights for our 33 commodities are reported in Table 3. The full estimating equation also includes indirect service sector effects (not shown).[36] Several points are striking from the results. First, unlike the recent literature based on U.S. political contributions data, we do not get unbelievably high national income/welfare weights. Indeed, in general, industry weights tend to be around 2 to 3 times the corresponding weight on national income/welfare. In other words, special interests receive a higher weight than Community welfare does.

Another striking point is that while manufacturing sectors all receive considerably less protection compared to agriculture, their policy weights are actually comparable. This implies that there is not much correlation between tariffs and weights, a rather counter intuitive result underscored by Figure 2. In the Figure, we map estimated weights against 2001 tariff rates. As noted earlier, agricultural protection in Europe has deep political and historical roots, and results here seem to suggest that tariffs are now currently high in   agriculture, not strictly because of the political power of farmer groups, but because of the low economy-wide effects that agricultural protection implies. To anticipate the econometric results reported below, giving in to the demands of the food industry carries relatively little negative implications for other industries compared, for example, to steel.[37]   However, in manufacturing, tariffs and weights move in a more congruent way. The higher weights attached to iron and steel, apparel, textiles, and leather are reflected in the higher protection they receive relative to other non-farm products. Still, tariffs are considerably lower in manufacturing to begin with, and hence, so are their contributions to overall equilibrium distortion patterns.

The bottom of table 3 also reports test statistics for Chi-squared tests on linear restrictions across parameters. In particular, if the EU is working like a strict Grossman-Helpman world, with agents playing locally truthful strategies, then the estimated political weights, when significant and with the correct sign, should be zero. We reject this restriction quite strongly.

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[36] Out of curiosity, we also experimented with including a measure of rest-of-world welfare effects. The rest of world receives no significant weighting, based on those regression results.

Figure 2

Tariffs and Weights
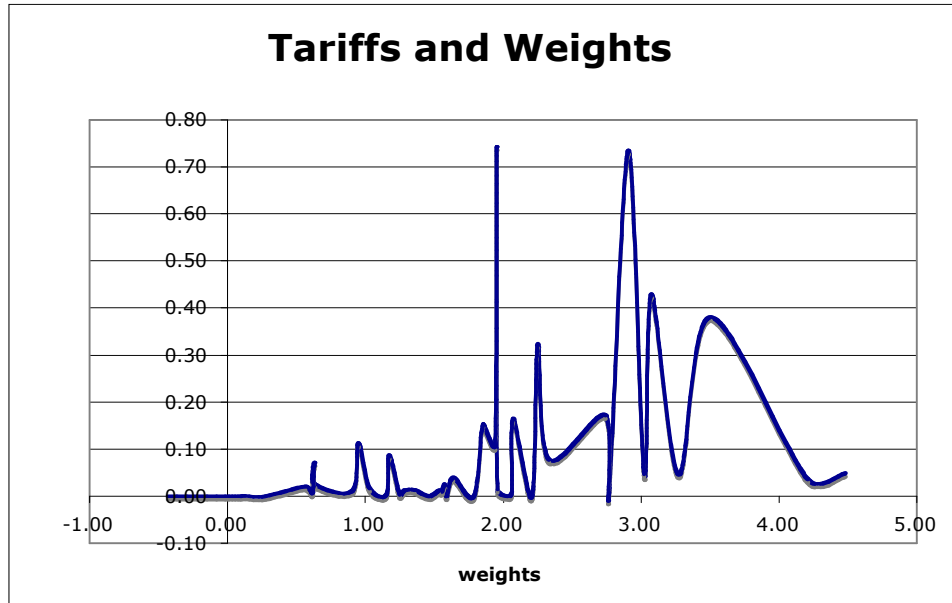
4.5 Deconstructing the Industry Weights

We now proceed by once again inspecting the influence of individual members, this time on the determination of the implicit policy weights assigned by the EU on various industries from Table 3. This is done by regressing the estimated relative industry weights, b_i/a, against the same political determinants employed in section 2, and the industry size indicator per EU-12 country. In addition, we also estimate tariffs as a function of revealed policy weights from Table 3, and as a function of the importance of intermediate linkages – INT_SHARE – and whether or not the sector is a food sector – FOOD. In formal terms, we estimate equations (13) and (14) as a system of two equations using iterated SUR least squares:

$$(b_i \, / \, a) = C + \beta_1 EU\_SHARE_i + \beta_2 FOOD_i + \beta_3 UNSKL_i$$

(13)

$$+ \beta_4 INT\_SHARE_i + \sum_m \beta_m \Delta_{Member} + \varepsilon_i$$

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[37] Put another way, heavy protection for steel would have heavy ramifications for construction, motor vehicles, and the machinery sector, whereas protection of rice *only* hurts consumers, and not so much competing industries.

$$\ln(1+t)_i = \alpha_1 WEIGHT_i + \alpha_2 INT\_SHARE_i + \alpha_3 FOOD_i + e_i$$

(14)

Regression results are reported in Table 4. The results further underscore the findings of low weights being attached to agricultural products, and greater value assigned to larger sectors. This time, however, the negative correlation between unskilled-labour intensity and the policy influence of an industry registers as statistically insignificant. Basically, in terms of policy weights, skill intensity does not appear to matter. Neither does sector size. What does matter is nationality, agricultural orientation, and also the strength of intermediate linkages. In particular, sectors that are important for downstream production receive lower policy weights.

Table 4 Iterated SUR regressions for tariffs ln(1+t) and industry weights

LHS variable	RHS variables	coefficient	z-ratio
tariff	WEIGHT****	0.055	(2.96)
	INT_SHARE***	-0.095	-(2.04)
	FOOD****	0.130	(3.06)
weight	EU_SHARE	-409.290	-(1.11)
	INT_SHARE****	-2.054	-(3.49)
	FOOD**	0.530	(1.73)
	UNSKL	0.674	(0.77)
	BEL****	107.995	(3.37)
	DNK*	-54.612	-(1.53)
	FRA*	158.951	(1.57)
	DEU	26.427	(0.27)
	GBR**	185.084	(1.97)
	GRC	-8.353	-(0.74)
	IRL****	-32.219	-(3.34)
	ITA***	130.452	(2.20)
	LUX	15.784	(1.34)
	NLD*	-51.403	-(1.33)
	PRT**	52.427	(1.79)
	ESP****	-151.807	-(3.38)
	intercept****	2.87	(4.51)
tariff	iterated SUR R-sq: .4769		
	chi2(3,39): 4067, Pr>F 0.00		
weight	iterated SUR R-sq: .6592		
	chi2(16,26): 81.13, Pr>F 0.00		
	****:signifies significance at the .01 level.		
	***:signifies significance at the .05 level.		
	**:signifies significance at the .10 level.		
	*:signifies significance at the .15 level.		
	obs:42		

Turning next to tariff rates themselves, we get as good a fit using the industry weights, INT_SHARE, and FOOD as we did with the full specification in Table 4. In other words, the weights do a good job catching the impact of variations in national influence within the EU when the overall rate of protection is set. In addition, as we would expect if our Über-Commissioner cared about direct and indirect effects, we find that the intensity of intermediate linkages matters, and with the expected sign. The INT_SHARE term also provides insight into agricultural protection. Processed foods are not inputs to industry. They are consumed directly. As such, they are easier to protect, in a political sense, than sectors like steel and chemicals.

Figure 3   1958 (pre-CET) Tariffs and National Weighting Coefficients
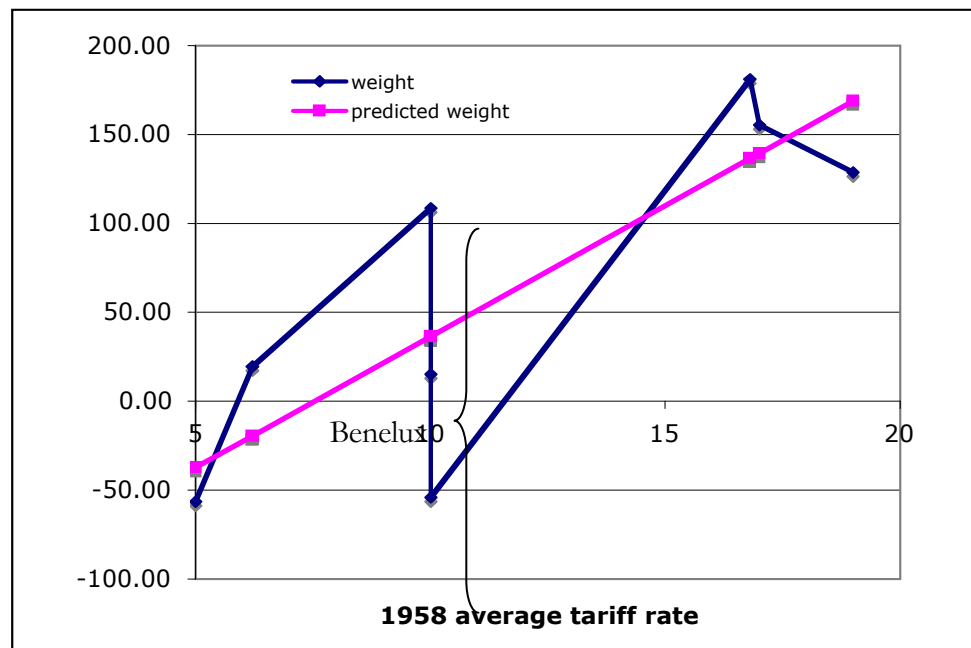
OLS regression results

	coefficient	t-ratio
intercept	-110.79	-(2.11)
1958 tariff	14.72	(3.56)

OLS R-squared: 0.678
F: 12.673, Pr>F: 0.01

One final appeal of this exercise is an examination of how the stance of protection in 1958 (Figure 1) maps to the influence on EU tariffs in 2001 (Figure 3). In Figure 3, we have plotted actual and predicted weights against 1958 tariff rates prior to the CET for the EC12 countries in Figure 1. It is clear that the countries with the highest revealed policy weights in 2001 (France, Britain, Italy) are the ones that had the highest tariffs in 1958, while the general pattern is one of more protectionist Members continuing to influence the policy process in Brussels.

4.6   Conclusions

The applied literature on political economy determinants of important protection is largely focused on the US. Yet the EU offers a contrasting model. Both are customs unions, though they differ in age. They also differ in that national governments play a more direct role in the EU than do state governments in the US. There are numerous difficulties one can expect in directly observing the political economy underpinnings of trade policy in such a Union, where overt lobbying and political contributions can be illegal, and where the policy mechanisms themselves have evolved in both ambition and complexity. We work around this problem by using general equilibrium estimates of the impact of EU trade policy to then directly estimate the relative political weights assigned to industry.

As a preliminary step, we have explored basic correlations found and discussed in the literature. Results show that industry size may cause coordination problems, leading to less protection. The country origin of industry also matters. Looking at the revealed policy preferences of the individual EU-12 countries, it is possible to make a distinction between high- and low- tariff countries. What is interesting is that this mirrors more or less the early classification of countries even before the CET was established in 1968.[38] This suggests that trade policy preferences of countries relative to each other, have remained fairly constant in almost 5 decades of European integration.

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[38] An exception is Germany, which appears to have increased its preference for protection. However, the statistical significance of the German coefficient is rather low in our estimates, thereby making it difficult to pose any definitive judgement.

To further understand how sectoral interests are valued by policymakers, we have estimated the marginal effects of protection on overall and industry incomes as they are specified in the objective maximization problem of an influence-driven government model. Using a general equilibrium framework to explicitly derive these estimates, we are then able to extract the apparent weights of various industries in the policy process. This also allows us to further deconstruct these weights along the lines of industry nationality, and other related characteristics.

Results show several factors reflected in the estimated political weights. First is the role of output size. Standard political economy models, working under the assumption of constant-returns-to-scale, consider the marginal impact of protection on factor incomes to be neutral to size. Hence, the importance attached to industry size is conditional on the amount of lobbying in the sector, as in Grossman & Helpman, or conditional on the amount of nominal votes it can deliver. Our estimates show that the specification where output plays a focal role provides a very good fit, suggesting the role of size supports the notion in the literature of coordination problems. Second, the depth of intermediate linkages matters. In particular, in the complex dance of interests that defines the pattern of tariffs, and the resulting political weights, the likelihood of protection if lower (and net influence is weaker) if special consideration leads to negative consequences downstream.

A third point is that national priorities and industry characteristics matter not only for tariffs, but also for the assignment of policy weights. Explaining why the experiments done here consistently point to both the French and British as the most prominent players in EU trade policymaking (at least on the import protection side) is beyond the scope of this paper. However, the French result confirms popular beliefs. The British (and Italian) results are fully consistent with the original tariff stance in 1958, before the birth of the common external tariff. Indeed, the history of European integration is replete with political ordeals related to efforts to cope with British, French and Italian insistence on special treatment (the British rebate) and resistance to protection (France at the end of the Uruguay Round and during the Doha Round). The most infamous example is perhaps the adoption of the Common Agricultural Policy, commonly regarded as a condition tied by the French government in 1964 to the second round of liberalization in intra-EC manufacturing trade.

Finally, it is worth noting that tariff protection, at least in manufacturing, has indeed become less important for the EU as compared to the past. Only non-Europe OECD and non-WTO countries[39] now face the MFN and tariff peak rates, and even in agriculture, further reforms are being introduced (i.e. in sugar). Still, what our results illustrate is that the political economy bedrock of policy making is more complex than a more simple analysis would suggest. Moreover, due to the general equilibrium approach taken here, trade policy can be used to deduce the political weights that could be reflected in other policies as well. Hence, while direct evidence on national and regional preferences might not be in place, this exercise does convey some indications of the general industry weights behind a wider range of policies.

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[39] Non-Europe OECD: USA, Canada, Japan, Australia, New Zealand, South Korea, Singapore, Hong-Kong; non-WTO: Russia, Ukraine, and other State-trading countries.

Table 1: Extra-EU Import Shares, Extra-EU Import Protection, and EU Output Shares

	Extra-EU import shares 2001, (%)	Extra-EU import duties 2001, (%)	EU output shares 2001, (%)
Agriculture	*2.830*	*7.363*	1.603
rice	0.024	53.494	0.005
wheat	0.084	0.899	0.070
other grains	0.052	17.951	0.079
horticulture	0.919	16.551	0.313
oil seeds	0.383	0.000	0.039
cane and beet sugar	0.001	9.081	0.027
plant fibers	0.099	0.000	0.007
other crops	0.918	2.542	0.323
Cattle	0.064	11.547	0.164
other animals	0.202	1.246	0.311
raw milk	0.006	0.000	0.263
animal fibers	0.078	0.000	0.002
Other Primary	*8.700*	*0.052*	*0.718*
forestry	0.216	0.044	0.126
fisheries	0.168	2.599	0.234
coal	0.652	0.000	0.048
oil	5.224	0.000	0.133
gas	1.603	0.000	0.058
other minerals	0.837	0.004	0.119
Manufactures	*61.497*	*2.556*	*34.836*
beef products	0.210	46.318	0.422
other meat	0.224	18.770	0.667
vegetable oils	0.150	11.888	0.301
dairy products	0.119	38.054	0.757
processed rice	0.034	108.427	0.015
processed sugar	0.111	110.094	0.135
other processed food	1.744	8.156	1.817
beverages & processed tobacco	0.375	7.429	0.980
textiles	2.596	3.765	0.859
wearing apparel	3.459	4.699	0.668
leather	1.504	5.041	0.353
lumber and wood products	1.840	0.347	0.942
paper, pulp, and publishing	1.406	0.229	2.276
petrochemicals	1.427	1.131	0.917
chemicals, rubber, plastics	7.212	1.676	5.189
non-metallic minerals	1.281	2.087	1.490
iron and steel	1.294	4.674	1.263
non-ferrous metals	2.498	0.750	0.719
fabricated metal products	1.694	1.276	2.079
motor vehicles	3.987	4.001	3.420

	Extra-EU import shares 2001, (%)	Extra-EU import duties 2001, (%)	EU output shares 2001, (%)
other transport equipment	3.164	1.415	0.736
electrical machinery	9.861	0.783	2.541
other machinery	11.940	0.900	4.822
other manufactures	3.367	1.218	1.468
Services	*26.971*	*n/a*	*62.842*

Source: GTAP 6.0 database. Protection data are from the WTO WITS database. Trade and output data are from UNCTAD-COMTRADE, and from Eurostat.

Chapter 5

Clothes without an Emperor :
Analysis of the preferential tariffs in ASEAN[*]

Abstract: This chapter examines the current state of intra-ASEAN trade under the preferential regime of the AFTA. It partly addresses some data problems and employs a gravity model to arrive at alternative ways of gauging the importance of preferences in the absence of data on the actual utilisation of AFTA preferential tariffs. Our results confirm the wide-spread notion that the AFTA preferential scheme is of very little consequence to intra-regional trade. However, in that limited range of products where AFTA might have an influence, preferences seem to matter only when the differential margin between the MFN and preferential tariff rates reaches a critical amount, allowing regional exporters to cover the costs of requesting preferences.

5.1 Introduction

Ambitions of regional integration are steadily increasing in Southeast Asia, especially after having seen the completion of an ASEAN[40] Free Trade Area (AFTA) in January 2002. The next project is no less than the establishment of an ASEAN Economic Community (AEC) by the year 2020, and possibly even earlier, by 2015.[41] Yet, the view is wide-spread that the most basic of instruments offered by AFTA, namely, the preferential tariffs, are hardly ever used in practice, with the utilisation rate purportedly reaching

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[*] **This chapter is based on a paper co-authored by Miriam Manchin.**

[40] Association of South East Asian Nations, established by Indonesia, Malaysia, Philippines, Singapore and Thailand in 1967. Membership was expanded to include Brunei (1984), Vietnam (1995), Laos (1997), Myanmar (1997) and Cambodia (1999).

[41] In the most recent ASEAN Summit of December 2005, the Heads of States discussed the possibility of advancing the target date. The proposal will be subjected for further study.

merely 5% of total intra-ASEAN imports[42]. The significant fall of MFN tariffs, partly explains the diminished importance of preferences, while others point to the high administrative costs of utilisation and other non-tariff measures (NTMs) which raises the effective price of intra-regional imports.

Unilateral liberalisation can favour the creation of more trade, reveal the strong intent of transforming the region into an attractive production base, and indeed, gives substance to the rhetoric of open regionalism. On the other hand, the hurdles posed by NTMs, and other high costs implied by administrative and rules of origin compliance, are obviously more malign, casting doubts on the sustainability of future regional efforts. ASEAN has been or currently negotiating a series of FTAs with third parties, which includes an FTA with China by 2012, a Comprehensive Economic Partnership (including elements of a possible FTA) with Japan, also by 2012, and an FTA with India at the earliest by 2011, latest by 2016. Bilateral FTAs between individual members and non-ASEAN are numerous: 8 WTO-notified agreements and a total of 26 non-reported initiatives (ADB, 2006; pp. 277- 278). If the obstacles of free trade within ASEAN can not be sufficiently addressed, then the prospects of new agreements which permit an even more limited market opening can only be pessimistic.

While considerable work has been done on estimating the probable impact of AFTA, as well as its possible trade diverting and creating effects[43], there is no study known to the authors, which sought to evaluate the actual impact of preferences and the extent of the chilling effects of NTMs on intra-ASEAN trade. This is hardly surprising given the numerous data problems that would draw against any such attempt. Data sharing is merely voluntary in ASEAN, and so is the reporting on the incidence of preference utilisation. According to the Bureau of Economic Integration of the ASEAN Secretariat, there is not one single year since the CEPT Scheme began in 1993, where data from the so-called Form D[44] is available for all 6 original AFTA countries[45], and if some data exist for some countries, the information is often on a quarterly basis and

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[42] See for instance: Baldwin (2006), Severino (2006), The Economist (07/29/04), Cuyvers et al (2005).

[43] See for instance Frankel and Wei (1996), Soloaga and Winters (1999), Cernat (2001), Clarete, Edmonds, and Wallack (2002), Gosh and Yamarik (2002), Dee and Gali (2003), Elliot and Ikemoto (2004), Lee and Park (2005).

[44] The total amount of intra-ASEAN imports granted preferential rates under the CEPT Scheme can be extracted from the Form D certificates.

incomplete for the relevant year. This means that existing estimates, such as the 5% utilisation rate often quoted in the literature is based on interviews or extrapolation but not on actual utilisation data. Another problem stems from the fact that product codes used in the submission of trade and tariff data are inconsistent, and even differ across some member countries, making the actual trade coverage of various rates of preferential tariffs impossible to track and compare across all AFTA participants.

The evaluation of AFTA's success or failure is thus often based on the number of tariff lines covered by the liberalisation scheme, and on the extent of tariff reduction under the preferential scheme. On both grounds, a rather positive judgement could be rendered. From the very start of the Common Effective Preferential Tariff (CEPT) Scheme in 1993, product coverage was already as high as 88.1%, and at present, preferences are applicable to 98.8% of the tariff lines. In terms of tariff liberalisation, average tariff rates imposed on ASEAN imports, fell from an average of 12.76% in 1993 to 1.87% at present, while unilateral tariff reduction among ASEAN-6 has also been substantial, as seen from the drop of MFN tariffs from 20% in 1994 to 8.16% in 2003 (ASEAN Secretariat, CEPT tariff database)[46].

The critical question is clearly the extent to which AFTA has induced more trade among its members. In absolute terms, trade within the region is low, with intra-ASEAN exports and imports in 2004 accounting for only 22.55% and 21.96% of total, respectively. Relative to 1993 figures, this is an improvement of only 1.4 percentage points for exports and 4.6 for imports.

AFTA must not be judged in the traditional Vinerian sense, but seen as part of a regional competitiveness strategy, especially in the context of the spectacular rise of China and the emerging dynamism of India. It is therefore FDI and MFN liberalisation that matters. In a series of recent studies and policy recommendations internal to the ASEAN Secretariat, it has nonetheless been strongly noted, that the key threat to competitiveness is the continued fragmentation of the regional market, which hinders the full exploitation of the complementarities of member economies, and increases the costs of doing business in the region (Schwarz and Villinger,2004). To make ASEAN an

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[45] Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand.
[46] See Consolidated CEPT Package data: http://www.aseansec.org/12025.htm.

attractive FDI destination, there is therefore a renewed thrust to assess the remaining tariff and especially, non-tariff barriers, and identify the principal constraints limiting the use of the AFTA preferential scheme.

The absence of key facts about the actual impact of preferences on intra-ASEAN trade is one of the most important obstacles faced by analysts and policymakers alike. Without complete reporting of preference utilisation by Member countries, one can only rely on the actual trade and tariff data. Further problems arise from the data due to the lack of congruence between the product codes used. Moreover, detailed comparison of individual country trade patterns is hampered by lack of uniformity in data submissions at the most disaggregated level.

This chapter is therefore a tentative attempt to examine the current state of intra-ASEAN trade under the preferential regime of the AFTA. It partly addresses some data problems and explores alternative ways of gauging the importance of preferences in the absence of actual data on its usage. The incidence of non-tariff measures will also be scanned, focusing on the products carrying high preferences but which are revealed to be underexploited. Our results confirm the wide-spread impression that the AFTA preferential scheme is of very little consequence to intra-regional trade. However, in that limited range of products where AFTA might have an influence, preferences seem to matter only when the differential margin between the MFN and preferential tariff rates reaches a critical amount, allowing regional exporters to cover the costs of requesting preferences.

The chapter is organized as follows: the following section provides a brief overview of the literature quantifying the possible trade and welfare effects of AFTA. The third section discusses data sources and methodology, while the fourth section lays out the results. Section 5 give gives a summary and concludes.

5.2 Regionalism Effects in ASEAN

Empirical work carried out on ASEAN is largely focussed on the trade creation and trade diversion impact of preferential trade regimes in the region. While net trade creation is clearly the superior result in efficiency terms, the fact that policies are produced in the political market shifts expectations towards a trade-diverting outcome. In this context, the predominantly trade-creating result of ASEAN regionalism that emerges from

various empirical studies (see Table 5.1) may seem unusual, but it is hardly surprising if one is reminded of the heavy external orientation of ASEAN trade.

The most commonly-used approach in empirically testing the trade effects of regionalism is the gravity model which attempts to establish what would have been the natural bilateral trading pattern one may expect based on income, distance, language and other country characteristics. Policy shocks, such as the formation of a discriminatory grouping is often introduced to the model through the use of dummy variables, in order to determine whether or not these have led to a concentration of trade among members at the expense of trade with the rest of the world.

Using this approach, Frankel and Wei (1996) found the intra-ASEAN bias to be significant for every year of the period under study (1970 – 1992)[47]. This means that though simple trade shares portray regional trade to be less significant relative to ASEAN's external trade, two members trade 600% more than two otherwise identical economies.[48] This bias persists even if the entrepot role of Singapore is addressed, through the addition of an additional dummy for bilateral trade that involves Singapore. Moreover, the intra-ASEAN orientation is only slightly reduced when the openness of ASEAN, which is significantly more than what is predicted by the model, is accounted for. The ASEAN effect, however, disappears when the East Asian bloc is tested simultaneously. This would imply that the earlier observed bias may not be due to preferentialism within ASEAN itself, but part of a more prevailing propensity to trade within the larger East Asian bloc. This is consistent with the finding of Lee and Park (2002), who likewise find ASEAN regionalism to have a significantly positive effect on intra and extra-regional trade, but find the statistical significance of the AFTA bloc also fading out when estimated with the ASEAN+3 grouping (China, Japan and South Korea). In terms of extra-bloc openness, Frankel and Wei found some (albeit insignificant) indication of decline due to the 1991 decision to form an AFTA.

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[47] However, this is close to the median and mode of the yearly estimates from 1965 - 1992 made by Frankel (1996) of the 6 FTAs considered: EC, EFTA, US-Canada FTA, Mercosur, Andean Group and ASEAN (Frankel, 1996).

[48] They do issue a reminder, however, that for groupings with fewer members, the estimate of regional bloc bias is rather imprecise as suggested by the accompanying large standard error. Extra-bloc measures, instead, are more accurate and reveal a strong outward orientation by members.

Compared to 1980, though, external openness has increased in 1992, the last year of the sample.

**Table 5. 1 Gravity model estimates of the effect of AFTA
on intra and extra-bloc trade**

Authors	Results	
	intra-bloc	extra-bloc
Frankel & Wei, 1996	+	+
Soloaga & Winters, 1999	-	+
Cernat, 2001		+
Clarete, Edmonds, & Wallack, 2002	0	-
Gosh & Yamarik, 2002		+
Dee & Gali, 2003	-	+
Elliot & Ikemoto, 2004	+	+
Lee & Park, 2005	- (but coef. insignificant)	+

Note: A positive sign in the intra-bloc column refers to an intra-ASEAN bias, that is, ASEAN tending to have higher trade within the region beyond what can be expected from their economic, geographic, or cultural characteristics. A positive or negative sign in the extra-bloc column indicates the propensity to under- or over-import from non-members, relative to the normal import rates indicated by the gravity model.

A slightly different picture emerges from the gravity estimates produced by Soloaga and Winters (1999). Investigating 9 major blocs over the period of 1980 to 1996, they find a highly significant increase in the extra-bloc coefficients, together with a fall in intra-ASEAN trade. In an Asian Development Bank study by Clarete, Edmonds and Wallack (2002), which extends the analysis up to 2000, they instead showed that AFTA might have reduced extra-ASEAN trade, and found no evidence of an effect on the pattern of intra-regional exports and imports. The inclusion of the new ASEAN members, namely, Cambodia, Myanmar, Laos and Vietnam in the 1990s, may have diluted the impact of regionalism, being less outward oriented and less developed relative to the rest of ASEAN.

The overall welfare effects of bloc formation, on the other hand, is better addressed employing a computable general equilibrium (CGE) model which can simulate real income effects as well as changes in sectoral production and factor prices. Earlier studies using the ASEAN linked CGE model[49] point to a positive but minimal effect of an

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[49] See for example Adams & Park (1995), Nadal de Simone (1995), Imada, Montes & Naya (1991), Felipe and Wescott (1992)

AFTA on overall income and trade flows. Adams and Park (1995), for instance, report a welfare change of 0.6% for Indonesia and 0.67% for the Philippines, and 1.34% for Thailand and 1.6% for Malaysia (1.6). Results from more recent CGE Studies using the GTAP model and data base also range around the same magnitudes. Park (2000) using the GTAP 3 version, find a percentage change in GDP of only 0.65% for ASEAN, with Indonesia experiencing the lowest gain (0.1) and the largest increase accruing to the Philippines (1.54). However, the results of Ando and Urata (2005) show that transforming AFTA into East-Asian FTA that would include China, Japan and South Korea, leads to a significant rise in ASEAN output, especially in chemical products (12%), machinery (6%), and electronic machinery (10). These findings reflect the weight of East-Asian trade for ASEAN, and the importance of capital accumulation, institutional convergence and trade facilitation, which Ando and Urata (2005) attempted to take into account in their work.

5.3   Structure of ASEAN trade under the Common Effective Preferential Tariff Scheme

Data Sources

Although trade and tariff data are available at the most disaggregated level for ASEAN through the ASEAN Secretariat database[50], they can not be combined for regression purposes due to frequent changes in the product codes used across countries and years. A harmonized product nomenclature in ASEAN, the AHTN, has only been recently in force[51], and is used only for the reporting of the Common Effective Preferential Tariff (CEPT) rates. Trade values and MFN tariffs, however, are not reported with the same ASEAN nomenclature, but with the 9-digit HS classification instead. Thailand further adds to the unevenness of the data by employing a 7-digit HS classification in its submissions. To address these problems, it has been necessary to limit the number of

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[50] See http://www.aseansec.org/12025.htm.

[51] The ASEAN Harmonized Tariff Nomenclature (AHTN), that took effect in 2004, is at an 8-digit level of classification for over 10,000 items, and is consistent with the 6-digit HS classification of 2002.

years and countries under study, and to converge the preferential tariff rates sourced from the ASEAN secretariat with the MFN and trade data base of WITS[52].

Sectoral and country structure of AFTA preferences

Table 5.2 describes the structure of AFTA preferences per sector for the periods 2001 to 2003, given the data assembled for this study. Both MFN and CEPT tariffs are relatively higher in plastics, footwear, textile & clothing, and machineries sectors than in other sectors. The average CEPT rates fall within the allowable range of 5% and below[53], while for most sectors, the average difference between MFN and CEPT tariff rates hover around the 10-15% range, with the exception of stone (7.7%) and metals (5.2%) sectors.

However, using a more disaggregated breakdown of sectoral trade (HS6), it becomes immediately apparent that for most of intra-ASEAN products, the margin between MFN and CEPT rates is actually zero. On one hand, 94.3% of tariff lines already fall within the 5% AFTA limit[54], covering 90.9% of total intra-ASEAN imports in 2003 (see Table 3.2).[55] Half of intra-ASEAN imports in terms of trade value are also covered by duty-free tariffs under the AFTA. But since MFN tariffs have also fallen rapidly in the last decade[56], the low CEPT rates do not translate into significant advantages or benefits for regional traders. In fact, for about 84%[57] of total trade in 2001 and 2003, the difference between MFN and CEPT rates is merely 5 percentage points and below. While ASEAN has fulfilled its agreement to eliminate import duties on 60% of the products in their normal inclusion lists by 2003[58], the continuing process

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[52] WITS is a combined database from UN's COMTRADE, UNCTAD's TRAINS and the WTO's database.

[53] Under the AFTA, members are allowed to impose up to 5% tariffs on ASEAN imports, and higher than 5% tariffs for products recently transferred from temporary exclusion and/or the list of sensitive products into the normal liberalisation track.

[54] Under the CEPT Scheme, tariffs must be brought down to the range of 0-5%.

[55] Including Singapore, whose trade is 100% duty-free, the coverage slightly rises to 95.7% of tariff lines and 93.2% of total value of imports. Thailand, however, is not included given the incompleteness of data for 2003. The rates of 94.3% and 90.9% are derived by summing the first two columns of the CEPT rates in Table 3.2 for ASEAN.

[56] Zero MFN tariffs are applied to slightly more than a third of imports for Indonesia, Philippines and Thailand, and two thirds for Malaysia and 99.8% for Singapore. See table A.1 in Annex for more details on the breakdown of MFN tariffs.

[57] Sum of first two columns of Preference Margins in Table 3.2.

[58] This target was reached in 2004 when Thailand and the Philippines have complied with their commitment under the Protocol to eliminate intra-ASEAN import duties. As of writing, 64.19% of products in the inclusion list are duty-free within ASEAN (AFTA Council, 2005).

of unilateral liberalisation of MFN tariffs, has led to the redundancy of preferences for a large range of products.

With the exception of Malaysia and Singapore, most of the CEPT tariff lines is pegged at the maximum AFTA rate of 5% tariffs. In terms of trade values, however, it is the zero CEPT rate that covers most of imports for Indonesia, Malaysia, Philippines and Singapore in 2003. As far as the top imports (in value terms) of these countries (see table 5.1 in Annex) are concerned, all carry zero or low CEPT and MFN rates so that for the most important products traded across ASEAN, preferential rates have negligible impact.

Table 5.2 Average MFN, preferential tariffs, and difference between MNF and preferential tariffs, 2001 - 2003

Sectors	Ave MFN (%)	Ave CEPT (%)	Ave. diff. (%)	Max diff. (%)	Min diff. (%)	Standard deviation of diff. (%)	Import value ($million)
Other	12.7	2.7	10.0	52.5	0.2	7.3	0.3
agriculture	14.2	2.5	11.7	153.9	0.1	11.0	6.5
minerals	13.9	2.7	11.2	32.5	0.0	7.3	1.4
chemicals	16.5	2.9	13.7	45.0	0.3	10.0	0.4
Plastics	18.4	3.1	15.3	35.0	0.5	9.3	0.05
Leather	17.2	3.0	14.2	60.0	0.3	9.4	0.8
Wood & paper	14.2	2.8	11.4	35.0	0.2	8.1	0.9
Textiles & clothing	17.4	2.9	14.5	40.0	0.2	10.4	0.3
footwear	17.5	3.1	14.3	30.0	0.3	8.7	1.4
Stone	9.7	2.0	7.7	87.5	0.2	8.2	1.2
Metals	6.4	1.2%	5.2	27.5	0.2	5.2	0.6
machinery	16.9%	2.6%	14.3%	170.0%	0.1%	18.7%	1798039
Total trade	14.6%	2.6%	12.0%	64.1%	0.2%	9.5%	15782071

Table 5.3 also illustrate that the product space where preferential tariffs could stimulate intra-ASEAN trade is indeed quite limited. The ASEAN trade value shares of products having preferential tariff margins of above 5 percentage points is only 14.86% (12.62%) of total imports in 2001 (2003)[59]. Given the high documentation and other administrative costs incurred in complying with the requirements of the preferential scheme (Schwarz and Villinger,2004), one would expect that only sufficiently high

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[59] Sum of trade value shares of products having preferential margins of 6% and above.

differentials between MFN and CEPT rates would prompt regional producers and traders to take up the preferences accorded by AFTA.   As shown in Table 5.2, products where margins go over 10 percentage points account for only 10.77% of total imports in 2001 and 7.13% in 2003.

5.4 Empirical Analysis

Analysis at aggregate level

We initially conduct an experiment that tests the importance of preferential tariffs, employing data at the aggregate level. As earlier mentioned, data availability constrains us to limit the analysis to the period of 2001 – 2003. Reporting (importing) countries in the analysis include Indonesia, Malaysia, Philippines and Thailand. Annex A.3 lists all partner countries which comprises all available trading partners. The decision to focus on only four countries, is due to the fact that preferences no longer matter for Singapore and Brunei given the predominance of zero MFN tariffs.   The new members, on the other hand, are yet to fully implement the CEPT scheme[60], and together account for a small share in intra-ASEAN trade.

   To measure the importance of trade preferences on intra-ASEAN trade flows we use a gravity model which explains the volume of bilateral trade flows between countries. The origins of the model date back to Tinbergen (1962) and Pöyhonen (1963) and the theoretical derivation of the gravity model has been further developed by Anderson (1979), Bergstrand (1985), Deardorff (1995), Eaton and Kortum (2002), Anderson and van Wincoop (2003). Anderson and Wincoop (2003) argue that bilateral trade flows depend on the destination and origin price effects, which are themselves related to the existence of trade barriers, which they call "multilateral resistance". They propose a method which consistently and efficiently estimates gravity equations by controlling for price effects in both the destination and origin markets (and for other regional specificities which would be omitted) by including origin and destination fixed effects in all equations. Since our dataset ranges over time, prices should also change over time. To

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[60] Cambodia, Laos, Myanmar and Vietnam have later deadlines to implement the CEPT scheme: Vietnam by 2006, Laos and Myanmar by 2008 and Cambodia by 2010.

control for these changes, we therefore include origin and destination fixed-effects, interacted with time dummies.[61]

For the analysis at the aggregate level we estimate the following equation:

(1) $\ln X_{ijt} = \alpha + \beta_1 \ln tariff_{ijt} + \beta_2 \ln D_{ij} + \beta_3 Colony_{itj} + \beta_4 Language_{ijt}$
        $+ \beta_5 E_{it} + \beta_6 I_{jt} + \beta_7 T_t + u_{ijkt}$

The dependent variable is X_{ijt}, is the aggregate bilateral import from country i to country j in period t. The variable $tariff$ measures bilateral tariffs between country i and j in period t. D_{ij} is distance between the partner countries which proxies trading costs. To capture historical linkages between trading partners a zero-one type dummy variable was included in the regression for colonial links (Colony). Common language can also greatly reduce transaction costs, hence the inclusion of a dummy for the trading partners having a common language. Tt are time fixed effects, while Eit and Ijt are exporter and importer time varying fixed effects.

Gravity models often include GDP for both reporter and partner countries capturing the size of the economy. In our specification the time varying country fixed effects capture among other things the impact of the size of the economy on trade. Moreover, including time varying reporter and partner fixed effects together with GDP data would give rise to a multicollinearity problem; therefore we adopt the specification proposed by Anderson and Wincoop (2003), dropping the GDP data in the estimation.

The objective of the econometric analysis at the aggregate level is to estimate the effects of preferential AFTA tariffs on trade flows of AFTA member countries. The available trade data does not distinguish between products imported under MFN tariffs and those where the privilege to avail lower preferential tariffs was invoked. Even though in principle AFTA member countries apply preferential tariffs between each other, there can be several restrictions, such as rules of origin or other non tariff barriers, which would limit the use of the preferential tariffs within AFTA reducing the importance of AFTA's preferences on its member states. To proxy the importance of preferences for trade between AFTA members the results of two specifications are compared. The first specification uses MFN tariffs between ASEAN and their partner countries while the second specification uses preferential tariffs for trade between ASEAN countries and

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[61] See Francois and Woerz (2006) using similar specification.

MFN for the rest of the countries. If preferential tariffs indeed exert an impact on intra-ASEAN trade flows, then we should expect the second specification to have a greater explanatory power relative to the first model, as revealed by higher R-squared.

Table 5.3   Importance of preferences in 2001/2003: shares of total intra-ASEAN imports and shares of total tariff lines (in italics) covered by the CEPT Scheme

		CEPT Rates						Preference Margins			
		0	0.5 - 5	6 - 10	11- 15	15<	excl	0	0.5-5	6 - 10	11- 15
Indonesia											
	2001	40.6	53.1	2.9	0.4	0.0	3.2	52.3	37.5	5.2	0.4
		29.4	*66.6*	*3.2*	*0.7*	*0.6*					
	2003	38.4	44.4	3.2	4.2	0.0	9.9	51.4	25.2	7.0	1.5
		28.6	*66.6*	*3.9*	*0.9*	*0.0*					
Malaysia											
	2001	68.6	27.9	1.8	0.5	0.1	1.1	80.2	5.4	4.3	5.4
		49.3	*7.3*	*2.3*	*0.7*	*0.0*					
	2003	66.8	28.9	1.7	0.4	1.4	0.9	78.7	4.9	4.7	5.8
		49.1	*43.5*	*4.3*	*2.0*	*0.9*					
Philippines											
	2001	43.6	52.1	2.5	0.8	0.2	0.9	64.3	27.0	4.9	1.2
		17.9	*77.5*	*3.9*	*0.4*	*0.3*					
	2003	52.6	41.8	3.5	0.2	0.3	3.0	66.0	24.4	4.8	2.6
		18.5	*76.5*	*4.1*	*0.5*	*0.5*					
Thailand											
	2001	35.9	59.2	2.4	2.4	0.1	0.0	54.3	13.3	2.0	19.4
		4.7	*84.7*	*5.9*	*4.6*	*0.3*					
ASEAN-4											
	2001	47.2	48.1	2.4	1.0	0.1	1.3	62.8	20.8	4.1	6.6
		25.3	*59.0*	*3.8*	*1.6*	*0.3*					
	2003	52.6	38.3	2.8	1.6	0.6	4.6	65.3	18.2	5.5	3.3
		32.1	*62.2*	*4.1*	*1.1*	*0.5*					

Note: Shares in terms of total tariff lines (HS6) are reported in italics.
Data for Thailand is incomplete for the year 2003.

Results of Aggregate Regressions

Table 5.4 presents the results of the OLS regressions performed using the two different model specifications discussed earlier. The first column carries the results of the first regression, which uses the preferential CEPT rates between AFTA countries for the *tariff* variable, while the results shown in the second column refer to the experiment using

MFN tariffs, also for country pairs which are eligible for AFTA preferences. Both specifications use time varying country specific dummies and time dummies.

The results in Table 5.4 indicate that the coefficient of the tariff variable is high and significant for both specifications. This is consistent with the usual expectations with regard to the negative trade effects of tariffs. In this case, a one per cent rise in tariffs would decrease trade by around 180%. More importantly, the results indicate that taking the preferential tariffs between ASEAN members into account does not significantly change the outcomes, with coefficients of all the variables remaining almost the same, and the R-squared of the two different specifications being almost identical. We also implemented a Hausmann specification test to assess if the two specifications are significantly different from each other and the results of the test indicate that the two specifications are not significantly different from each other. This leads us to conclude that preferences applicable between ASEAN countries, have indeed not wielded any important influence on their trade flows during the period under study.

Table 5.4   OLS regressions using aggregate trade flows

	With preferential tariffs	Without preferential tariffs
Ldistance	-0.811	-0.804
	(0.259)***	(0.259)***
Common language	0.292	0.289
	(0.189)	(0.189)
Colony	0.485	0.485
	(0.542)	(0.542)
LTariffs	-5.263	-5.186
	(1.205)***	(1.201)***
Constant	10.671	10.600
	(3.021)***	(3.021)***
Observations	1770	1770
R-squared	0.8834	0.8834
Adjusted R-squared	0.8181	0.8180

Notes: Time fixed effects and time varying reporter and partner fixed effects are included in the regressions. Standard errors in parentheses.
* significant at 10%; ** significant at 5%; *** significant at 1%

Analysis at disaggregated level

We now focus the analysis on the disaggregated trade flows in order to further explore the effects of preferences on trade flows and to provide an approximate estimate of the

costs of requesting preferences under the AFTA. Since the data at hand does not distinguish between trade flows using MFN tariffs and those that utilized preferential tariff rates, we carry out the present analysis using normal trade flows. While the obtained estimates do not provide a precise quantification of the costs of preferences because of these data constraints, we nevertheless are able to obtain an indicative estimate of the importance of preferences for trade flows and of the minimum level of preferences needed in order to have a positive trade stimulating effect on intra-AFTA trade flows.

The disaggregated analysis is conducted at 6-digit HS level and includes Indonesia, Malaysia, Philippines and Thailand as reporting countries and the same four countries and Singapore as partner countries. Thus we excluded those trade flows for which the third country tariffs were zero or equal to the preferential tariff. The disaggregated trade data covers the period 2001-2003 which yields a database of 42,268 observations on bilateral trade flows.[62] Data on geographical variables were obtained from the Paris based Centre d'Etudes Prospectives et d'Informations Internationales (CEPII).

The analysis at the disaggregate level also requires a variable which would capture the otherwise omitted price effects. Prices are expected to be different in each sector, thus to correctly account for price effects we include time varying country specific fixed effects interacted with sectoral dummies.[63] The following specification is used for the disaggregated regression:

$$(2) \qquad \ln X_{ijkt} = \alpha + \beta_1 \ln PREF_{ijkt} + \beta_2 \ln D_{ij} + \beta_3 Language_{ijt}$$
$$+ \beta_4 E_{itk} + \beta_5 I_{jtk} + \beta_6 T_t + + \beta_7 S_k + u_{ijkt}$$

The dependent variable X_{ijkt}, is the bilateral import from country i to country j in period t of product k. Country i and j are limited to 5 ASEAN countries, namely, Indonesia, Malaysia, Philippines, Singapore and Thailand and products k are limited to those for which there is an applicable preferential tariff according to the AFTA. The specification is very similar to those of the aggregate regressions. The main difference is that instead of using bilateral preferential tariffs or MFN tariffs, we include the preference margins (the difference between MFN and preferential tariffs relative to MFN tariffs) in the

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[62] Data for Thailand for the year 2001 is not available.

regressions. The variable *PREF* captures the impact of different preference margins on bilateral trade flows, and is constructed in the following way:

(3)
$$PREF = \ln \frac{(MFN - PT)}{(1 + MNF)} * Difference$$

where *PT* is the preferential tariff, *MFN,* the third country tariff, and *Difference* stands for several dummy variables which capture the difference between MFN and preferential tariffs. A total of fifteen dummy variables were interacted with the preference margin, each created for every 5% differential in MFN and preferential rates, all the way up to 50% margin, after which dummies correspond to margins of 10%.[64] The coefficient of the preference margin interacted with these dummy variables, thus indicates the region of tariff differentials where an impact on bilateral trade flows can be expected to take effect. E_{tik} and I_{itk} are time varying reporter and partner fixed-effects interacted with sectoral dummies, while T_t and S_k, correspond to time fixed effects and sector specific fixed effects, respectively.

Results of disaggregate regressions

While the results from analyzing aggregate trade flows showed that preferences offered under AFTA did not have a significant effect on trade flows of beneficiary countries, we nonetheless intend with the subsequent analysis to determine the margin of preferences relative to MFN rates, where AFTA might have a stimulating impact on trade.

From the results based on disaggregated data presented in Table 5.5, it is apparent that distance has a smaller negative effect on intra-ASEAN trade than on ASEAN countries' trade with the rest of the world. Although high internal land transport costs are said to characterize much of ASEAN, port logistics between the main regional trade routes (largely involving Singapore) are believed to be cost efficient.

Turning to the role of preferences, fifteen variables were included in the regression to capture the importance of preference margin on trade flows. Results reveal that the

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[63] Chen (2004) also uses sector and country specific fixed effects to capture price effects in each sector and country, however she has a cross-section data and therefore she does not use time varying fixed effects.

[64] In other words the fifteen dummies capture when the difference between third country tariffs and MFN tariffs are 0-5%, 5-10%, 10-15%, 15-20%, 20-25%, 25-30%, 30-35%, 35-40%, 40-45%, 45-50%, 50-60%, 60-70%, 70-80%, 80-90%, or more than 90%.

preference margin has a negative significant effect on trade when the difference between third country tariffs and preferential tariffs are lower than five per cent. This might be because the costs of requesting the preferences, such as administrative costs, and the costs of complying with the rules of origin requirements of AFTA are higher than the benefits expected from obtaining the preferential treatment. When the difference between preferential and MFN tariffs are between five to 10 per cent, the coefficient remains negative but becomes insignificant. While margins of 10 to 25 percentage points register a slightly positive effect, the coefficient is insignificant. Preferences start to have a trade stimulating effect only when preferential tariffs are at least 25 percentage points lower than the MFN rates. These results suggest that the costs of requesting preferences within AFTA might be in the range of 10-25%. Nevertheless, one has to bear in mind that these results are not based on actual utilization rates but normal intra-regional trade flows which do not take into account whether preferential tariffs were actually applied or not.

The cost estimates obtained are somewhat larger than those found in the literature for other preference schemes. Herin (1986) estimates that in EFTA countries, the costs of documentation and the administration of origin rules, which is the principal part of increased costs for preferential trade, add some 3 per cent of the value of the goods traded to total exporter costs. Manchin (2006) finds that costs of requesting preferences for ACP countries under the Cotonou preference scheme of the EU is around 4-4.5 per cent of the value of goods traded. More recent work on NAFTA by Carrère and de Melo (2004) finds that average total compliance costs were 6.2% in 2001. Using double-censored tobit estimation techniques, they obtain a compliance cost estimate of 3.9% for products where the utilization rate is below 100%.[65] Estimating the costs for NAFTA, Cadot et al. (2005) measure the trade-weighted compliance (administrative) costs to be 6.8% (1.9%) and for the Pan-European preference scheme to be around 8% (6.8%).

Interestingly, for products with very high preference margins, the impact of preferences is reversed and turns negative. The immediate explanations that come to mind are the presence of NTMs that inhibits trade, the negligible supply of the product

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[65] See also Anson et al. (2005), who estimate that in the case of NAFTA average compliance costs are around 6 percent, offsetting the preferential tariff differential of about 4 percent... Administrative costs chewed up about half of the value of preferential access for Mexican firms.

within the region, or redundancy due to other regional import substitution instruments in place.

Table 5.5 OLS regressions using disaggregated data

Difference between preferential and MFN tariffs (in % points) in parenthesis	Limportsvalue	Limportsvalue
Ldistance	-0.211	-0.214
	(0.041)***	(0.041)***
Common language	0.188	0.188
	(0.055)***	(0.055)***
Difference1 (0-5)	-0.059	-0.057
	(0.026)**	(0.026)**
Difference2 (5-10)	-0.034	-0.031
	(0.036)	(0.036)
difference3 (10-15)	0.018	0.018
	(0.047)	(0.047)
difference4 (15-20)	0.045	0.049
	(0.057)	(0.056)
difference5 (20-25)	0.092	0.094
	(0.070)	(0.070)
difference6 (25-30)	0.194	0.197
	(0.081)**	(0.081)**
difference7 (30-35)	0.392	0.392
	(0.119)***	(0.119)***
difference8 (35-40)	0.339	0.337
	(0.181)*	(0.181)*
difference9 (40-45)	1.080	1.085
	(0.333)***	(0.333)***
difference10 (45-50)	0.968	0.934
	(0.277)***	(0.277)***
difference11 (50-60)	0.700	0.695
	(0.352)**	(0.351)**
difference12 (60-70)	-0.310	-0.300
	(1.119)	(1.119)
difference13 (70-80)	4.020	4.044
	(2.259)*	(2.258)*
difference14 (80-90)	-11.106	-11.067
	(4.455)**	(4.451)**
difference15 (90-	-5.155	-5.176
	(2.329)**	(2.327)**
Substantial transformation		-0.932
		(0.112)***
Observations	42268	42268
R-squared	0.11	0.11

Time fixed effects; sectoral dummies and time varying sector-specific reporter and partner fixed effects are included in the regressions. Standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

A dummy variable was included in the regression (see second column in Table 5.5) capturing the effects when traders can choose between satisfying the value-added requirement or an alternative rule requiring specific production processes to be performed in order to obtain the originating status for the product[66]. The variable is significant and the coefficient is negative indicating that trade in these products is lower than what would be normally expected. The results imply that despite the provision of a more flexible origin rule, the requirements for obtaining originating status for these products might still be too restrictive. It is also true that ASEAN sources its textiles imports largely from outside the region such as China, US, EU and South Asia. This would imply that the amount of preferential margins given to textiles, are insufficient to alter the competitive position of regional producers vis-à-vis their non-ASEAN counterparts.

Table 5.6 examines in detail some of the products that register the highest margin of preferences, looking at the incidence of non-tariff measures, and the value of imports as a share of total intra-ASEAN trade. For Thai imports of women's / girls' silk blouses (HS 620610) from ASEAN, for instance, a preference margin of 60 percentage points is applicable, but out of the total imports of Thailand for this product, only 5.58% is sourced from ASEAN. In fact, for half of the product groups in this list, trade shares hover around the 1 percent range. This propensity to extend high preferences on products where little or no intra-ASEAN trade takes place is sometimes referred to as the 'snow-plough' effect (Menon, 2005), referring to the failed ASEAN Preferential Trading Arrangement[67] where preferences are given mostly to trade-irrelevant products such as snow-ploughs. Incidentally, a remnant of this proverbial example can still be seen here: (HS 870310), vehicles especially designed for travelling in snow.

Countries that confer the highest margins also appear to be the ones that impose non-tariff measures on these same products. Indonesia, Malaysia, Philippines and Thailand, for instance, offer high margins for vehicles in the HS 870310 category, but all four countries likewise impose non-tariff measures on that product. Malaysia, also imposed quantity control measures on vehicle products, some of which register the

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[66] Since 1995, an alternative change of tariff heading (CTH) rule is allowed for textiles and clothing products.
[67] The ASEAN Preferential Trading Agreement (PTA) was instituted in 1977. See Cuyvers and Pupphavesa (1996) for discussion of the pre-AFTA economic cooperation policies of ASEAN.

highest margins found in ASEAN (148%).   The coincidence of large tariff discounts and NTMs, clearly reveal the remaining areas of import substitution which are resistant to liberalisation even if limited to AFTA countries.

The only high margin item in Table 5.6 with a large share in total intra-ASEAN imports is vehicle bodies (HS 870710), 97% of which consists of Malaysian imports from Thailand.   Here, imports are mainly driven by an industrial complementation scheme[68], wherein the buyer, source, and brand are pre-specified under the terms set by the said regional program. Other than tariff preferences, products included in this program also enjoy local-content accreditation, and other non-tariff incentives.   The large margins observed here for vehicle bodies are therefore likely to be redundant, and moreover, they originate not from the importer, which is Malaysia, but from the principal exporter, Thailand.   The substantial differential in preferences in this case therefore merely reflects Thailand's import substitution policy in this sector, as shown by the high MFN rates of 80% .

One important reason for preference underutilization in ASEAN may be found in the nature of the regional production chains where non-ASEAN import content could be very high. Significant part of the manufacturing sector in ASEAN has been established through FDIs by multinationals who bring in major components from parent companies outside the southeast Asian region. Although the rules of origin of AFTA requiring at least 40% cumulative regional content could be considered relatively liberal compared to some other regional agreements due to full cumulation and the relatively lower value-added required, exporters of heavily traded goods such as electronics, may be unable to cumulate the necessary local / regional content.

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[68] The Brand-to-Brand Complementation Scheme was set in 1988 to encourage joint production in ASEAN. This was later phased out in 1995 and incorporated into a new ASEAN Industrial Cooperation (AICO) Scheme. See for example Yoshimatsu (2002) and Lecler (2002), for analysis and examples of Industrial Cooperation Agreements of ASEAN.

Table 5.6 Incidence of Non-tariff measures on products with high preferential margins (2003)

high margin products	HS6 code	preference margin of (in %)	share of intra-A4 -trade	NTM incidence*
Compound alcoholic preparations	330210	**87.5 IDN** (0 SGP, MYS) (1 PHL) ; (5 THA)	10.96 (2.06)**	
women's/girls' silk blouses	620610	**60.0 THA** (0 SGP; 13.75 IDN; 15 MYS)	5.58 (5.48)	Thailand – import license
Vehicles specially designed for travelling on snow, golf cars & similar vehicles	870310	**70.0 IDN** (23.36 MYS)	1.7 (0.0)	Ind – 6100 , 8100 Malaysia – 6170
Vehicles w/ spark-ignition internal combustion reciprocating piston engine, of a cylinder capacity exceeding 1,500 cc but not exceeding 3 000 cm3	870323	**100.6 MYS** 65.0 THA 36.67 IDN 25.0 PHL	10.74 (10.7)	Ind – 6100 , 8100 Malaysia – 6100 Philippines – 6100 Thailand – 6170
Vehicles w/ spark-ignition internal combustion reciprocating piston engine, Of a cylinder capacity exceeding 3,000 cc	870324	**148.85 MYS** 57.5 THA 40.0 IDN	0.7 (0.6)	Ind – 6100 , 8100 Malaysia – 6100 Philippines – 6100 Thailand – 6170
Vehicles w/ compression-ignition internal combustion piston engine (Diesel /semidiesel), Of a cylinder cap. exceeding 1,500 cc but not exceeding 2 500 cm3	870332	**36.67 IDN** 25.0 PHL	1.4 (1.4)	Ind – 6100 , 8100 Malaysia – 6100 Philippines – 6100 Thailand – 6170
Vehicles w/ compression-ignition internal combustion piston engine (Diesel /semidiesel), Of a cylinder capacity exceeding 2,500 cc	870333	**148.33 MYS** 40.0 IDN 25 PHL	0.9 (0.9)	Ind – 6100 , 8100 Malaysia – 6100 Philippines – 6100 Thailand – 6170
Components, parts, accessories for assembly of motor vehicles	870390	**100.6 MYS** 75.0 IDN	10.3 (9.6)	Ind – 6100 , 8100 Malaysia – 6100 Philippines – 6100 Thailand – 6170
Bodies (incldg cabs), for the vehicles of hdg. 8703	870710	**75.0 THA** 25.0 MYS	45.69 (45.69)	Malaysia – 6170
Bodies (incldg. cabs), for the vehicles of hdg. 8701 to 8705, excl. 8703	870790	**75.0 THA**	7.3 (6.0)	
Motorcycles w/ reciprocating internal combustion piston engine	870020	**67.0 THA** 36.45 MYS 25.0 IDN 25.0 PHL	7.3 (7.3)	

* Source: ASEAN Secretariat database of Non-Tariff Measures

* *Share of intra-ASEAN10 trade in parenthesis

Note: NTM codes: 6100 – non-automatic licensing (quantity control measure); 6170 – non-automatic licensing (discretionary import license); 8100 – Technical regulations.

Table 5.7a **Import content of selected sectors in East Asia, 2001**

country	text.l	cloth.	leather	chem	motor veh.les	transp equipt.	elect. mach.	mach & equipt	other mfg,
Ind	27.4	6.6	8.4	29.3	25.1	40.1	23.1	56.9	9.4
	7.8	*15.5*	*5.5*	*4.5*	*6.0*	*3.3*	*6.8*	*2.5*	*2.1*
Mal	38.0	39.2	73.2	27.4	36.0	29.5	44.1	34.1	40.0
	10.0	*9.4*	*4.7*	*5.0*	*7.2*	*5.6*	*2.8*	*8.0*	*6.1*
Phil	37.8	40.7	26.7	38.7	45.0	23.7	70.2	56.6	18.7
	13.0	*14.3*	*8.5*	*13.2*	*17.1*	*7.3*	*45.0*	*31.3*	*4.1*
Sing	51.1	44.3	34.6	42.2	41.7	36.2	83.2	58.2	46.3
	6.6	*5.7*	*6.3*	*3.1*	*4.7*	*7.4*	*1.4*	*2.5*	*0.00*
Thai	23.3	13.0	26.1	22.7	38.1	64.0	57.2	48.9	27.6
	6.6	*10.5*	*5.1*	*2.3*	*8.6*	*5.7*	*5.2*	*3.8*	*0.0*
ASEAN	35.5	28.8	33.8	32.1	37.2	38.7	55.6	50.9	28.4
	8.8	*11.1*	*6.0*	*5.6*	*8.7*	*5.9*	*12.3*	*9.6*	*2.5*
rest of ASEAN	23.3	13.0	26.1	22.7	38.1	64.0	57.2	48.9	27.6
	5.4	*6.1*	*4.3*	*2.9*	*5.1*	*5.5*	*3.8*	*2.4*	*3.3*

Table 5.7 a/b provide an indication of the extent of this problem, showing the import content and the local value-added of key manufacturing sectors in ASEAN. Calculations are based on data taken from the GTAP 6 data base for 2001, the latest year available. As expected, the import content of electronics and machineries are the highest for ASEAN, the sum of the direct and indirect import content (reported in italics in Table 5.7 a/b)[69] being 67.8% and 60.6%, respectively. The share of imports is particularly high in these sectors for Singapore and Malaysia. The figures reported here are most likely understated (for import content) and overstated (for value-added) since the data do not differentiate between output destined for local consumption and output for exports. One would expect the import content for exports to be higher than for

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[69] Direct import content and value-added are computed as shares of the value of imported intermediate inputs, and value-added (labor, capital, natural resources, land) over the total value of output per sector. Indirect import content and value-added (reported here in italics) are the sum of the import content and the sum of value-added shares contained in the local intermediate inputs used in output production.

those sold in the local market because of various fiscal incentives (i.e., import duty drawbacks), which is available for export production in most countries. In terms of value-added, AFTA members appear to be unable to meet the 40% (for AFTA) regional value content (RVC) rule for most of the key sectors featured here.

Table 5.7 b **Value-added of selected sectors in East Asia, 2001**

	sectors								
country	textiles	clothing	leather	chem	motor vehicle	transp equip	electr mach	mach. & eqpt	other mfg
Ind	31.2	25.0	46.2	26.4	39.0	28.3	30.1	23.7	31.3
	14.6	*2.8*	*9.3*	*10.0*	*14.7*	*12.5*	*12.0*	*12.2*	*2.8*
Mal	20.2	27.0	10.1	32.0	34.1	36.0	33.0	22.8	24.0
	11.3	*13.0*	*10.3*	*11.6*	*18.8*	*12.5*	*14.1*	*12.2*	*10.2*
Phil	17.5	28.7	25.6	27.8	3.7	31.1	9.8	17.7	41.4
	5.4	*4.8*	*2.9*	*4.1*	*15.3*	*23.3*	*5.9*	*135.8*	*3.9*
Sing	21.0	29.0	32.5	33.6	24.5	32.0	10.3	23.7	23.6
	18.0	*14.4*	*11.2*	*12.2*	*9.1*	*13.1*	*9.7*	*10.2*	*8.9*
Thai	30.2	27.4	34.4	22.7	26.0	14.1	20.5	20.7	31.0
	17.7	*22.6*	*9.8*	*10.8*	*100.7*	*8.6*	*21.6*	*20.2*	*5.6*
ASEAN	24.0	27.4	29.8	28.5	25.5	28.3	20.8	21.7	30.3
	13.4	*11.5*	*8.7*	*9.7*	*31.7*	*14.0*	*12.7*	*38.1*	*6.3*
rest of ASEAN	36.3	25.0	30.7	25.8	40.6	24.0	36.7	29.4	34.7
	16.4	*20.9*	*11.9*	*7.1*	*51.1*	*6.6*	*10.7*	*8.3*	*5.0*

Source: Manchin and Balaoing, 2006

5.5   Conclusions

While the potential gains offered by a fully implemented free trade area in ASEAN has been examined in both theoretical and empirical literature, the nature and magnitude of actual trade and production effects are unknown. This paper aims to provide some indication of the extent of influence preferentialism might have in ASEAN given the trade and tariff data converged for the years 2001 to 2003. The results confirm the popular notion that the preferences offered under AFTA do not exert any apparent effects on intra-ASEAN trade. The gravity model specified using MFN tariffs display the same explanatory power as a similar model where CEPT rates are instead used.

A closer look at disaggregated data offers some probable explanations underpinning this result. Although the empirical analysis could not be carried out using data on utilization of preferential tariffs, the results, nevertheless, suggest that CEPT tariffs might be expected to be exploited when difference between third country tariffs and preferential tariffs are higher than 10-25 per cent. According to our estimate the positive effects of preferences becomes significant when the preference margin is higher than 25 per cent which covers 9.2% of total sum of tariff lines in Indonesia, Malaysia, Philippines and Thailand, and accounts for 7.8% of the aggregate value of their joint imports. The rough utilisation rate estimate of 5% (of total import value) based on firm interviews, thus comes rather close to the regression estimates derived here.

The effects of margins below 5%, and those above 80% have a significant negative effect on trade flows; the former implying that administrative and other costs related to obtaining preferences exceed the benefits due to margins; and the latter due to the larger incidence of NTMs in these products, or the simultaneous implementation of a regional program which is exerting a more determinant role on production and trading patterns.

Although preference underutilisation is not unique to ASEAN, the rates envisaged here is certainly low relative to the known record of other discriminatory schemes. Brenton and Manchin (2003), for instance, reported that 35% of eligible exports from the CEEC countries enter the EU using the available preferential rates. Inama (2003), examined the utilisation of the General System of Preferences (GSP) of the QUAD countries, and found that of the 62% of imports of Quad countries originating from all beneficiaries of GSP schemes covered by preferences, 39% of these were effectively traded under the lowest available rates.

It must be pointed out, however, that the total import value shares of products with margins above 5%, are only 14.86% in 2001 (and 12.62% in 2003). Utilisation rates must therefore be measured not against the total imports eligible for preferences, but against that product range where utilisation can be considered rational. Assuming that in about 5% of total imports, CEPT privileges were indeed requested by ASEAN traders, then the real take-up rate of AFTA preferences would actually be in the neighbourhood of 30% -40%. Moreover, as shown in the analysis of the tariff and trade structure of the CEPT scheme, even if preferences would have been fully utilized, no matter how marginal, the maximum amount of trade that could potentially be affected would only

be in the neighbourhood of 35% - 37%[70] of total intra-ASEAN imports. Assuming that the costs of documentation and the administration of origin rules are comparable to the (EU-based) estimates of 3 – 4.4.5% of total value of goods imported, as indicated by Herin (1986) and Manchin (2006), then the relevant shares fall to around 16% of the total value of regional trade for ASEAN.

It is true that there exists small pockets of intra-ASEAN trade where preferences are important (especially for Thailand[71]). Overall, however, the fact that discriminatory tariffs now influence only a small area of regional trade may mean that attempts to enhance the utilisation of AFTA preferences may not yield sizable results in terms of further increasing regional trade. Current efforts linked to the harmonisation of custom procedures and other trade facilitation measures, which affect both ASEAN and non-member products may yet prove to be more effective in extending the frontiers of intra- and extra-ASEAN trade.

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[70] As shown in Table 3, products where the difference between MFN and CEPT rates is zero account for 62.78% and 65.34% of total value of intra-ASEAN imports in 2001 and 2003, respectively.

[71] The standard deviation of Thailand's MFN rates is high relative to the rest of the ASEAN-5, which also leads to a higher standard deviation for its preferential margins.

Annexes

Table A.1   Top 5 Intra-ASEAN imports, 2001 (US$ millions)

rep	part	product	Value	CEPT	MFN
IDN	THA	acyclic hydrocarbons	1368.4	0	0.0
IDN	SGP	acyclic hydrocarbons	1435.0	0	0.0
IDN	MYS	petroleum oils (crude)	1370.5	0	0.0
IDN	SGP	petroleum oils & oils from bituminous minerals etc. (not crude)	1158.9	0	3.3
IDN	SGP	light-vessels, fire-floats, dredgers etc.; floating docks	250.9	0	0.0
MYS	SGP	parts and accessories for office machines of headings 8469-72, computer accessories	2187.8	0	0.0
MYS	SGP	electrical capacitors, fixed, variable or adjustable; parts	1813.2	0	0.0
MYS	SGP	petroleum oils & oils from bituminous minerals etc. (not crude)	1615.1	0	2.3
MYS	SGP	electronic integrated circuits and micro assemblies; parts	1563.8	0	0.0
MYS	SGP	semiconductor devices (diodes, transistors etc.); light-emitting diodes etc.; parts thereof	223.8	0	0.0
PHL	SGP	electronic integrated circuits and micro assemblies; parts	756.0	0	0.0
PHL	SGP	parts and accessories for office machines of headings 8469-72, computer accessories	239.0	0	0.0
PHL	MYS	petroleum oils & oils from bituminous minerals etc. (crude)	239.0	3	3.0
PHL	SGP	petroleum oils & oils from bituminous minerals etc. (not crude)	237.9	3	3.0
PHL	IDN	Copper ores	126.7	3	3.0
THA	MYS	parts and accessories for office machines of headings 8469-72, computer accessories	797.5	0	0.0
THA	MYS	thermionic, cold cathode or photocathode tubes & parts	383.1	5	20.0
THA	MYS	petroleum oils & oils from bituminous minerals etc. (not crude)	485.2	5	15.3
THA	MYS	Petroleum oils	351.1	0	0.0
THA	IDN	gold (incl. gold plated with platinum) unwrought or in semimnfr or in powder form	160.6	0	0.0

Table A.2. Relative importance of preferential tariffs and duty-free MFN tariffs, 2001 - 2003

	MFN = zero		MFN = pref tariffs		MFN > pref tariffs		Total trade
	value	Share of total	value	Share of total	value	Share of total	
Indonesia							
no. of tariff lines	2727	20%	7238	53%	6349	47%	13587
value of imports	4049945	36%	6604567	59%	4683297	41%	11287864
Malaysia							
no. of tariff lines	12066	46%	13802	52%	12697	48%	26499
value of imports	35445289	67%	36989508	70%	15711145	30%	52700653
Philippines							
no. of tariff lines	831	4%	9736	44%	12173	56%	21909
value of imports	6059808	37%	11520174	70%	5038329	30%	16558503
Singapore							
no. of tariff lines	139808	99.97%	139808	99.97%	36	0.03%	139844
value of imports	286929741	99.87%	286929741	99.87%	372172.3	0.13%	287301913
Thailand							
no. of product codes	603	5%	2095	16%	11136	84%	13231
value of imports	6701497	35%	8945374	46%	10338585	54%	19283958
Total							
no. of product codes	156035	73%	172679	80%	42391	20%	215070
value of imports	339186280	88%	350989364	91%	36143528	9%	387132891

Table A.3. List of partner countries

Afghanistan	Colombia	Guinea-Bissau	Mexico	Solomon Islands
Albania	Comoros	Guyana	Micronesia	Somalia
Algeria	Congo Dem.	Haiti	Moldova	South Africa
Andorra	Rep.	Honduras	Mongolia	Spain
Angola	Congo, Rep.	Hong Kong	Montserrat	Sri Lanka
Anguila	Cook Islands	Hungary	Morocco	St. Kitts and Nevis
Anti. &	Costa Rica	Iceland	Mozambique	St. Lucia
Barbuda	Cote d'Ivoire	India	Myanmar	St. Vincent &
Argentina	Croatia	Indonesia	Namibia	Grenadines
Armenia	Cuba	Iran,Islamic	Nauru	Sudan
Aruba	Cyprus	Rep.	Nepal	Suriname
Australia	Czech	Iraq	Netherlands	Swaziland
Austria	Republic	Ireland	Neth. Antilles	Sweden
Azerbaijan	Denmark	Israel	New Caledonia	Switzerland
Bahamas,	Djibouti	Italy	New Zealand	Syrian Arab
Bahrain	Dominica	Jamaica	Nicaragua	Republic
Bangladesh	Dominican	Japan	Niger	Taiwan, China
Barbados	Rep	Jordan	Nigeria	Tajikistan
Belarus	East Timor	Kazakhstan	Niue	Tanzania
Belgium	Ecuador	Kenya	Norfolk Isl.	Thailand
Belize	Egypt, Arab	Kiribati	N.Mariana Isl.	Togo
Benin	Rep.	Korea Dem.	Norway	Tokelau
Bermuda	El Salvador	Rep.	Oman	Tonga
Bhutan	Equat.l	Korea, Rep.	Pakistan	Trinidad & Tobago
Bolivia	Guinea	Kuwait	Palau	Tunisia
Bosnia and	Eritrea	Kyrgyz	Panama	Turkey
Herzegovina	Estonia	Republic	Pap. New Guinea	Turkmenistan
Botswana	Ethiopia	Lao PDR	Paraguay	Turks and Caicos Isl.
Brazil	Faeroe	Latvia	Peru	Tuvalu
British Virg Isl	Islands	Lebanon	Philippines	Uganda
Brunei	Falkland	Lesotho	Pitcairn	Ukraine
Bulgaria	Island	Liberia	Poland	United Arab
Burkina Faso	Fiji	Libya	Portugal	Emirates
Burundi	Finland	Lithuania	Qatar	United Kingdom
Cambodia	France	Luxembourg	Romania	United States
Cameroon	French	Macao	Russian Fed	Uruguay
Canada	Polynesia	Macedonia,	Rwanda	Uzbekistan
Cape Verde	Gabon	FYR	Saint Helena	Vanuatu
Cayman Isl	Gambia, The	Madagascar	St Pierre &	Venezuela
Centr Afri	Georgia	Malawi	Miquelon	Vietnam
Rep	Germany	Malaysia	Samoa	Wallis and Futuna
Chad	Ghana	Maldives	Sao Tome &	Western Sahara
Chile	Gibraltar	Mali	Principe	Yemen
China	Greece	Malta	Seychelles	Zambia
Christmas Isl	Greenland	Marshall	Sierra Leone	Zimbabwe
Cocos	Grenada	Islands	Singapore	
(Keeling)	Guatemala	Mauritania	Slovak Republic	
Islands	Guinea	Mauritius	Slovenia	

Chapter 6

The Web of East Asian FTAs and the Resulting Labyrinth of Origin Rules

6.1   Introduction

The maze of East Asian regional and bilateral free trade agreements (FTAs) that has emerged in the last few years has triggered fears of what the attendant rules and administrative procedures would imply for the cost of doing business in the region. If these agreements are mutually consistent, particularly with regards to rules of origin (ROO), then obviously the marginal costs of a new agreement will be minimal for all parties. The lack of coordination in rule-setting among countries, however, ensures that each trade route marked by preferentialism will be differentially governed, thus leading to mounting information and transaction costs. Moreover, the spectre of multiple and overlapping agreements among countries, will only further increase the need to regulate trade so that preferences do not spill-over unintendedly to non-partners via the member with the lowest trade barriers.

In a sea of preferential agreements, ROO are, in fact, seen as indispensable since they define the conditions that a product must satisfy to be deemed as originating from the country seeking preferential access. They are principally meant to prevent trade deflection, whereby products from non-participating countries destined for the partner country's market are redirected through free trade partners of the partner country to avoid the payment of partner country's customs duties. However, the problematic intricacies brought about by ROO often work to hinder the flow of goods in the region and introduce new uncertainties in the conduct of trade.

The complexities surrounding the rules of origin could be traced from two sources. One is the difficulty of ascertaining origin in an age of globalized trade and at the same time, increasingly fragmented production processes. When goods are produced in a single production stage then the origin of the products should be relatively easy to establish. Proof that the product was produced in the free trade partner should be sufficient. For other cases, ROO are used to define the methods by which it can be ascertained that the product has undergone sufficient working or processing in the free trade partner to qualify for preferential access. However, technological progress and globalization have made possible the further refinement of division of labour among various producers, in order to exploit scale economies and cost differentials among various countries. Consequently, the production of a single product often encompasses multiple locations, compounding the difficulties of verifying its origin.

The other reason behind the complex design of many ROOs is the convenience in which these rules could be used to both accommodate and conceal protectionist intents. ROOs, by increasing the local content of the product, or by attaching multiple criteria for the satisfaction of origin, could be another avenue to effectively exclude product groups from a country's liberalisation commitments. Rules can also be made product-specific, so that the extent of protection is hidden in the hundreds of pages of annexes, and coated by technical language not immediately accessible to non-specialists.

Needless to say, the motives underpinning the creation of FTAs, have a direct bearing on the design and degree of restrictiveness of ROO. For FTAs which are created largely for political and foreign policy purposes, cumbersome ROO provide an effective means of shielding Members from the economic effects brought about by the removal of tariff barriers. If, on the other hand, the goal of regional import substitution dominates, then ROO can make the conferment of origin conditional on a set of minimum regional content targets, which can spur trade diversion, especially in the use of intermediate manufacturing inputs. The FDI-motive, which is present in some FTAs, can exert two opposing pressures. On one hand, it may lead to more restrictive ROOs, as a means to entice rules-evasion ('rules-jumping') on the part of non-partner investors. On the other hand, countries may actually intend to use an FTA to bring down the costs of transactions among members, so as to create a bigger market and a more attractive

production base for foreign firms. In this case, the heavy requirements set by ROO become a genuine hindrance to the achievement of regional goals.

With the proliferation of FTAs observed especially in the last 3-4 years in East Asia, it becomes ever more important to take stock of the implication of these simultaneous agreements on the integration of regional markets. This paper aims in particular to provide an overview of the preferential rules of origin in East Asia, highlighting the aspects that might possibly generate some trade-chilling effects. Negotiations are still on-going for a number of agreements, hence this survey is limited to the FTAs that have been signed and those whose documents have been made publicly available.

6.2. Rules of Origin: a brief overview

The literature on Rules of Origin has flourished in the last decade, so that there are now an ample amount of surveys done to illustrate the different methods used by various regional grouping. This section thus offers but a brief overview of some basic features of origin rules. For a more extensive treatment, the reader is referred to Krishna (2003), Estevadeordal & Suominen (2004), and Lazaro & Medalla (2005); for an application to NAFTA, see Anson, et. al (2005); and for a discussion on the rules of origin in EU Trade Agreements, consult Brenton & Manchin (2003).

There are two basic criteria used to determine the origin of products based on the Kyoto Convention.[72] The first requires that a product be 'wholly obtained' from the exporting country requesting for preferences. This applies primarily to agricultural products and other raw materials. The second is the somewhat more vague concept of 'substantial transformation.' The interpretation of what 'substantial' means is what distinguishes the various preferential agreements from each other. There are three directions where these interpretations may lead. The first is to confer origin based on the required domestic content, which can be defined in terms of the value-added of the exporting country (using either cost or price), or defined in terms of weight or other physical terms. Another approach is to require a change of tariff heading (CTH) which

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[72] The Kyoto Convention or the International Convention on the Simplification and Harmonization of Customs Procedures entered into force in 1974, and has subsequently undergone several revisions. The World Customs Organization (WCO) currently adopts the Kyoto Convention as it was revised in 1999.

stipulates that the good, for which the preference is being requested, must have a different tariff heading than the inputs used in its production. Regional agreements using this rule could require that a product change its chapter (2 digits Harmonized System classification), heading (4 digits), subheading (6 digits) or item (8 – 10 digits), relative to the inputs used by the exporting country. It can also be, however, that certain materials from a tariff classification (sub) heading / chapter is prohibited in the production of the preference-seeking product.

A third method is to specify the processes that must be undertaken within the preferential grouping, for instance, requiring that cutting and sewing of clothing products must be done by the exporting countries, or that raw materials must be transformed in two or three specific processes into the final product.

Rules of origin can either restrict or facilitate the trade of goods under preferential terms in a number of ways. Most agreements, for instance contain a so-called 'de minimis' rule, which allows the use of a specified minimum percentage of non-originating materials without affecting origin. This provision introduces some flexibility in the CTH criteria, for instance, as it makes it easier for products with significant import content to qualify for preferences.

Agreements that allow 'absorption or roll-up,' also relieve the process of acquiring origin. Under this principle, once an input has been given origin status, the non-FTA import content of that input will no longer be taken into account when calculating the value-added of the end-product which has made use of that input.

Finally, agreements applying the value-added rule, can further facilitate the use of preferences by allowing producers to use less than the domestic content required, or more than the maximum non-FTA import content, as long as these foreign inputs are sourced within the regional bloc. This is called 'cumulation', which is defined according to three main types. All regional agreement apply the first type, 'bilateral cumulation', which makes no distinction between inputs produced locally, and those produced by the partner country. A product whose inputs are 25% sourced locally, and 25% sourced from the partner, for instance, is considered 50% locally/regionally-produced good, and would therefore qualify for origin under a domestic content rule of 50%. 'Diagonal' cumulation applies that similar concept, extending the rule to two or more countries participating in the RIA. With bilateral and diagonal cumulation, however, the inputs

used for subsequent transformation should be first considered originating, before it can be used for cumulation by a regional partner. For some agreements, like the AFTA, 'partial' cumulation is allowed, so that inputs with less than the value-added required, but having at least 20% origin, for instance, can still be used in the calculation of value-added. However, no preferences are extended to these partner inputs when they are imported to the country using these products. They are solely used for cumulation purposes. 'Full' cumulation is the most lenient of all types of cumulation because countries within a RIA can use each others goods, regardless of whether they are originating or not. Essentially, whatever manufacturing process performed in the regional bloc is considered as being carried out in the last country of manufacture.

Unfortunately, rules of origin have acquired a poor reputation because of the manner in which it can be used to restrict trade. Rules could be coupled together, for instance, the value-added content rule and the CTH, thereby increasing the threshold for origin qualification. Certain manufacturing activities could also be considered as being 'insufficient' in conferring origin, such as packaging, transport, labelling, etc.. A product can also be transformed to a different heading, but not from inputs of some specified (sub)heading. Finally, some agreements may prohibit the use of duty-drawback or the refunding of tariffs paid on intermediate inputs which are used in products subsequently exported to a regional partner. Such prohibition is often justified in terms of conferring undue advantage to regional producers who gear their productions towards exports instead of the domestic market.

Needless to say, complexity will always increase an agreement's administrative burden, whether it be in terms of time lost due to compliance, or actual cost of bureaucratic formalities and procedures, or in terms of production delays and spoilage of goods. This explains why for all the liberal intent of a regional agreement, the end result hardly brings the participating countries closer to their goal of an integrated regional market.

6.3 An Overview of the Rules and Origin in East and Southeast Asian Agreements

In a recent survey of ROOs worldwide, Estevadeordal and Suominen (2004) observed that Asian FTAs, such as the ASEAN Free Trade Area (AFTA), Australia-New Zealand Closer Economic Relations Trade Agreement (ANZCERTA)[73], Singapore-Australia Free Trade Agreement (SAFTA), and the South Pacific Regional Trade and Economic Cooperation (SPARTECA) in the Asia-Pacific, stand out for their generality. However, the propensity to expand the existing FTAs to new members or create new country-combinations of FTAs, increasingly introduce product-specificities in the design of ROOs. This can be seen in new arrangements such as the ASEAN-China FTA and the recently signed ASEAN-Korea FTA.

The relatively ample allowance for imports in the **AFTA** stems from the realization that for many heavily-traded products in the region, like electronics, production processes may be so splintered that the value of local content is often a small percentage of the product's total value. Very early on in the formation of AFTA, it was recognized that the 40% ASEAN origin rule may often not be met in the case of trade in textile and textile products. In 1995, it was therefore decided that either the percentage value-added or the substantial transformation rule may be used by ASEAN exporters. The AFTA ROO underwent further overhaul, starting in 2003, when operational procedures were further clarified and simplified. In the same year, the decision was reached to adopt a change in tariff heading rule for determining the origin of the product as a general alternative rule "applicable to all products which cannot comply with the 40% local/ASEAN content requirement, giving priority to sectors which are the subject of private sector requests and those sectors prioritized by the AEM for accelerated integration" (AFTA Council, 2003)[74]. As of last year, the change of tariff heading rule is

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[73] CER (Closer Economic Relations), CEP (Closer Economic Partnership), SEP (Strategic Economic Partnership), are all names used interchangeably with FTA.

[74] In November 2004, 11 priority sectors were identified for deeper integration where tariffs will be eliminated in at least 85% of the products in 2007 for ASEAN-6, and 2012 for Cambodia, Laos, Myanmar and Vietnam. These sectors are: agro-based products, automotive products, electronics, fisheries, rubber-based products, textiles & apparels, wood-based products, e-ASEAN, health care, tourism and air travel. See http://www.aseansec.org/15070.htm for AFTA Council reports.

fully endorsed for four sectors: wheat-flour[75], wood-based products, aluminium products and iron and steel[76].

The ASEAN-China Free Trade Area (ACFTA) adopts the same general value-added rule of the AFTA of 40% local/regional content with diagonal cumulation. The Agreement on Trade in Goods is currently in force, which extends the liberalisation commitments from the limited 'Early-Harvest' agricultural products (HS chapter 01 – 08), to the rest of the traded sectors in the normal inclusion list. As in the AFTA ROO, an alternative change of tariff heading criteria can be invoked for a number of products.[77] In the case of ACTFA, the rule applies for 424 (HS6) textile and textile products items, 2 items of preserved fish, 6 items of wool, 22 of leather goods, 14 for fur skins and 4 item lines of footwear. It is only in 5 wool tariff items, that the change of tariff heading is set as the exclusive rule.[78]

The **ASEAN-KOREA Free Trade Area (AKFTA)** is the most recent agreement that has been concluded (May 2006), although Thailand, Cambodia and Myanmar has not yet signed due to the current political instabilities in Thailand[79], and the unfinished negotiations for the inclusion lists for Cambodia and Myanmar. The general 40% value-added local-regional content of AFTA and the ACTFA is extended to this free trade area, as well as the diagonal cumulation rule. Surprisingly, AKTFA emerges now as even more liberal than the AFTA because the change of tariff heading, as an alternative rule to the 40% content requirement, is applicable to a greater number of products relative to the coverage in the AFTA and the ACTFA. A novelty has also been introduced in the AKTFA, namely, the back-to-back Certificate of Origin (CO), which allows the conferment of preferences to the re-exports of partner *A* into partner *B* of products first exported by partner *C* into *A*.[80] This is particularly advantageous for countries engaging in substantial entrepot trade such as Singapore.

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[75] For wheat-flour products, change of tariff heading is the sole origin criterion.

[76] Product-specific rules are negotiated only upon the request of private sector groups.

[77] Negotiations are still on-going for the product specific rules of other sectors. Only the specific ROOs are finalized in sectors under the normal inclusion list.

[78] See Annex 3, Attachment B of the ASEAN-China FTA Agreement (http://app.fta.gov.sg/data//fta/file/ACFTA_Annex3.pdf).

[79] Another reason is the protest issued by Thailand due to Korea's exclusion of rice in the agreement. Thailand is the world's biggest exporter of rice.

[80] Singapore imports, say, 10 units of televisions from Korea, where the preferential duties apply under the AKTFA. A back-to-back certificate allows Singapore to re-export, for instance, 7 of those units to

Table 6.1 **Rules of Origin in East Asian FTAs**

	Change of Tariff Classif.	Value Added Dom. or Import Content	Specific Mfg Process	Cumulation	Tolerance
ASEAN FTA (AFTA)	Yes[81]	Regional (40%)		diagonal	
ASEAN-China (ACFTA)	Yes	Regional (40%)		diagonal	
ASEAN-Korea (AKFTA)	Yes	Regional (40%)		diagonal	
Singapore – Japan (JSEPA)	Yes	Dom. (60%)	Yes	Bilateral	product specific
Singapore – New Zeal. (ANZSCEP)		Dom. 40%		Bilateral	10
Singapore – Australia (SAFTA)		Dom. 50% (30% for some prod.)			3%
Singapore-Korea (KSFTA)	Yes	45-55%		Bilateral	10%[82]
Thailand- Aust. (TAFTA)	Yes	40-45%	Yes	Bilateral	10%
Thailand- NZ TNZCEP	Yes, prod. spec.		Yes	Bilateral	10%
Malaysia-Japan (JMEPA)	Yes, product spec.	Dom. 40% (product specific)		Bilateral	Only from ASEAN (prod.sp.c)
Trans-Pacific TRANSEP[83]	Yes	45-50%	Yes	Diagonal	10%
Australia – NZ (ANZCER)		50%		Bilateral	2%

Source: Manchin & Balaoing, 2006

For **Singapore FTAs**, such as the one signed with **Japan (JSEPA)[84]**, the degree of restrictiveness of the ROO largely reflects the sensitivities of Singapore's partners. Agricultural products and textiles and apparel are characterized by particularly complex rules even if 384 agricultural items are excluded, constituting 90% of total Singapore

ASEAN, and still be able to avail of the same preferential rates any ASEAN member would impose on Korean-made televisions.

[81] Applicable for textiles, and wood-based products, iron & steel as an alternative rule, and for wheat & flour as an exclusive rule.

[82] For yarns and fibres used for clothing and textiles products 8% applies; the de minimis rule does not apply to agricultural products or applies with restrictions.

[83] Strategic Economic Partnership (SEP); members: Brunei, New Zealand, Chile and Singapore.

exports to Japan. ROOs are product specific, relying mostly on the change of tariff heading rule[85]. For some products an alternative RVC rule is allowed, albeit at a high rate of 60%. In cases where RVC is an additional criteria to be satisfied, the content requirement is lower at 40%. However, about half of the tariff subheadings in the agreement already have duty-free MFN status, so that in practice, ROOs' effect is quite limited. *De minimis* is permitted, also varying across products. Outward processing is recognized in all of Singapore's FTAs, allowing it to count the value of the outsourced part of the production process as Singaporean production.

The **Korea-Singapore FTA** follows the same pattern of product specificity of the JSEPA, also with the change of tariff heading rule as the dominant origin criteria. For some products an additional RVC of 45%, 50% or 55% is asked, and for a few items, the RVC rule alone will suffice. The sensitivity of textiles is seen in the added details in the description of transformation rules, and in its exclusion from the 10% *De Minimis* rule.

In contrast, a general value-added rule of 40% is applicable to all products under the **Agreement of New Zealand – Singapore for Closer Economic Partnership (ANZSCEP).** Both countries are parties to yet another FTA, the **Trans-Pacific Strategic Economic Partnership Agreement (TRANSEP),** which was formed in June 2005 together with Brunei and Chile[86]**.** Under this agreement, ROOs contain product specific change of tariff heading rules, with some products having an additional RVC provisions ranging from 45% to 50%, as in the case for textiles and footwear. Still, for some products, the CTC and RVC are alternative rules. Goods that are unable to meet any of the ROO criteria, origin may still be conferred provided that the non-partner content do not exceed 10% of the goods' value. In effect, the product specific rules apply only to the trade between Chile and the rest of the TRANSEP countries, and between Brunei and New Zealand, since a general value-added rule apply for the other

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[84] Japanese FTAs are incorporated in an 'Economic Partnership Agreement ' (EPA), which has a broader scope than the typical FTA, such as e-commerce, financial services, information and communication technology and Human Resource Development.

[85] Heading changes are needed for HS 01- 24, HS 38 (chemical products), HS 85 (machinery), while subheading or value content requirements for liquor and cordials apply. For the rest a RVC requirement of 60% with a combination of subheading changes is needed. The yarn-forward rule applies for textile fabrics and articles (HS 59).

[86] Trans-Pacific SEP was previously known as the Pacific Three Closer Economic Partnership (P3-CEP). Its negotiations was first launched at the 2002 APEC Leaders Summit by leaders of Chile, Singapore and New Zealand. Brunei first took part as a full negotiating party in the fifth round of talks in April 2005.

pairs of countries under the ANZSCEP agreement between Singapore and New Zealand, and also under the AFTA between Brunei and Singapore.

Australia's FTA with **Singapore (SAFTA)**, is less general than the ANZSCEP since a value-added requirement of 30% is imposed for some products (110 HS8 tariff lines mostly in HS 84-85) while for the rest a higher 50% local/regional content is required. For some 152 tariff lines an additional requirement is imposed that the last process in the manufacture of the product must take place within the territories of the party seeking the preference.

As opposed to the generality and the broad scope of the Singapore- New Zealand FTA, the agreement between **Thailand – New Zealand (THAINZCEP),** and **Thailand- Australia (TAFTA)** contains specific rules for all products. The CTC rule is once again predominant, with some products allowing a change in subheading. Additional RVC requirement of 50% for THAINZCEP and 55% for TAFTA are imposed mostly for textiles and textile materials. Clothing is further restricted by making origin conditional on the performance of essential processes, such as cutting and sewing. In the case of TAFTA, transformation from specific headings and subheadings is excluded for some products.

The ROO of the **Australia – New Zealand CER (ANZCER)** has undergone a major revision early this year (to take effect in January 2007).[87] The RVC rule of 50% previously applies to all products. The new CTC/ change of tariff heading approach has been adopted, although the RVC rule of 45% is still the exclusive criteria for some textile sectors such as those in men's and boys' apparel.

The new bilateral agreements reached by **Japan** with individual ASEAN Members are intended to be incorporated (as annexes) in the ASEAN-Japan FTA (AJEPA), which will not be open to renegotiation once the negotiations for the ASEAN-Japan FTA are completed. The **Japan-Malaysia Economic Partnership Agreement (JMEPA)**, is the first to be concluded under this foreseen trajectory towards an AJEPA. It is, as the JSEPA (with Singapore), largely based on the change of tariff heading rule, and with a high degree of product specificity. Even the *De Minimis* rule varies according to product categories. Once again, for some sectors the RVC rule (40% - 50%) is an alternative,

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[87] Under the agreement, exporters can still choose to use the old RVC rule till 2012.

while for some, it is the sole criterion for conferring origin. The novelty in the JMEPA is that for some products the change of tariff heading rule is only valid if the non-originating material is sourced from any of the ASEAN country. This is most likely done in anticipation of possible cumulation rules under the future AJEPA.

6.4 Some Problems Surrounding the Use and Implementation of ROOs

The test of the efficacy of a FTA in inducing intra-bloc trade is the extent in which preferences are taken up by the business sector.   In AFTA, no data on the utilisation rate is available because of the lack of proper reporting of intra-ASEAN imports that were given origin certifications (i.e. imports accompanied by Form D[88]). According to the Bureau of Economic Integration of the ASEAN Secretariat, there is not one single year since the CEPT Scheme began in 1993, where Form D data is available for all 6 original AFTA countries[89].   However, estimates based on firm interviews conducted for the ASEAN Secretariat, show a low utilisation rate of about 5% of total trade. Although preference under-utilisation is not unique to ASEAN, this estimate is certainly low relative to the known record of other discriminatory schemes. Brenton and Manchin (2003), for instance, reported that 35% of eligible exports from the CEEC countries enter the EU using the available preferential rates. Inama (2003), examined the utilisation of the General System of Preferences (GSP) of the QUAD countries, and found that of the 62% of imports of Quad countries originating from all beneficiaries of GSP schemes covered by preferences, 39% of these were effectively traded under the lowest available rates.

For AFTA and ANZCER that relies on the RVC rule, one reason may be traced in the inability of exporters to cumulate the necessary local / regional content given the degree of process fragmentation in highly globalized sectors such as electronics. Tables 5.7 a/b (Chapter 5) provide an indication of the extent of this problem, showing the import content and the local value-added of key manufacturing sectors in ASEAN and other East Asian countries. Calculations are based on data taken from the GTAP 6

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[88] The total amount of intra-ASEAN imports seeking preferential rates under the CEPT Scheme can be extracted from the Form D certificates.
[89] Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand.

database for 2001, the latest year available. As expected, the import content of electronics and machineries are the highest for ASEAN, the sum of the direct and indirect import content being 67.8% and 60.6%, respectively. The share of imports is particularly high in these sectors for Singapore and Malaysia.

The figures reported in Tables 5.7 a/b are most likely understated (for import content) and overstated (for value-added) since the data do not differentiate between output destined for local consumption and output for exports.   One would expect the import content for exports to be higher than for those sold in the local market because of various fiscal incentives (i.e., import duty drawbacks), which is available for export production in most countries. In terms of value-added, both in AFTA and in ANZCER, members appear to be unable to meet the 40% (for AFTA) and 50% (for ANZCER) RVC rule for most of the key sectors featured here.

Another main culprit tagged as being responsible for the under-utilisation of preferences is the complexity of administering and complying with the ROO. LDC exporters are particularly burdened by high compliance cost, not to mention the more fundamental difficulty of local sourcing to meet whatever RVC requirements are imposed. Brenton (2003), for instance, partly attributes the under-utilisation of the EBA agreements to ROO, which are generally stricter relative to those contained in the ACP preferences.

The initial trend in East Asia, as shown by the AFTA and ANZCER agreements is an application of a value-added content rule across all products.   In terms of transparency and clarity, a general rule is clearly more desirable relative to specific product rules. Feedback of AFTA exporters, however, reveals the difficulties posed by the computation of costs, the invoicing and other documentation demands inherent in the RVC rule. Customs valuation that differ across countries is another problem, and while continues efforts are being made to address the problem,[90] it will take a

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[90] In AFTA, the different tariff classification adopted by members is a particular problem. This was addressed in 2004, when a common ASEAN tariff nomenclature (ASEAN Harmonized Tariff Nomenclature, or AHTN) came into force. Another project is the ASEAN Single Window which involves the computerization of clearance procedures with common formats fulfilling the requirements of the international rules of WCO (World Customs Organization) and WTO. The project is still currently being pilot tested between Malaysia and the Philippines.

considerable amount of time before the decision to harmonize, undertaken in the highest policy level, is translated into daily practice in all trading ports.

The implementation of the RVC criteria is particularly problematic in the absence of automation, clear, harmonized rules and readily accessible conciliation or objection procedures. The actual valuation of costs thus heavily depends on the judgment of individual customs officials, and this even more in an environment where contesting the rulings would imply more costly delays without any certainty of neutral arbitration. Self-certification is one solution, which was in fact, proposed by Australia, Korea, China and Japan in their respective FTA negotiations with ASEAN. However, the notion of self-certification is alien to the culture of customs inspection in ASEAN.

The potentially cumbersome procedures involved in the valuation and certification of declared costs under the RVC rule, may have prodded ASEAN to follow the example of ANZCER in shifting to the CTC criteria for all products. As mentioned earlier, the ASEAN-Korea FTA (AKFTA) is now more flexible than the AFTA since the change of tariff heading alternative is available for all products. For products where the preferential tariffs under the AKFTA approximate the levels found in AFTA, then preferences in the latter will be eroded by the more liberal rules offered by the former.

This trend towards product specific rules is not without risks, however. What may begin as a facilitating measure may eventually be used to introduce protectionist restrictions. This can be done by excluding inputs from certain tariff headings, attaching an essential process in the transformation of the product or turning the RVC as an additional instead of an alternative rule to satisfy origin. Bilateral FTAs with restrictive product specific rules will also most likely define the parameters of wider FTAs formed later on, as in the case of the Japan-ASEAN EPA. Thus, instead of a race-to-the bottom, where countries strive to outdo each other in introducing still more open policies, the potential situation emerging here, is an incipient hike-to-the peak, where the erstwhile liberal policy stance is modified to accommodate the need to police the borders of an increasingly porous regional bloc.

6.5 Conclusions

Much of the concern surrounding the surge of FTAs in East Asia in the last few years is centered on the practical burden brought about by the need to know, apply and adapt to a new trading environment characterised by more rules. The amount of investment needed to adjust to this environment might perhaps be justified if the end-result is indeed the creation of more trade. Although a number of FTAs are still under negotiation, the hundreds of pages of annexes detailing the rules of origin in some of the signed agreements, do not inspire much optimism.

One problem inherent in a preferential scheme that brings together countries with differing degrees of openness, is that of trade deflection. For FTAs such as AFTA which group together relative high-tariff countries with a duty-free member such as Singapore, avoiding trade deflection will always be a difficult challenge, given the complexities of verifying the origin of goods produced or assembled from multiple locations worldwide. The burden of proper verification becomes all the more taxing in an environment where the proliferation of bilateral FTAs lead to numerous potential 'backdoors' that need effective policing. Clearly, the likelihood of trade deflection increases when relatively high tariff countries like Thailand or the Philippines also acquire pockets of low barriers. This in turn might lead to more intensive or heavy-handed verification procedures that will further hike administrative and waiting costs. If implementation indeed becomes too difficult, leading to the inability to arrest a significant amount of trade deflection, then this may have a direct adverse consequence on the level of domestic political support for the FTA.

The lack of coordination in setting ROOs amidst the proliferation of FTAs also has a political cost attached to it, namely the cost of choosing favourites among favourites. It is not surprising that different permutations in the exchange of concessions among countries result to ROOs with varying degrees of restrictiveness, which in turn lead to a sort of hierarchy of partners not unlike the EU's so-called pyramid of preferences. History is replete of examples of how differentiating partners into friends, lesser friends and foes has bred all sorts of animosities, and has certainly not created an environment conducive to the development of closer or strategic economic partnership. The recent surge of FTAs in East Asia is said to be less about trade and more about issues like trade

facilitation or regulatory barriers involving investments and services, where negotiations have bogged down in the multilateral arena. It is not unlikely that irritations stemming from contentious ROO negotiations, or the uneven restrictions applied to trade among different partners, could spill-over to more important, high-stake negotiation areas. That would indeed be unfortunate and will not be unlike the proverbial ROO tail wagging the free-trade dog to death.

Chapter 7

**The Benefits of AFTA: Estimating the gains due to
the full utilisation of ASEAN Preferences**

Abstract

This chapter examines the potential benefits that can be expected once ASEAN traders take full advantage of preferential tariffs. Since full utilisation implies the successful implementation of trade facilitation measures, and removal of non-tariff barriers (including those linked to rules of origin), the estimation of AFTA effects also provides an indication of the economic returns corresponding to these policy efforts. AFTA simulations performed by past CGE studies assume that ASEAN liberalisation under the AFTA leads to the reduction of MFN tariffs all the way to zero. In this chapter, the actual AFTA regime is approximated by using trade-weighted CEPT rates. Results show that the gains of full CEPT utilisation are indeed marginal, so that given the various costs associated with the application for CEPT rates, the predominant use of MFN tariffs could be considered quite rational. However, the complete removal of intra-ASEAN tariffs could have more pronounced welfare effects, especially for Malaysia, and to a lesser degree, for Thailand. Policy-wise, this implies that the decision to eliminate tariffs in 2010 for ASEAN-5 and 2015 for the CMLV countries, do have positive and substantial economic implications for the whole ASEAN region.

7.1 Introduction

The decision of ASEAN leaders in 1992 to create a Free Trade Area (AFTA) in the region was initially met with considerable scepticism. Past experiments in economic cooperation were not perceived to have produced significant results, and the lack of complementarities in the economic structures of Member Countries repeatedly raised

fears about the competitive pressures brought about by regional liberalisation. Weak institutional structures, and the lack of clear and credible enforcement mechanisms in the region were also predicted to seriously dampen the prospects of the realisation of an AFTA.

In 2003, however, five years before AFTA's intended completion, 98.8% of total intra-ASEAN tariff lines were brought down to the targeted range of 0-5%, with average tariffs falling from 12.76% in 1993 to 1.87% at present (ASEAN Secretariat, CEPT tariff database)[91]. Although exclusions remain, the share of these products represents only 4.15% of total intra-ASEAN imports in 2003. Another feature that defied expectations was the inclusion of agricultural products (with few exemptions, such as rice) in the CEPT liberalisation scheme.

Despite the remarkable progress in the implementation of tariff liberalisation in the AFTA, the prevailing perception is that tariff preferences do not exert any considerable influence on actual intra-ASEAN exports and imports. Although no data is available on the extent of preference utilisation, a low take-up rate of 5% of total regional imports is often quoted.[92]
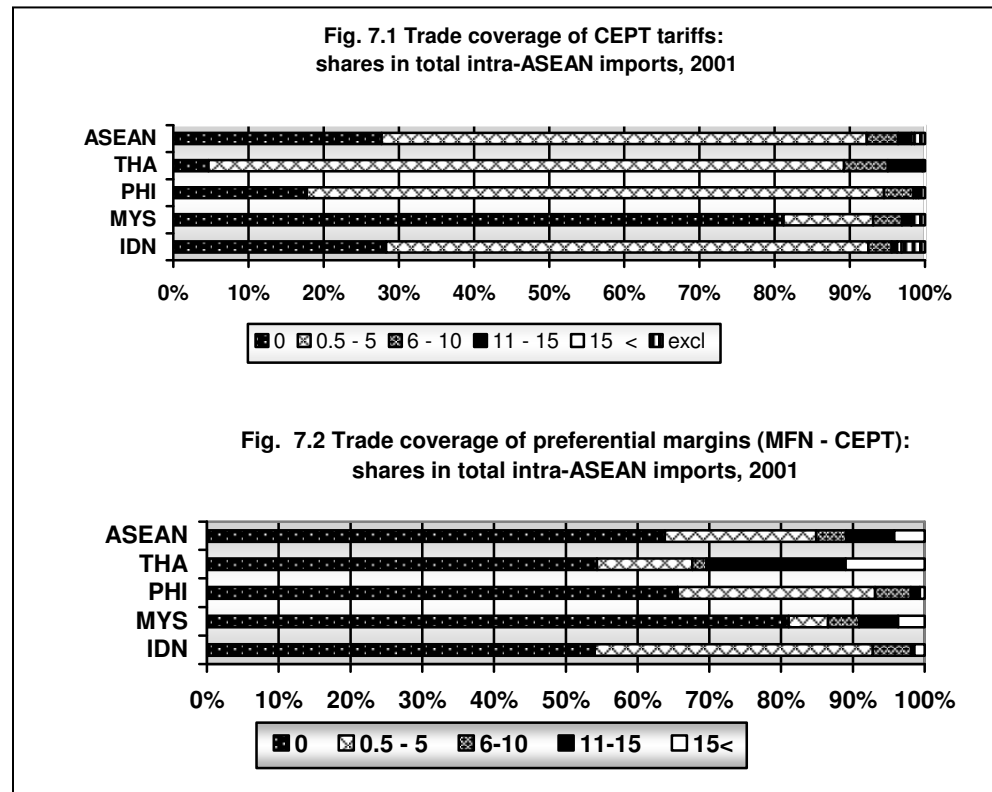
The apparent irrelevance of AFTA is largely due to the rapid and simultaneous liberalisation of MFN tariffs in ASEAN. As shown in Table 2, products where the preferential CEPT rates of AFTA is just equal to MFN rates, constitute 62.8% of total intra-ASEAN imports in 2001 and (65.3% in 2003).[93] Given the high costs of compliance with the rules of origin and other administrative requirements, it will take equally high preferential margins before AFTA begins to matter for producers and traders. The total import value shares of products with margins above 5%, on the other hand, are only 14.86% in 2001 (and 12.62% in 2003). Utilisation rates must therefore

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[91] See Consolidated (Common Effective Preferential Tariffs) CEPT Package data: http://www.aseansec.org/12025.htm.

[92] See for instance: Baldwin (2005), Severino (2006), The Economist (07/29/04), Cuyvers et al (2005), Rahan & Sen (2004). According to the Bureau of Economic Integration of the ASEAN Secretariat, there is not one single year since the CEPT Scheme began in 1993, where data from the so-called Form D[92] is available for all 6 original AFTA countries[92], and if some data exist for some countries, the information is often on a quarterly basis and incomplete for the relevant year. This means that existing estimates, such as the 5% utilisation rate often quoted in the literature is based on interviews or extrapolation but not on actual utilisation data (Balaoing and Manchin, 2006).

[93] See Appendix Table 2 for full table. Thailand is not included in 2003 due to incompleteness in the Thai data.

be measured not against the total imports eligible for preferences, but against that product range where utilisation can be considered rational. Assuming that in about 5% of total imports, CEPT privileges were indeed requested by ASEAN traders, then the real take-up rate of AFTA preferences would actually be in the neighbourhood of 30% - 40%.

Fig. 7.1 Trade coverage of CEPT tariffs: shares in total intra-ASEAN imports, 2001

Fig. 7.2 Trade coverage of preferential margins (MFN - CEPT): shares in total intra-ASEAN imports, 2001

Data Sources: MFN tariffs and trade data are from the WITS data base, while the CEPT rates have been supplied by the ASEAN Secretariat.

This chapter further investigates the trade and production effects of AFTA, using a CGE approach, and with data being sourced from the GTAP 6 data base. Similar work done on the AFTA in the past, typically simulate the full AFTA scenario as one where products are traded duty-free within the region. However, as evident in Table 7.1, about 65% of total intra-ASEAN goods are still imported with positive tariffs. AFTA in this sense, is more akin to a preferential trading agreement than a FTA, since products with a maximum of 5% tariffs are accommodated and considered as AFTA goods. In this

chapter, the Common Effective Preferential Tariffs (CEPT) will be incorporated in the GTAP 6 data base, so as to further approximate the actual impact of AFTA on welfare, output and trade. Moreover, an assessment of the impact of the full utilisation of AFTA gives an indication of what the potential effects one may expect from current trade facilitation efforts.

The chapter is structured as follows. The following section gives a survey of past CGE analyses on the AFTA. The third section briefly describes the current pattern of intra-ASEAN trade and the structure of the CEPT preferences. Data sources and the methodology is discussed in the fourth section, while last two sections respectively reports the results, and concludes.

7.2 Survey of AFTA CGE studies

In most CGE studies, the effects of AFTA are examined in broader scenarios of FTA formations. Lewis, Robinson and Wang (1995), for instance, look at the prospects of an Asian FTA, as did more recent work by Roland-Holst, Verbiest, and Zhai (2005), and Ando and Urata (2005). McKibbin (1996), Feridhanusetyawan (1997), and Scollay and Gilbert (2000), focus instead on the implementation of the APEC 2010/2020 Vision of free trade. Still others investigate the formation of possible FTAs in the region, such as the ASEAN-Japan FTA (Itakura, Hertel, and Reimer, 2003), the ASEAN+3 FTA proposal involving Japan, China and South Korea (Brown, D., A. Deardorff, and R. Stern, 2001), among others.

There are only few studies where the pure AFTA effect is separately examined. An early work is attributed to Park (1995), where a CGE model was developed that takes into account the macroeconomic disequilibrium features typical of developing countries (i.e. imbalances in government budget, current account, labour market). He employs a trade-linked multi-country CGE ASEAN model, the basic structure of which was derived from a single-country static CGE model developed for the Philippines (PHILCGE). In a later study, Park (2000) used a modified version of his 1995 model, this time using the GTAP version 3 database, and with 1992 as the benchmark year. As in the other studies surveyed here, results show positive welfare and trade effects for all ASEAN-5 countries.

145

CGE studies largely rely on the GTAP database so that the differences in the outcomes of various CGE analyses on AFTA, as shown in Table 1, could largely be traced to the varying model structure used and to the chosen design of experiments or counterfactual scenarios. The relatively large (or less small) results by Adams and Horridge (2000), for instance, may have been due to the assumption that AFTA would lead to the elimination of both tariff and (tariff equivalents of) non-tariff barriers. The manner in which regions and sectors are aggregated also differ according to the focus taken by authors. In Hakim (2004), the highlight is placed on agriculture, so that all non-agricultural sectors are aggregated as either manufacturing or services. With the exception of Park (1995), which simulates an AFTA scenario of 50 percent tariff reduction for intra-ASEAN imports, the rest of studies surveyed here equate the implementation of AFTA with the complete removal of regional tariffs.

Table 7.1 **Selected AFTA CGE analyses: comparison of models**

	Park (1995, 2000)				Adams, Horridge (2000)			Hakim (2004)		
data	Own collation: international statistical yearbooks (1995); GTAP version 3 (2000)				GTAP version 4			GTAP version 4		
model	ASEANCGE – trade-linked model, static				GTAP			GTAP, dynamic recursive		
bench-mark year	1989; 1992				1995			1995		
scen/ exper.	(unilateral and multilateral) 50% ↓ tariffs with ASEAN and with ROW; devaluation				Removal of all tariffs and NTBs within ASEAN			Removal of all tariffs within ASEAN		
data	Own collation: international statistical yearbooks (1995); GTAP version 3 (2000)							GTAP version 4		
	GDP	GDP*	Exp	Imp	GDP	Exp	Imp	GDP	Exp	Imp
IDN	0.6	0.1	10.6	5.4	0.5	2.4	3.5	0.2	1.8	1.8
MYS	1.6	0.6	26.0	4.6	5.2	9.9	11.2	3.1	2.9	3.1
PHI	0.67	1.5	69.9	11.2	3.5	18.2	13.3	1.6	4.5	4.2
SGP	-	0.1	29.8	11.7	4.9	9.4	7.8	2.9	3.2	2.9
THA	1.34	1.1	121	2.8	3.1	6.9	7.1	0.8	2.1	1.7

 * in billion US dollars

Although it would be inappropriate to compare the results of models with different specifications, the consistently small gains accruing to Indonesia is quite notable. Park

(2000) attributes this to Indonesia being the country where the share of intra-ASEAN trade is the smallest. However, Philippines also has rather insignificant trade shares, as shown in Figure 3, but fare much better than Indonesia in terms of expected welfare gains in AFTA. This may be largely due to the foreseen export growth of the Philippines, which is the highest among ASEAN, based on the results in Table 1. Malaysia consistently figure as a big beneficiary of AFTA, not surprising, given the relatively large share of intra-ASEAN imports and exports in its total trade. Singapore likewise gains as the reciprocity its gets for its free trade regime within ASEAN, translates into bigger export growth.

Fig. 7.3 Intra-ASEAN exports shares (%)	Intra-ASEAN imports shares (%)
Source: ASEAN Statistical Yearbook, 2005	
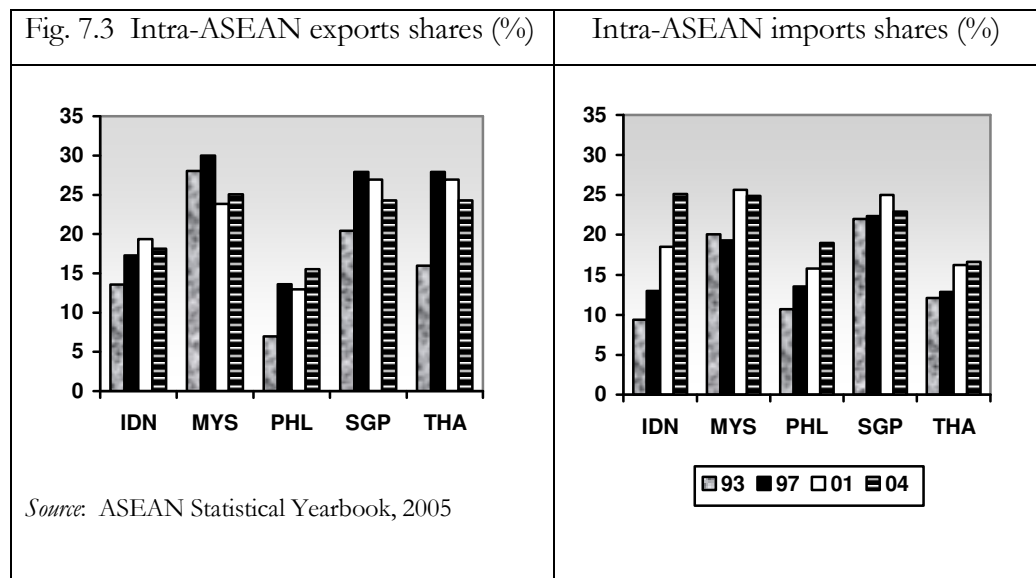
In more recent CGE analyses involving AFTA, the effects of trade facilitation and other productivity (procompetitive) effects are also taken into account. Although these studies simulate the extension of AFTA to the rest of Asia, as in Roland-Holst, Verbiest, and Zhai (2005), and to Japan, in Itakura, Hertel, Reimer (2003), they provide an indication of the incrementals one may expect if the simulation of economic integration would not be limited to the reduction of intra-bloc tariffs alone. In fact, Roland- Holst, et. al., find that the income gains due to regional trade facilitation in ASEAN far outweigh those triggered by tariff reductions alone. They simulate two scenarios of trade

liberalisation in Asia, with and without the simultaneous reduction of trade costs,[94] and find that the average percentage change in real income in ASEAN-5 (from 2005 in 2025) jumps from 8.26 (no trade facilitation scenario) to 85.36 (with trade facilitation). This serves as a reminder that there are various aspects of trade liberalisation brought about by regional integration that simulations in standard CGE models cannot capture, thereby leading to potentially understated results.

7.3 Structure of CEPT tariffs and intra-ASEAN trade

The typical suspicion often voiced about AFTA, or any preferential agreement for that matter, is that while the product coverage of liberalisation may be substantial, the most heavily traded products would still be hindered by whatever tariff peaks that would be remaining. Table 2, however, proves this notion to be unfounded in the case of AFTA. More than half of Malaysia's imports from ASEAN, for instance, have preferential rates of 1.5% and below. The preferential margins (MFN – CEPT rates), however, also appear to be too low to make a significant dent for most traded goods. With the exception of Thailand, the tariff discount on all the big import items for the rest of ASEAN, hardly reach 5 percentage points. Given that compliance to rules of origin, exact non-trivial costs, then the revealed preference of majority of ASEAN producers to trade under MFN rates, seems quite rational.

The dominant role of electronics imports within ASEAN is also evident in Table 2. Indonesia is an exception, with electronics accounting only 2.8% of total imports. But for Thailand (41%), Malaysia (37%) and the Philippines (31%), imports are heavily biased towards electronic equipments (GSC[95] 40). Other important sectors are: petroleum and coal products (16.87% ASEAN-4 average share of total imports), other machinery and equipment (16.62%), and chemical, rubber and plastic products (16.48%).

Some tariff peaks do have an effect on key imports, but in a moderate way, because of the likewise relatively small import shares of these affected goods. Textiles and clothing are somewhat sensitive items in Indonesia, with CEPT rates in 2001 of 7.1%

[94] Includes removal of all import tariffs and tariff-equivalent nontariff barriers, as well as all export subsidies within Asia. Trade-facilitating policies, in another scenario, are simulated by a 3 percent annual reduction in intra-Asian trade costs.

[95] GTAP Sectoral Classification, contains 57 sectors in GTAP version 6.

and preference margin of 7.3%. For Malaysia preferential tariffs are relatively high for paper products and minerals, with rates of 5.8% and 5.2, respectively, while food products (8.6%) and motor vehicles (6.75) are well-protected in the Philippines. Among all the ASEAN countries, Thailand displays the highest CEPT rates for its top imports. However, the equally high MFN tariffs means that Thai's preferential margins provide ASEAN traders the biggest opportunities to exploit the AFTA regime.

Table 7.2 Intra-ASEAN imports and preferential tariffs, 2001

Indonesia				Malaysia			
top ASEAN imports	share in total imports	CEPT ave	pref. margins	top ASEAN imports	share in total imports	CEPT ave	pref margins
petroleum	27.5	3.1	0.7	electronics	37.0	1.3	3.7
chemicals	23.9	4.3	2.0	petroleum	26.5	1.5	2.6
other machinery	12.2	3.0	1.1	other machinery	10.6	2.2	3.5
transp. eqpt.	7.3	3.9	4.7	chemicals	9.1	1.9	4.2
oil	5.3	1.3	0.0	paper prod	2.0	5.8	7.8
text & cloth	3.5	7.1	7.3	other metals	1.7	3.4	4.8
electronics	2.9	2.0	2.2	metal prod	1.4	5.2	8.1
motor vehicles	2.5	3.1	2.0	food prod	1.3	2.6	5.4
food prod	2.3	4.5	0.6	text. & cloth	1.2	4.6	12.8
bev. & tob	2.1	3.5	58.8	other minerals	0.9	5.5	13.3

Philippines				Thailand			
top imports	share in total imports	CEPT ave	pref. margins	top imports	share in total imports	CEPT ave	pref. margins
electronics	31.4	1.6	1.5	electronics	40.9	3.8	6.6
chemicals	15.8	3.8	1.5	chemicals	16.2	5.2	8.3
other machinery	10.9	3.3	1.1	other machinery	13.0	4.2	6.4
petroleum	9.7	3.0	0.0	other metals	4.3	4.2	4.0
food prod	3.8	8.6	6.5	petroleum	3.8	3.1	0.7
oil	3.4	2.4	0.0	oil	3.4	0.0	0.0
other minerals	2.8	3.0	0.0	metals	3.1	6.2	13.7
motor vehicles	2.7	6.8	2.2	food prod	2.6	5.0	17.6
text & cloth	2.5	4.8	7.0	motor vehicles	2.0	8.5	30.2
paper prod	2.4	4.5	2.9	wood prod	1.7	7.0	10.7

Data sourced from GTAP 6 and ASEAN Secretariat for CEPT rates.

7.4 Experiments and Results

Simulations will be based on the latest version (6) of the global social accounting dataset of the Global Trade Analysis Project (GTAP)[96] and implemented with the GTAP6inGAMS (Generalized Algebraic Modelling System) modelling package. Tariffs are sourced from the WTO's database of tariffs and bindings, as well as from the UNCTAD TRAINS dataset and national schedules. For the purposes of this study, the data is supplemented by the Common Effective Preferential Rates (CEPT) of the AFTA, which is sourced from the ASEAN Secretariat database. All tariffs are trade-weighted.

Appendix 7, describes the CGE model applied here. For a full treatment of the basic multi-region CGE model, the reader is referred to Hertel et al (1997), and Rutherford (2005).

The model is calibrated using 2001 as the base year. It is aggregated to 12 regions, and 36 sectors (see Appendix 7.1, Table A1 for the regional and sectoral scheme used). The benchmark scenario takes into account post-Uruguay protection rates, as well as the removal of quotas, such as those linked with the Multi-Fibre Agreement. The AFTA is assumed here to be fully implemented when tariffs reach the CEPT levels, instead of the zero rates assumed in previous simulations

In order to later observe the effect of using CEPT rates in the model, Table 3 also presents the results of the AFTA experiment involving the reduction of tariffs from MFN to zero tariff rates. Although preferential tariffs under the AFTA have a maximum rate of only 5%, and much of the preferences have been eroded by unilateral MFN liberalisation, results show that the economic effects of global and regional liberalisation on ASEAN and the rest-of-the-world, could still differ somewhat. Potentially, there is therefore reasonable gains to be reaped from the implementation of an ASEAN agreement in the AFTA to further reduce CEPT tariffs all the way to zero. This justifies the decision of ASEAN members to progressively eliminate tariffs, starting from the removal of tariff duties on at least 60% of the product lines in the normal inclusion list in 2003.

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[96] See Dimaranan and MacDougall, 2002, for details.

Table 7.3a Results of Simulations : Welfare, Output and Imports

	MFN → 0			MFN → CEPT		
	Welfare	Output	Imports	Welfare	Output	Imports
IDN	0.83	0.6	7.3	0.18	7.1	-0.30
MYS	13.93	26.5	12.8	7.10	129.5	6.63
PHL	0.80	5.3	10.0	-0.07	10.7	-0.70
SGP	2.18	3.3	3.5	0.01	68.0	-0.54
THA	3.35	3.4	14.1	0.45	-2.6	-0.72
XSE	2.32	2.3	17.9	0.61	74.1	4.12
CHN	-0.80	-0.04	-0.8	1.01	-8.0	2.84
JPN	-0.02	-0.01	-0.8	0.05	4.9	-0.56
KOR	-0.05	-0.04	-0.2	0.17	-1.0	-0.33
XEA	-0.04	-0.02	-0.3	-0.33	29.6	-3.42
ROW	0	-0.06	-0.9	0.11	-7.0	-0.68

Table 7. 3b Results of Simulations : Unskilled wages, Skilled Wages, CPI

	MFN → 0			MFN → CEPT		
	Unsk_w	Sk_w	CPI	Unsk_w	Sk_w	CPI
IDN	0.83	0.83	0.65	0.22	0.13	0.18
MYS	3.46	2.68	-1.20	1.92	1.60	-0.93
PHL	0.62	0.81	0.11	-0.09	-0.27	0.24
SGP	1.23	1.04	1.22	-0.02	0.01	0.13
THA	2.35	1.07	0.75	0.26	-0.18	0.46
XSE	2.52	1.37	0.45	1.06	0.47	1.58
CHN	-0.05	-0.05	-0.07	0.64	0.09	1.80
JPN	-0.02	-0.02	-0.02	0.04	0.03	0.20
KOR	-0.04	-0.03	-0.02	0.11	0.08	0.30
XEA	-0.03	-0.01	-0.09	-0.47	-0.41	-0.11
ROW	-0.01	0	0	0.08	0.13	-0.11

Note: IDN = Indonesia; MYS = Malaysia; PHL = Philippines; SGP = Singapore; THA = Thailand; XSE = Rest-of-Southeast Asia; CHN = China; JPN = Japan; KOR = South Korea; XEA = Rest-of-East Asia; ROW = Rest-of-the-World; Unsk_w = unskilled wages; Sk_w = skilled wages

The differences in the imports growth under a MFN→0, and MFN→CEPT scenarios, are particularly striking. The trade-stimulating effect of global liberalisation within ASEAN is unmistakable, although some indication of trade-diversion can also be gleaned from the results. All other East Asian countries experience a slight fall in welfare, output and imports, in contrast with the rest of ASEAN, and in particular, with Malaysia, whose welfare rise by 14 percent.

Table 7.4a Growth of Top Exports & Imports

Indonesia					
top exports	**output growth**		**top imports**	**import growth**	
	MFN → 0	MFN → CEPT		MFN → 0	MFN → CEPT
coal, oil, gas	-0.7	-0.398	coal, oil, gas	2.4	-4.5
elect. equip	-6.3	-1.175	elect. equip	0.9	-0.4
wood prod	-4.7	-1.172	wood prod	1.4	0.2
chem/rub /	-0.5	-0.248	chem/rub /	6.6	2.6
clothing	10.4	-4.779	clothing	10.4	-2.0
textiles	25.7	14.035	textiles	19.5	8.2
services	-0.6	-0.287	services	2.5	0.3
other machinery	1.5	-0.688	other machinery	0.5	-0.4
paper prod	-2.3	-0.633	paper prod	1.4	0.1
leather prod	-10.9	-2.764	leather prod	4.4	-3.5
Malaysia					
top exports	**output growth**		**top imports**	**import growth**	
	MFN → 0	MFN → CEPT		MFN → 0	MFN → CEPT
elect. equip	-3.1	-1.994	elect. equip	-1.4	*-1.1*
services	-2.2	-0.782	services	-4.0	*-2.1*
other mach.	5.5	2.2	chem/rub / plast	6.5	*2.0*
chem/rub /	4.7	2.051	other mach	2.6	*0.6*
wood prod	-2.6	-1.679	wood prod	6.4	*0.8*
coal, oil, gas	-0.7	-0.617	coal, oil, gas	6.4	*-3.1*
veg oil & fats	2.0	2.157	veg oil & fats	5.3	*3.5*
other manuf	5.3	2.251	other manuf	8.8	*2.8*
textiles	104.7	81.017	textiles	31.9	*9.0*
clothing	29.4	-0.617	food prod	12.9	*5.4*

Indeed, Malaysia emerged as the prime beneficiary of ASEAN liberalisation in both simulations. In welfare terms, the gain is larger in a global, relative to an ASEAN-wide liberalisation, but Malaysia's over-all output rises more in an AFTA-only scenario. However, it is note-worthy that Malaysia's output falls the most in its top export products, electronics (↓3%) and services (↓ 2%), under the full MFN tariff liberalisation. When MFN tariffs fall to the CEPT levels, the drop in output is slightly less, that is 2% and 1%, respectively for electronics and services (see Table 4) . Thus, the larger welfare effects of a shift to a completely duty-free regime for Malaysia, could probably be traced from the rationalization of resource allocation, as well as the drop in the consumer prices of tariff peak items, such as motor vehicles, for instance.

Table 7.4b Growth of Top Exports & Imports

Philippines					
top exports	output growth		top imports	import growth	
	MFN→0	MFN →CEPT		MFN→0	MFN →CEPT
electronics.	-1.8	0.772	electronics	0.1	0.6
other mach	1.1	0.524	other mach	0.6	0.1
services	-0.2	0.004	clothing	3.1	-3.0
clothing	11.5	-10.618	services	1.7	-0.1
food prod	0.8	0.101	food prod	2.9	-0.4
textiles	12.1	1.22	textiles	9.7	-4.9
chem / rub	2.5	0.04	chem / rub	3.3	0.2
oth. metals	1.7	0.426	oth. metals	6.8	0.1
wood prod	-2.0	0.07	wood prod	2.6	0.4
veg, fruits	0.5	-0.163	veg / fruits	1.8	-0.6
Thailand					
top exports	output growth		top imports	import growth	
	MFN→0	MFN →CEPT		MFN→0	MFN →CEPT
electronics	2.8	-0.852	electronics	4.2	-0.6
services	-1.8	-0.269	other mach	3.2	-0.3
other mach	3.4	-0.896	services	-1.0	0.5
chem / rub	-1.3	-2.297	chem / rub	6.8	1.1
food prod	-1.0	-0.882	food prod	12.1	0.1
other manuf	-3.1	-0.315	clothing	31.3	1.3
textiles	16.5	8.139	textiles	20.6	3.8
clothing	12.0	2.01	other manuf	5.8	1.7
other crops	4.0	5.267	paddy rice	14.6	-2.8
leather prod	-1.0	-1.412	other crops	31.0	9.2

The relative low growth rates posited here by Indonesia could also perhaps be partly explained by Table 7.4a. In 7 out of the 10 top exports of Indonesia, output falls quite significantly, especially in fossils, chemicals, electronics, and wood products, which together comprise 41% of total exports. In other countries, not only is the decline in output limited to relatively fewer products, but there are compensating increases in other key sectors, too. Under the AFTA-only regime, output of all top exports fall, except in textiles. There is, in fact, a marked improvement in textile production in both scenarios, with the rise in output surpassing import growth.

With the exception of Thailand, which sees a slight increase in clothing output under the AFTA (2%↑) , all the rest of the ASEAN4, experience a fall in clothing

output and imports when liberalisation is limited to ASEAN. In contrast, clothing output rise even as overall imports also increase under full MFN liberalisation. This seems to imply that apart from the obvious direct cost advantage and pro-competitiveness effects brought about by the removal of CEPT tariffs, further liberalisation also induces more regional sourcing for least-cost inputs, which helps boost overall competitiveness.

Table 7.5 Full MFN liberalisation with export quotas

|	Welfare	clothing output	clothing imports	textile output	textile imports
IDN	3.9	42.0	66.3	22.7	50.3
MYS	45.5	62.9	69.6	79.6	61.6
PHL	2.3	60.6	32.5	31.0	48.1
SGP	5	16.2	10.5	28.7	11.7
THA	13.9	22.5	268.8	8.7	85.1
XSE	5	32.3	132.9	5.0	76.0
CHN	7.9	34.6	106.6	7.7	93.6
JPN	2	-3.9	34.1	18.2	25.8
KOR	11	30.7	49.9	36.9	66.4
XEA	3.2	22.4	10.9	34.0	14.2
ROW	0.9	-6.1	25.6	-5.2	15.2

Among all the regions involved in the experiments, only the Philippines and the rest of East Asia, experience a fall in welfare as a result of the more limited liberalisation to CEPT rates. This seems to be largely due to the clothing sectors of these region losing out to its ASEAN counterparts, with the output of the Philippines and the rest of East Asia falling by 10% and 7%, respectively.

In previous CGE studies on the AFTA, the Philippines is expected to fare relatively well, better than Indonesia, for instance, mainly because of the projected growth in its exports. Indeed, if one assumes that MFA textile and quotas will remain enforced, then clothing output of the Philippines under a full MFN liberalisation scenario jumps from 11% to 60%. With the removal of quotas, on the other hand, the clothing output of China dramatically jumps from -0.4% to 106%, thereby potentially squeezing out other ASEAN clothing manufacturers like the Philippines.

Next to Malaysia, Thailand is seen to benefit the most in both a partial and full liberalisation scenarios in ASEAN. This is despite the fall in output in 9 out the 36 sectors under a MFN $\rightarrow$ CEPT experiment, and in 21 sectors under full tariff

liberalisation. The rise in welfare seems to be driven by consumer gains, Thailand, being the country with the highest rate of overall protection and the most number of tariff peak products among ASEAN-5.

Figure 7.4 Welfare changes under various degrees of ASEAN liberalisation
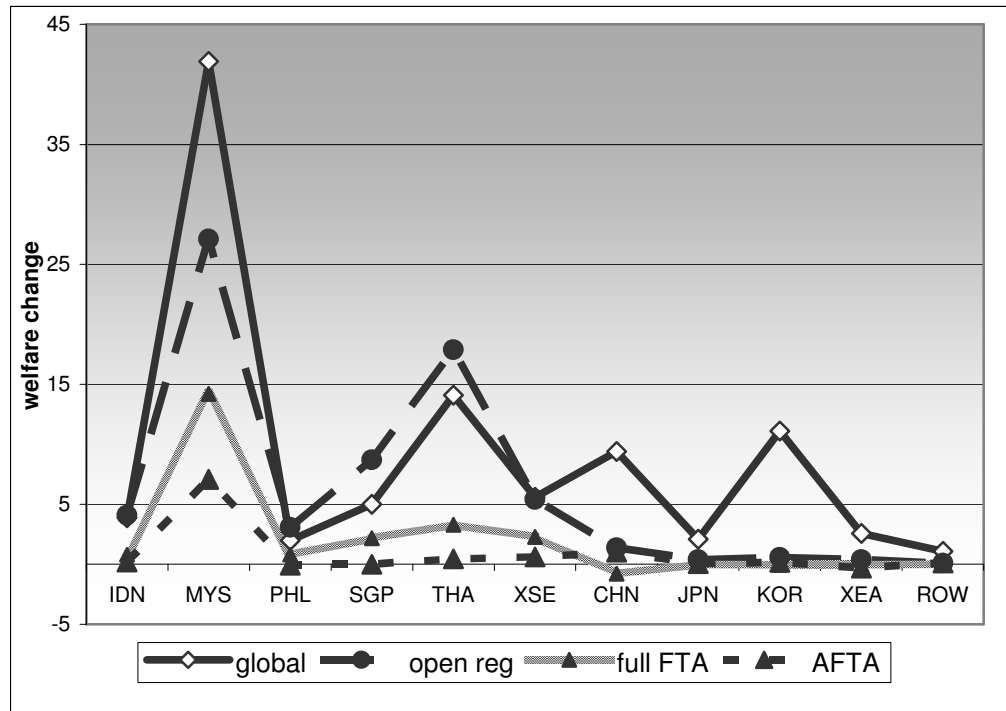
As for the rest of Southeast Asia, namely, Cambodia, Myanmar, Laos and Vietnam (CMLV countries), welfare rises both in a partial and full ASEAN liberalisation, but output in practically all manufacturing sectors fall, with the exception of leather and wood products, whose output rise by 82.3% and 35%, respectively in a full MFN liberalisation scenario, and 76% and 33% under the CEPT-AFTA.. This somewhat justifies the more gradual implementation of CEPT commitments for these countries. Vietnam is expected to bring down tariffs to the CEPT maximum range of 5% by 2006, Myanmar and Lao PDR by 2008, and Cambodia by 2010. About a quarter of their tariff lines are also still under a temporary exclusion list.

Among the ASEAN-5 countries, it is Thailand that appears to be the most positively affected once the CMLV countries fully integrates into the AFTA. Thailand's

welfare rises from 2.84% in a no-CMLV (full MFN ↓) scenario, to 3.34% with CMLV full participation. Singapore also benefits, its welfare rising from 1.62% to 2.18%. China, however, seems adversely affected. Without a CMLV liberalisation, China's welfare still rises by 9.38%, and slightly shrinks by -.08% in a full ASEAN FTA.

Finally, Figure 4 compares the economic effects of a full multilateral abolition of MFN tariffs, open regionalism (i.e. unilateral liberalisation of MFN tariffs on the part of ASEAN), with the results reported earlier in Table 3, in order to get a glimpse of the full range of benefits ASEAN can expect from differing degrees of liberalisation. With the exception of Malaysia and CMLV, the rest of ASEAN gain the most under a regime of open regionalism, while even a complete implementation of the CEPT-AFTA brings only marginal welfare increases. The ASEAN agreement to fully eliminate tariffs in the CEPT covered goods by 2010, is therefore a step towards the right direction, although there is clearly much more to be gained by if ASEAN unilaterally extends the AFTA preferential rates to its non-ASEAN partners.

7.5 Summary and Conclusions

The speed with which MFN tariffs have fallen in ASEAN in the last decade has led to the erosion of preferences under the AFTA-CEPT regime. The cost of proving origin, and other administrative procedures linked to the exploitation of AFTA privileges may also have further reduced whatever advantages lower AFTA rates may imply. However, in the product range where preferential margins are substantial (i.e. 5 percentage points and higher), the utilisation of preferences is about 30% - 40% of total imports. This study therefore examines the potential benefits that can be expected if ASEAN traders take full advantage of CEPT preferences. Since full utilisation implies the successful implementation of trade facilitation measures, and removal of non-tariff barriers (including those linked to rules of origin), the estimation of AFTA effects also provides an indication of the economic returns corresponding to these policy efforts.

AFTA simulations performed by past CGE studies assume that ASEAN liberalisation under the AFTA leads to the reduction of MFN tariffs all the way to zero. In this study, the actual AFTA regime is approximated by using trade-weighted CEPT rates. Results show that the gains of full CEPT utilisation are indeed marginal, so that

given the various costs associated with the application for CEPT rates, the predominant use of MFN tariffs could be considered quite rational. However, the complete removal of intra-ASEAN tariffs could have more pronounced welfare effects, especially for Malaysia, and to a lesser degree, for Thailand as well. Policy-wise, this implies that the decision to eliminate tariffs in 2010 for ASEAN-5 and 2015 for the CMLV countries, do have positive and substantial economic implications for the whole ASEAN region.

During the various negotiations under the APEC, especially in 1996 when the Manila Action Plans were being formulated, ASEAN voiced its readiness to extend the AFTA privileges to non-ASEAN partners, if the principle of open regionalism would be embraced by the bigger regional body. While global MFN liberalisation may be politically far-fetched, it is therefore not inconceivable that the notion of open regionalism could muster the necessary political-backing, at least within ASEAN. In that event, the growth effects of regional liberalisation will be even more apparent, and the policy efforts to address the market fragmentation in ASEAN will yield even higher returns.

Annex 7.1 Summary of Welfare effects simulations

	global	open reg	full FTA	AFTA
IDN	3.9	4.1	0.8	0.18
MYS	41.9	27.1	14.2	7.1
PHL	2	3.1	0.8	-0.07
SGP	5	8.7	2.2	0
THA	14.1	17.9	3.3	0.45
XSE	5.6	5.4	2.3	0.61
CHN	9.4	1.4	-0.8	1.01
JPN	2.1	0.4	-0.02	0.05
KOR	11.1	0.6	-0.05	0.17
XEA	2.6	0.4	-0.04	-0.32
ROW	1.1	0.1	0	0.1

Appendix 7

The core CGE model is based on the assumption of optimizing behaviour on the part of consumers, producers, and government. Consumers maximize utility subject to a budget constraint, and producers maximize profits by combining intermediate inputs and primary factors at least possible cost, for a given technology. The GTAP model used here is a static, multi-regional model, which maps out the production and distribution of goods and services in the global economy. It includes 12 regions and 36 sectors, as detailed in Table A7. The GTAP6 dataset is implemented using the GTAP6inGAMS package. For a full treatment of this modelling package, as well as a complete description of the economic structure accounting identities underlying the GTAP model, the reader is referred to Rutherford (2005). The following provides a concise account of the basic specifications for the consumption, production and trade relations, as they are applied in this chapter.

Table A1 Regional and Sectoral Aggregation

Regions			
IDN	Indonesia	CHN	China
MYS	Malaysia	JPN	Japan
PHL	Philippines	KOR	Korea
SGP	Singapore	HKG	Hong Kong
THA	Thailand	TWN	Taiwan
XSE	Rest of South-east Asia	ROW	Rest-of-the-World
Sectors			

pdr	Paddy rice	b_t	Beverages and tobacco products
wht	Wheat	tex	Textiles
gro	Cereal grains nec	wap	Wearing apparel
v_f	Vegetable, fruits, buts	lea	Leather products
osd	Oil seeds	lum	Wood products
ocr	Sugar cane, sugar beet	ppp	Paper products, publishing
ctl	Bovine cattle, sheep and goats, horses	p_c	Petroleum, coal products
oap	Animal products nec	crp	Chemical, rubber, plastic products
frs	Forestry	nmm	Mineral products nec
fsh	Fishing	i_s	Ferrous metals
fos	Coal, Oil, Gas	nfm	other metals
omn	Minerals nec	fmp	Metal products nec
cmt	Bovine meat products	mvh	Motor vehicles and parts
omt	Meat products nec	otn	Transport equipment nec
vol	Vegetable oils and fats	ele	Electronic equipment
mil	Dairy products	ome	Machinery and equipment nec
sgr	Sugar	omf	Manufactures nec
ofd	Food products nec	ser	Services

The production and consumption structure of the CGE model can be best understood by using a technology tree as shown in figure A7.1

Fig. A7.1 Nested production structure
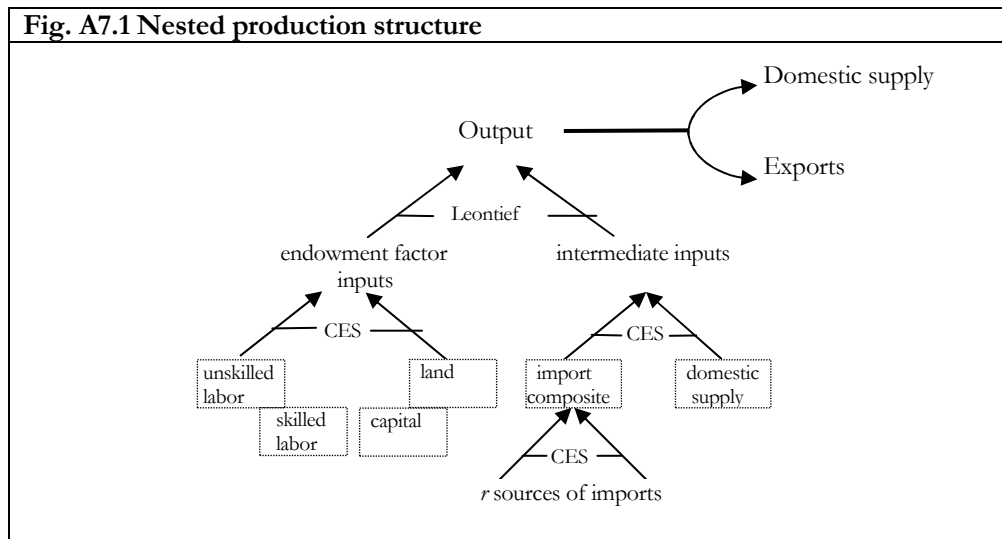
The production function as shown above has a two-level nested constant-elasticity-of-substitution (CES) form, where cost minimization determines the input demands for

primary factors of production (labor (skilled and unskilled), capital and land), and the demand for intermediate inputs. The latter can be purchased domestically and also be sourced from abroad. The most bottom part of the tree is the CES nest that describes the combination of bilateral imports using the Armington assumption of regionally differentiated products.

Overall consumption is governed by utility maximization subject to the budget constraint and specified over composite private consumption, private investments, government consumption and government investment. A Cobb-Douglas trade-off across domestic and imported goods further characterize final demand.[97] Expenditure on imports is then further spread across exporting countries with the aim to minimize cost. Figure A7.2 represents the consumption structure as described.

Fig. A7.2   Consumption Structure
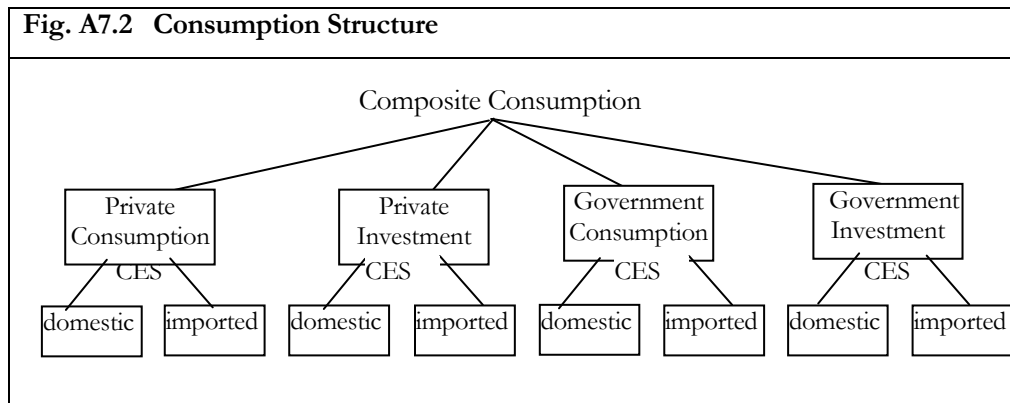
In the basic GTAP model, the consumer price index is a Cobb-Douglas aggregate of the set of domestic prices, P_d^r and the set of prices for imported goods, P_m^r . The price indices for imported goods are given by:

(1) $P_m^r = (1+t)P_m^*$;

where t is the tariff rate, and P_m^* is the world price.

The domestic price, on the other hand, is determined by the prices of the CES composite of factors, v (skilled and unskilled labor, land, resources and capital inputs), and the price of domestically produced intermediates, P_A^r:

(2) $P_d^r = f_d^r(P_v^r, P_A^r)$.

Given domestic prices for inputs and outputs, the demand for primary inputs, v, will be a function of unit input coefficients (determined by relative input prices) and by total demand for domestic output, Q:

(3) $v^r = (Q^r)[c_v^r(P_v^r)]$;

where the input coefficients, c, follow from the CES production technology for value added.

Demand for goods will be a function of the entire set of global incomes, I, and prices, P:

(4) $Q = f_q(P, I)$

where incomes are an outcome of the full general equilibrium solution across final and intermediate demands within the model.

Incomes, I, in each region are the sum of factor incomes and taxes collected Γ which is a function of tax rates γ:

(5) $I^r = (P_v^r)(v^r) + \Gamma(P_m^*, P_v^r, \gamma)$.

Finally, welfare u is defined in terms of an aggregate consumer with standard preferences, such that we can write an expenditure function e (.) defined over consumer prices and welfare:

(6) $e(u^r, P_A^r) = I^r$

Chapter 8

Summary and Conclusion

8.1 Regionalism and the agglomeration motive

This book was triggered by the analytical question of how one can characterize the political equilibrium of countries when regionalism is driven by the need to trigger agglomeration through the pooling of markets and the promotion of foreign direct investments. This is a question not addressed by standard endogenous protection literature, opting to focus instead, on the question of how the creation of regional integration agreements (RIAs) can accommodate the economic interests of the most politically influential producer groups. Regionalism, in standard political economy theory, is largely valued for its ability to enhance protection through trade diversion, and is sustained by the balanced distribution of export markets within the region. In cases where trade-creating results dominate, references are made to other political goals, such as those linked to regional security, to the enhancement of regional bargaining power, or to the need to lock-in domestic reforms.

The rhetoric behind the surge of RIAs, however, is filled with allusions to the necessity of building up scale economies, and making the region an even more attractive production hub for global industries. This led Ethier to suggest that trade diversion and trade creation are no longer the principal driving forces behind regionalism, as we have witnessed in the 1990s, but the increased globalisation of production processes. International firms are in constant search of higher productivity, through the exploitation of cost differentials among countries, and the generation of scale economies by further breaking up their manufacturing processes and concentrating the production of each stage in single locations. This has led to a race among developing countries to offer the best investment environment for FDIs, not only because of the growth-impetus of greater manufacturing activity, but also because of the risk of being relegated to a status of a peripheral, low-growth location. Developed countries, on their part, are spurred by access to resources, and greater cost competitiveness through their ability to service global export markets from an integrated hub of regional suppliers.

Linking industrial agglomeration and regionalism, however, inevitably begins from stepping out of the constant-returns-to-scale framework, on which standard political economy literature is largely based. The literature on variable returns to scale is considerably rich, and the welfare effects of trade policy have been adequately laid out. The work at hand is therefore to make the relationship between scale economies and endogenous protection more explicit. This is done in this book in two parts. The first, carried out **in Chapter 2,** consists of a survey of literature covering the fields of endogenous protection, increasing returns to scale and regionalism. This is followed, in **Chapter 3**, by an attempt to further examine the theoretical implications of taking scale effects into account in the analysis of endogenous protection.

8.2 Endogenous protection and variable returns to scale: theoretical linkages

To understand how the preferences of political actors over trade policy vary in the presence of scale effects, it is key to identify the ways in which these policies impact on welfare under the circumstances of variable returns. It was evident in Chapter 2 that the expected welfare effects of trade policy differ depending on the assumptions made about the kinds of goods (intermediates or final); market structure; source and scope of externalities; and initial market size. It is well-known, for instance, that import-competing interests, are not always necessarily served by rising protection, nor is free trade always the optimal policy that promotes overall efficiency and welfare. Circumstances exist wherein increasing the supply of protection, for instance, do not inescapably lead to higher political costs on the part of governments, in terms of falling levels of welfare for the general electorate. Moreover, since trade policy can potentially induce an economy to move from a low to a high-growth equilibrium and vice-versa, the politically optimal level of protection can be expected to change as patterns of trade and production correspondingly shift.

A key point is that once scale economies and agglomeration are taken into account, market size no longer becomes a marginal element in the analysis of the political tariff equilibrium. In current literature, the importance of size is merely conditional on the amount of lobbying or its implication on the voting power of an industry. In an

increasing-returns-to-scale framework, instead, market size assumes a pivotal role as it determines the strength of scale effects and the effectiveness of trade policy in effecting a break-point that could potentially cause the economy to leap towards a more superior equilibrium.

Seen from this context, the political support for the formation of a regional agreement is based on the welfare calculus which takes into account the effects of a larger scale of production on profits and overall incomes. The move to freer regional trade takes place, therefore, not necessarily despite the falling political influence of key industrial players, and because of increased political activity of exporters alone. When scale effects enter the political calculus, it is possible to envisage equilibrium conditions where reduction in protection leads to higher profits for firms, especially those whose production is characterised by increasing returns. Since import-competing firms, particularly in the developing world, are precisely those operating in industries with excess capacity, then one can expect the policy preference of these producers to shift in favour of less protection.

In many policy debates, it is true that government intervention through targeted protection has been likewise motivated by the aim to generate that critical mass of industrial production, which once reached, could trigger an industrial take-off. Policymaking in much of the developing world, in fact, has been strongly shaped by the goal of industrial development. The choice of policy regimes, more than being driven by interest group lobbying, has often been driven by ambitions of nation-building, and determined by the political consensus on the kind of strategy that could spur industrialisation. The literature on agglomeration and economic geography supports this idea of a take-off, illustrating how the incipient growth of manufacturing could have catalytic effects on the overall growth of national income, which then stimulates the further rise of demand for manufacturing. Higher incomes and greater manufacturing production then strengthen the backward and forward linkages in the economy, attracting further growth of manufacturing as firms from other regions relocate in order to benefit from the swelling agglomeration in the developing economy.

Chapter 3 delves into the dynamics of the policymaking process in the presence of economies and diseconomies, looking at the interaction of the political and production sectors, particularly during industrial transitions. The analysis shows the manner in which

political interactions can comprise as a shock in the real sector, pushing the economy towards a breakpoint and into a higher level of manufacturing activity. Multiple equilibria, however, imply that the political equilibrium may not be global, so that no guarantee exists that the lobbying that leads to higher tariffs leads to higher incomes as well. The larger is the initial size of employment, and/or the higher the returns to scale (i.e. via higher public expenditures in infrastructure, etc.), the greater is the likelihood of lobbying-driven agglomeration. Changes in the real sector, on the other hand, such as a terms-of-trade shock may likewise lead to permanent political changes. It could reduce the net returns of lobbying (through lower scale effects) and raise the costs of higher protection, causing a reduction of equilibrium tariffs. Results imply that larger countries can be expected to be more protectionist in manufacturing sectors where they remain net importers.

Some attention is also placed on the crucial role of the supply side of the political market. The nature of the incumbent government, that is, whether it is vision-growth-oriented, or passive/kleptocratic, on one hand, determine the level of public investments poured into overall nation-building, and consequently, the potential scale economies that can be generated by domestic entrepreneurs. On the other hand, it sets the pattern of, and the rules governing the political interactions between lobbyists and public officials. Lobbying may come in the form of investment pledges, for instance, whenever a government has a predominantly industrialist agenda. This is because the decision to protect an industry could be conditioned on the ability of firms to display its growth potential or its contribution to industrial employment.

What the results also illustrate is that although the presence of scale economies could intensify the demand and supply of higher industrial tariffs, it may also help ensure that protection stays temporary. As production and productivity expands, the economy could shift to a higher growth path but with lower or zero incidence of protection. The model discussed here shows that even when strong industrial lobbies are politically active, one could expect downward shifts in tariffs, as soon as the critical industrial scale is reached, and the role of trade policies in output expansion is reduced or becomes redundant. Put in an alternative way, while tariffs may finance industrialisation, growth in manufacturing could eventually exert a downward pressure on protection. This corresponds to historical trends of higher manufacturing growth and lower levels of

protection through time, not only in industrialised economies but also recently among the newly-industrialising countries, or NICs.

8.3 Regionalism from theory to practice

Alongside the visible trend towards liberalisation, is the likewise undeniable evidence of continued protection in selected sectors within regional blocs. Despite the articulated ambitions for regional economic integration, producers are confronted with the daily reality of tariff peaks, and market fragmentation, as in the case of ASEAN.   The second section of this study zooms into the actual practice of regionalism, in particular, at the political economy determinants of EU's structure of protection, and at the current state of ASEAN economic integration.

In **Chapter 4**, we examine the nature of EU trade policy, initially testing some basic correlations between tariffs and industrial indicators that are typically used in literature as proxies for political economy variables. We find that industries with bigger output experience lower protection, which could be due to the coordination problems inherent in large groups. Explanations could also be found in the scale economies arguments discussed in earlier chapters. If an IRS economy is lodged in a high-output equilibrium, then producer and overall welfare are served by lower and not higher rates of protection. It follows then that any lobbying-activity of politically-influential groups would lead to the reduction in tariffs.

The country origin of industry also seems to matter in EU trade policy. Experiments consistently point to both the French and the British as being the most prominent players in EU tariff-setting. It is interesting to note that the trade policy posture of the EU countries relative to each other in this study, are still fully consistent with their original relative tariff stance in 1958, before the institution of a common external tariff.

In recent empirical works testing the Grossman-Helpman model, the key challenge has always been to identify the appropriate indicators for lobbying activity, given the central place accorded by the model to the political participation of interest groups. Even in studies done on the US where actual data on campaign contributions exist, the results generate implausible estimates for the policy weights that government attach to

166

various industries. These may have been largely due to the data on political contributions being unable to adequately approximate the magnitude of private sector lobbying, and indirect influence peddling. A similar approach would thus yield even more problematic results for the EU where explicit lobbying behaviour is particularly difficult to track.

In Chapter 4, we take an alternative route to assess the relative importance of industry against the overall interests in the determination of trade policy in the EU. Employing a numerical general equilibrium model of the EU, we estimate the direct marginal effects of sectoral tariff protection on various industries, the indirect effect on upstream and downstream industries, and the effect on overall welfare. The model is specified using the objective maximization problem of an influence-driven government, as in Hillman (1989) and Grossman and Helpman (1994). We then econometrically calculate the apparent weights of industry in policymaking given the current tariff structure. We further deconstruct these weights along the lines of industry nationality and other sectoral characteristics.

Unlike previous empirical studies, the values we derive for the revealed policy weights tie in with theoretical expectations: the importance given to industry profits, in general, tend to be around 2 to 3 times that assigned to national income. Moreover, high protection is not necessarily always explained by greater political weight attached to a particular sector. In fact, we find that the policy weights of less protected sectors are comparable to those that enjoy higher protection rates. While the agricultural bias of EU protection was evident in our results, for instance, the low policy weights suggest that tariffs are now currently high in agriculture, not strictly because of the political power of farmer groups, but because of the low economy-wide effects that agriculture protection implies.

Despite the collective exercise of trade policy, nationality still matters for EU protection-setting. Industries important to certain Member States (United Kingdom, France and Italy) in terms of relative output shares, also consistently receive higher levels of tariff protection.

For the succeeding chapters, the focus is shifted towards ASEAN. It is worth noting that in more than a decade of the ASEAN Free Trade Area (AFTA), the analyses made on the immediate effects of preferences on the regional tariff structure have been largely based on the pace and the tariff lines coverage of regional liberalisation. No

analysis has been made on the impact of tariff liberalisation on actual trade flows. The biggest obstacle has been the non-harmonisation of product codes used in data reporting, which correspondingly prevents the convergence of trade and tariff data. The most basic information regarding the actual coverage of AFTA preferences, in terms of trade value, is therefore non-existent, and key questions about the relevance and effectiveness of AFTA could likewise not be adequately addressed.

One pressing question, for example, is the extent of the utilisation of the tariff preferences inherent in AFTA's Common Effective Preferential Tariff (CEPT) Scheme. Once again, utilisation data is not available, since data reporting/sharing is voluntary and not obligatory in ASEAN. In **Chapter 5**, an attempt is made to estimate the importance of AFTA preferences in the absence of actual data on its usage. The concordance of trade and tariff data for 2001 – 2003 have been made through WITS, paving the way for some basic investigation of the current state of intra-regional trade under the AFTA's preferential regime.

A look at disaggregated (HS6) sectoral trade show that the coverage of ASEAN liberalisation in terms of trade (import) value is indeed substantial, with 90.9% of total intra-ASEAN imports in 2003 falling within the AFTA tariff limit of 5%. This is only slightly lower than the 94.3% coverage with respect to tariff or product lines. About half of the value of intra-ASEAN imports are also covered by duty-free tariffs under the AFTA. However, the rapid fall of MFN tariffs in the last decade, means that for most of intra-ASEAN products, the preferential margins (MFN – CEPT) are actually zero. In 2001, 62.8% of imports enjoy zero margins, while in 2003, the figure is 65.3% (without Thailand).

Firm interviews undertaken for the ASEAN secretariat estimate the utilisation of preferences at a low 5% of total intra-ASEAN imports. However, since the total import value shares of products with margins above 5%, are only 14.86% in 2001 (and 12.62% in 2003), the preference take-up rates are possibly not low, relative to the product range where utilisation can be considered rational. Compliance costs hover around 4 -4.5% for the EU (Manchin, 2006), 6.2% for NAFTA (Carrére and de Melo, 2004) and about 8% for the Pan-European preference Scheme (Cadot et. al, 2005). Thus, granted that CEPT utilisation rates are indeed in the neighbourhood of 5% of total imports, and assuming that compliance costs is at a very conservative rate of, say, 5%, then the take-up rate of

AFTA preferences would actually be in the neighbourhood of 30% - 40%. The higher is the compliance cost, then the higher would be the gap between the nominal and real rates of preference utilisation.

An econometric test employing a modified gravity model and using aggregated data, further showed that the results of the model which employed CEPT tariff rates in its specification performed no better than the model using MFN tariffs. This implies that preferences have indeed not yielded any important influence on their trade flows during the period of study. Another experiment performed using disaggregated data, tested the significance of various preferential margins on intra-ASEAN imports. Only with margins of 10-25 percentage points do preferences begin to exert a positive effect on trade. The coefficient is insignificant, however. At margins hitting at least 25 percentage points, preferences have a more evident stimulating effect on intra-ASEAN imports. This seem to indicate a rather high range of compliance or administrative costs attached to the request for AFTA preferences.

In the context of a Free Trade Area, these costs are largely attributed to the need to prove and certify the origin of products traded within the region. **Chapter 6** therefore investigates the whole subject of Rules of Origin, not only in ASEAN, but in the whole of East Asia, where FTAs have literally mushroomed in a short span of 3 – 4 years. A survey was made of the rules of origin attached to the 12 FTAs that have been signed so far, in order to identify some of the problems brought about by the use and implementation of these rules. For countries applying the value-added or domestic/regional content rule, one probable reason for low utilisation of preferences is the inability of exporters to cumulate the necessary amount of local / regional content, given the degree of process fragmentation in some of the more heavily-traded products. Analysis of the direct and indirect value-added and import content of key sectors show that indeed, in key export sectors such as electronics and machineries, the import content is the highest for ASEAN. The sum of the direct and indirect import content for these sectors are 67.% and 60.6%, respectively, slightly above the maximum 60% allowed by AFTA. In terms of value-added, both for AFTA and for the Australia-New Zealand

Closer Economic Partnership (ANZCER), members appear to be unable to meet the 40% (for AFTA) and 50% (for ANZCER) rule for most of the key sectors studied.[98]

There is an emerging trend towards the use of product specific rules (PSR) in East Asian FTAs. For AFTA and ANZCER, the move is justified by the need to provide an alternative to the value-content rule, given the problems cited above, and also due to the cumbersome procedures involved in the valuation and certification of declared costs. For other FTAs, the use of PSRs is motivated by the need to maintain the structure of protection of politically sensitive sectors, especially in agricultures and in textiles and clothing. One threat is the likelihood that bilateral FTAs with restrictive PSRs define the parameters of wider FTAs to be formed later on. One example is the bilaterals that Japan is negotiating with individual ASEAN countries, and its impact on the design of an ASEAN-Japan FTA, also under negotiation.

A real challenge, however, is how to facilitate trade and at the same time prevent trade deflection in a region characterized by ever increasing 'back-doors' for non-members and where even relatively high tariff countries are acquiring pockets of low tariff barriers. These could lead to more intensive and heavy-handed verification procedures that will further raise the already high administrative costs in the region.

What would be the welfare gains of moving to a much-simplified regime for origin rules, and to a harmonised set of customs procedures, so that the use of preferences can be fully maximised? **Chapter 7** explores some answers using a CGE approach. It estimates the benefits of the full implementation of AFTA, that is the reduction of tariffs down to the CEPT range of 0 – 5%. Similar work in the past simulates the AFTA by eliminating intra-regional tariffs. However, only about 35% of total intra-ASEAN goods are duty-free, so that the incorporation of CEPT rates into the GTAP 6 data base could be expected to further approximate the actual impact of AFTA on welfare, output and trade. Results show that the gains of full CEPT utilisation are indeed marginal, so that given the various costs associated with the application for preferences, the large use of MFN tariffs in intra-regional trade could be considered quite rational. However, the complete removal of intra-ASEAN tariffs could have more pronounced welfare effects,

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[98] Sectors: textiles, clothing, leather goods, chemical products, motor vehicles, transport equipment, electrical machinery, machinery and equipment, and other manufacturing products.

especially for Malaysia. This implies that the policy decision to completely eliminate tariffs in 2010 for ASEAN-6 and 2015 for Cambodia, Myanmar, Laos, and Vietnam, could have positive and substantial economic implications for ASEAN.

8.4 Areas for future research

This book was initially motivated by the desire to understand the political economy underpinnings of new regionalism as Ethier (1998) has described it. There was indeed a need to beyond trade diversion motives, if one is to understand how countries with protectionist traditions, and with similar production and trade patterns, such as those in ASEAN, could reach the political equilibrium that supports the formation of a free trade area. Some initial steps are undertaken in this study, namely, the investigation of the implications of scale economies and agglomeration for endogenous protection.

The model that was developed here is somewhat basic, and assumes that scale economies are national in scope. The gains to specialisation envisaged by Ethier, however, and those that are relevant for new regionalism, are the productivity gains brought about by the increased division of labour worldwide. The natural extension of this study is therefore towards an open economy version of our agglomeration and endogenous protection model. It is clear that the pooling of regional markets could impact on the locational decisions of globalized firms, thereby accelerating the process of agglomeration. Regionalisation of production could also enable countries to internalize whatever spill-overs that might result from public and private spendings designed to enhance industrial output.

In the context of endogenous protection, one area of inquiry is what the political implications are of a core-periphery scenario within a regional grouping. Countries enter a regional agreement, with certain ambitions of being the hub of high value-added production. The political support of key interest groups would also be likely based on expectations of regionalism-induced investments in their sectors. What happens when a key member, such as Malaysia in ASEAN, is faced with the threat of falling output in some targeted sectors, such as car manufacturing, due to the agglomeration of production in Thailand? In a general equilibrium sense, Malaysia might experience a rise or fall of overall welfare, depending on the strength of regional scale effects, but the

short-run costs in terms of falling profits for a key sector such as motor vehicles would strongly impact on the equilibrium political support for the FTA agreement.

Indeed, looking at the turn of events in 2000 in ASEAN, Malaysia did temporarily pull out key items in the motor vehicle sector from the CEPT Scheme. This triggered a similar reaction from the Philippines which also made a request for temporary exclusion for petrochemicals. These measures are generally consistent with the standard theoretical expectations of endogenous protection. The puzzle is why and how these countries managed to re-submit these sectors for liberalisation only a few years later.

Another point of interest is the political consequences of unfulfilled expectations with respect to the flow of foreign direct investments. The threat of a worst-case scenario for ASEAN, that is, the combination of full liberalisation, falling investments, and a periphery status in East-Asia, could not be completely non-existent, given the continued rise of China, and the gaining strength of India as well. A case could be made for the withdrawal of political support for continued regional integration, and political economy theory would provide enough motivations for such a policy move. The response of ASEAN to this threat, however, seems to be the opposite. One of the most recent decisions is to create an ASEAN Economic Community by 2020. Another policy trend is to extend the ASEAN preferentialism to its East Asian neighbours. If this is the bicycle theory at work, what are the political economy forces propelling the momentum for continued regionalism? A related theoretical question concerns the political-economic costs and benefits of a shift back to protection from a free-trade equilibrium, when international scale economies remains to be an important component in the protection-setting equation.

References

Adams, F. and I. Park, (1995), "Measuring the Impact of AFTA: An Application of a Linked CGE System" Journal of Policy Modelling 17:4, 325 – 365.

Afontsev, S., (2002), "Endogenous Tariff Protection and the Level of Trade Distortions in Russia," *Economics Education and Research Consortium Working Paper Series,* 01/07.

Anderson, J., (1979), 'A Theoretical Foundation for the Gravity Equation,' *American Economic Review, 69*(1), pp. 106-16.

Anderson, K., & Baldwin, R. E., (1987), "The Political Market for Protection in Industrial Countries", in: *Protection, Cooperation, Integration and Development* , A.M. El-Agraa (ed), MacMillan, New York.

Anderson, J. and E. van Wincoop, (2003), 'Gravity with Gravitas: a Solution to the Border Puzzle,' *American Economic Review, 93*(1), pp. 170-92.

_____, (2004), "Trade Costs," *Journal of Economic Literature* 42 (3): 691 – 751.

Anderson, K., (1980), "The political market for government assistance to Australian manufacturing," *Economic Record* 56:153. pp: 143-144.

Anderson, J.E., & P. Neary, (1996), "A New Approach to Evaluating Trade Policy," *Review of Economic Studies*, Vol. 63, No. 1 (January), pp. 107 – 125.

Ando, S., and S. Urata, (2005), "The Impacts of East Asia FTA: A CGE Model Simulation Study," Graduate School of Economics and Graduate School of Business and Commerce, DP2005-021, Keio University.

Anson, J., O. Cadot, A. Estevadeordal, J. de Melo, A. Suwa-Eisenmann and B. Tumurchudur. (2005). "Assessing the Costs of Rules of Origin in North-South PTAs with an Application to NAFTA." *Review of International Economics* 13: 501-17.

Asian Development Bank, (2006), *Asian Development Outlook*, Manila.

Athukorala, P., & J. Menon, (1996), "Foreign Direct Investment in ASEAN: Can AFTA Make a Difference?" in M. Ariff et al., <u>AFTA in the Changing International Economy</u>, ISEAS.

Baak, B., & E.J. Ray, (1983), "The Political Economy of Tariff Policy: A CaseStudy of the United States," *Explorations in Economic History*, Vol. 20, pp. 73 – 93.

Bagwell K., & R. Staiger, (1993), "Multilateral Tariff Cooperation During the Formation of Regional Free Trade Areas", *NBER Working Paper*. No.4364.May, Cambridge, MA.

Baldwin, R., (1984), "Rent-seeking and trade policy: an industry approach", *Weltwirtschaftliches Archiv.,* 4.

_____, (1985), *The Political Economy of U.S. Import Policy,* MIT Press, Cambridge (MA).

_____, (1989a), "The political economy of trade policy", *Journal of Economic Perspectives*, Vol. 3, No. 4, Fall.

_____, (1989b), "The microfoundations of political economy", *prepared for conference on "Global and Domestic Factors in International Cooperation"* , Trento, Italy, April 3-4, 1989.

_____, (1993), "A domino theory of regionalism", *NBER Working Papers,* No. 4465, September 1993, Cambridge, MA.

Baldwin, R., (2006), "Managing the Noodle Bowl: the fragility of East Asian Regionalism," Graduate Institute of International Studies, Geneva.

Baldwin, R.E., R. Forslid, J. Haaland, (1996), "Investment Creation and Diversion in Europe," *The World Economy,* Vol. 19, No. 6, pp. 635 – 659.

Baldwin, R., & F. Robert-Nicoud, (2002), "Asymmetric Lobbying: Why Government Pick Losers," *NBER Working Paper*, No. 8756

Baldwin, R.E., & E. Seghezza, (1996), "Testing or Trade-Induced Investment-led Growth," *NBER Working Paper*, No. 5416.

Baldwin, R., R. Forslid, P. Martin, G. Ottaviano, F. Robert-Nicoud, "*Economic Geography and Public Policy*," (2003), Princeton and Oxford: Princeton University Press.

Bergsten, F., (1995), "Competitive liberalisation and global free trade: a vision for the 21st century," Working Paper no. 96-15, Washington: Institute for International Economics.

Bergstrand, J., (1985), 'The Gravity Equation in International Trade: Some Microeconomic Foundations and Empirical Evidence,' *The Review of Economics and Statistics, 67*(3), pp. 474-81.

Bernheim, B., & M. Whinston, (1986), "Coalition-proof Nash Equilibria I: Concepts," *Journal of Economic Theory,* 42, no. 1, June, pp. 1-12.

Beaulieu, E., & C. Magee, (2004), "Four Simple Tests of Campaign Contributions and Trade Policy Preferences," *Economics and Politics*, Vol. 16, No.2, pp. 163 – 187.

Bhagwati, J., A. Panagariya, T.N. Srinivasan, (1998), *Lectures on International Trade*, 2nd Ed., The MIT Press, Cambridge MA., London, England.

Blomström, M., & A. Kokko, (1997), "Regional Integration and Foreign Direct Investment", *Policy Research Working Paper*, no. 1750, World Bank, International Trade Division, April.

Bohara, A.K., & W.H. Kaempfer, (1991), "A Test of Tariff Endogeneity in the United States," *American Economic Review,* Vol. 81, pp 952 – 60.

Bond, E., Syropoulos, C., & L.A. Winters, (1996), "Deepening Regional Integration and Multilateral Trade Agreements", *CEPR Discussion Paper,* No. 1317, January, London.

Bouet, A., Y. Decreux, L. Fontagne, S. Jean and D. Laborde, (2004), "A consistent, ad-valorem equivalent measure of applied protection across the world: The MAcMap-HS6 database," CEPII discussion paper No 2004–22, December.

Brenton, P. (2003), 'Notes on Rules of Origin with Implications for Regional Integration in South East Asia', World Bank, Washington DC, mimeo

Brenton, P. and Manchin, M. (2003), 'Making EU Trade Agreements Work: The Role of Rules of Origin', *World Economy*, May 2003, vol. 26, no. 5, pp. 755-769

Brock, W., & S. Magee, (1978a), "The economics of special interest politics: the case of the tariff", *The American Economic Review*, vol. 68, 2, May.

_____, (1978b), "Tariff formation in a democracy", *paper presented to the Annual conference of the International Economics Study Group*, 23-24 September, Sussex.

Brown, D., A. Deardorff, and R. Stern, (2001), " CGE Modeling and Analysis of Multilateral and Regional Negotiating Options," *RSIE* Discussion Papers, No. 468, January, see, http://www.spp.umich.edu/rsie/workingpapers/wp.html

Cadot O., C. Carrere, J. De Melo, and B. Tumurchudur, (2005), "Product Specific Rules of Origin in EU and US Preferential Trading Agreements: An Assessment", CEPR Discussion Paper No. 4998

Cadot, O., Grether and J. de Melo (2003), "India's Trade Policy for Sale: How Much? Who Buys?" paper presented at the *Political Economy of Integration* conference, Southern Methodist University.

Cadot, O., J. de Melo, and M. Olarreaga, (1999), "Regional Integration and Lobbying for Tariffs Against Non-Members," *International Economic Review* 40, pp.: 635-657.

_____, (2004), "Lobbying, Counterlobbying, and the Structure of Tariff Protection in Poor and Rich Countries," *World Bank Economic Review* 18, pp. 345-366.

Carrère, C. and de Melo, J., (2004) "Are Different Rules of Origin Equally Costly? Estimates from NAFTA." CEPR Discussion Paper No. 4437.

Cassing, J. & A. Hillman, (1986), "Shifting Comparative Advantage and Senescent Industry Collapse," *The American Economic Review*, Vol. 76, no. 3.

Caves, R., (1976), "Economic models of political choice: Canada's tariff structure", *Canadian Journal of Economics*, Vol. IX / 2, May.

Cernat, L., (2001), "Assessing Regional Trade Arrangements: are South-South RTAs More Trade-Diverting?" *Global Economy Quarterly*, Vol. II, no. 3 (July-September).

Chang, P., (2005), "Protection for Sale Under Monopolistic Competition," *Journal of International Economics*, 66, pp. 509 – 529.

Cheh, J., (1974), "United States Concessions in the Kennedy Round and Short-Run Labor Adjustment Costs," *Journal of International Economics*, Vol. 4, pp. 323 -40.

Chen, N, (2004), Intra-National Versus International Trade in the European Union : Why Do National Borders Matter?, *Journal of International Economics* 63, pp.93–118.

Cheong, I. & K. Kwon, (2005), " Assessing the Quality of FTAs and Implications for East Asia, " (look at web for source details)

Clarete, R., C. Edmonds, and J. Wallack, (2002), "Asian Regionalism and Its Effects on Trade in the 1980s and 1990s," ERD Working Paper Series, no. 3, Asian Development Bank, Manila.

Constantopoulos, M., "Labour protection in Western Europe", (1974), *European Economic Review*, Vol. 5.

Cooper, C.A., & B. Massell, (1965), "Toward a general theory of customs unions for developing countries", Journal of Political Economy,

Corden, M., (1974), *Trade Policy and Economic Welfare*, Oxford University Press, Oxford.

_____,(1987), "Why trade is not free: is there a clash between theory and practice?" in

H. Griesch (ed.): Free trade in the World Economy, Tubingen: JCB Mohr & Institut fur Weltwirtschaft, Kiel University.

Cuyvers, L., P. de Lombaerde, S. Verherstraeten, (2005), "ASEAN Free Trade Area towards an ASEAN Economic Community... and beyond." CAS Discussion Paper No. 46, University of Antwerp, Belgium.

Cuyvers, L., and W. Pupphavesa, (1996), "From ASEAN to AFTA" CAS Discussion Paper No. 6, University of Antwerp, Belgium.

De Melo, J., Panagariya, A., & D. Rodrik, (1992), "Regional Integration: An Analytical and Empirical Overview," *World Bank and CEPR Conference on New Dimensions in Regional Integration,* April 2-3, Washington.

Deardorff, A., (1995), 'Determinants of bilateral trade: does gravity work in a neoclassical world?', Working Paper 5377, National Bureau of Economic Research, Washington DC.

Dee, P. and Gali, J. (2003), "The trade and investment effects of preferential trading arrangements," NBER working paper, No. 10160.

Destler, I.M., (1995), *American Trade Politics*, 3rd ed., Institute for International Economics, Washington.

Dimaranan, B.V. and R.A. McDougall (2002*). Global Trade, Assistance, and Production: The GTAP 5 Data Base*, Center for Global Trade Analysis, Purdue University.

Drysdale, P., & R. Garnaut, (1993), "The Pacific: An Application of a General Theory of Economic Integration", in: *Pacific Dynamism and the International Economic System*, C. Bergsten & M. Noland (ed.s), Institute for International Economics, Washington.

Eaton, J., and S. Kortum, (2001), 'Technology, Geography and Trade,' *Econometrical, 70*(5): pp.1741-79.

Eaton, J. & A. Panagariya, (1979), "Gains from Trade under Variable Returns to Scale, Commodity Taxation, Tariffs and Factor

Market Distortions," *Journal of International Economics* 9, pp. 481-501.

Elliot, R.J.R. and Ikemoto, K. (2004), "AFTA and the Asian Crisis: Help or Hindrance to ASEAN Intra-Regional Trade?" *Asian Economic Journal*, Vol. 18, No. 1, March 2004, 1-23.

Eshafani, H., and S. Leaphart, (2001), "Testing the Political Economy Models of Trade Policy: A Generalized Methodology with an Application to Turkey," paper presented at the *Yale conference on the Political Economy of Development*, March.

Estevadeordal, A. and K. Suominen, (2005), 'Rules of Origin in Preferential Trading Arrangements: Is All Well with the Spaghetti Bowl in the Americas?', *Economia 5(2): 63-92*

Ethier, W.J., (1979), "Internationally Decreasing Costs and World Trade," *Journal of International Economics* 9, 1-24.

_____, (1982), "National and International Returns to Scale in Modern Theory of International Trade," *American Economic Review* 72, 389 - 405.

_____, 1998, "Regionalism in a multilateral world," Journal of Political Economy, vol. 106. No.6.

Feenstra, R., & J. Bhagwati, (1982), "Tariff-seeking and the Efficient Tariff," in: *Import Competition and Response*, J. Bhagwati (ed.), University of Chicago Press, Chicago.

Felipe, J. and R. Wescott, (1992), "The Welfare Effects of An ASEAN Free Trade Area: A Simulation Analysis," Paper presented at the ICSEAD Model Comparison seminar on *Trade,Development and Regional Groupings in East and South East Asia*, organized by the International Centre for the Study of East Asian Development, Kitakyushu City, Japan, July 30-31, 1992.

Fernandez, R., and J., Portes, (1998), "Returns to Regionalism : An Analysis of Nontraditional Gains from Regional Trade Agreements," *The World Bank Economic Review,* 12 (2), 197 – 220.

Ferreira, P., & G. Facchini, (2004), "Trade Liberalization and Industrial Concentration: Evidence from Brazil," Ensaios Economicos, No. 531, EPGE.

Feridhanusetyawan, T., and M. Pangestu, (2003), "Indonesian Trade Liberalisation: Estimating the Gains," *Bulletin of Indonesian Economic Studies*, Vol. 39, no. 1 (April), pp. 51 – 74.

Fieleke, N., (1976), "The Tariff Structure for Manufacturing Industries in the United States: A Test of Some Traditional Explanations," *Columbia Journal of World Business,* Vol. 11, No.4, pp 98 - 104.

Findlay, R., & S. Wellisz, (1983), "Some Aspects of the political economy of trade restrictions", *Kyklos*, Vol. 36, Fasc. 3.

Flam, H., & E. Helpman, (1987), "Industrial policy under monopolistic competition," *Journal of International Economics*, 22, pp. 79-102.

Francois, J., (1992), "Optimal Commercial policy with international returns to scale," *Canadian Journal of Economics*, 25, 184-195.

_____, (1994), "Global production and trade: factor migration commercial policy with international returns to scale," *International Economic Review*, 35, pp. 565 - 581.

Francois, J. and J. Woerz, (2006), 'Rags in the High Rent District: the Evolution of Quota Rents in Textiles and Clothing', Tinbergen Institute Discussion Paper TI 2006-007/2.

Frankel, J., (1997), *Regional Trading Blocs in the World Economic System*, Institute for International Economics, Washington.

Frankel, J., & S. Wei, (1996), "ASEAN in a Regional Perspective," Project undertaken for th Southeast Asia and Pacific Department, IMF.

Finger, J.M., H.K. Hall and D. Nelson, (1982), "The Political Economy of Administered Protection," *American Economic Review* 72 (: 452 – 466.

Frankel, J. and S, Wei, (1996), "ASEAN in a Regional Perspective," A Research Project Undertaken for the Southeast Asia and Pacific

Department International Monetary Fund, June, Washington.

Gardner, B. (1987), "Causes of U.S. farm commodity programs," *Journal of Political Economy* 95:2 : 290-310.

Gawande, K., and U. Bandyopadhyay, (2000), "Is Protection for Sale? A Test of the Grossman-Helpman Theory of Endogenous Protection," *Review of Economics and Statistics* 89, pp: 139-152.

Gawande, K., and P. Krishna (2002), "The Political Economy of Trade Policy: Empirical Approaches," *Handbook of International Trade*, New York: Basil Blackwell.

Gawande, K., P. Sanguinetti and A. Bohara, (2001), "Exclusions for Sale: Evidence on the Grossman-Helpman Model of Free Trade Agreements," *Nafta-Mercosur Working Paper Series,* 4 ,Latin American and Iberian Institute, University of New México.

Godek, P.E., (1985), "Industry Structure and Redistribution Through Trade Restrictions," *Journal of Law and Economics*, Vol 28, pp. 687 – 703.

Goldberg, P. and G. Maggi, (1999), "Protection for Sale: An Empirical Investigation," *American Economic Review* 89 : 1135-1155.

Gosh, S. and Yamarik, S. (2002), "Are regional trading arrangements trade creating? An application of extreme bounds analysis," *Journal of International Economics*, Vol. 63, No. 2 , July 2004, pp. 369-395.

Grindle, M., (1999), "In Quest of the Political: The Political Economy of Development Policy Making," CID Working paper no. 17, Harvard University.

Grossman, G., and E. Helpman, (1994), "Protection for Sale," *American Economic Review* 84 : 833-850.

_____, (1993), "Trade Wars and Trade Talks," *NBER Working Paper*, No. 4280.

_____, (1995), "The Politics of Free Trade Agreements," *American Economic Review* 85 : 667-708.

_____, (2002), *Interest Groups and Trade Policy*, Princeton University Press, Princeton and Oxford.

Hakim, D., (2004), "The implication of the ASEAN Free Trade Area on Agricultural Trade," Ph.D dissertation submitted to Institut für Agrarökonomie, Georg-August-Universität, Göttingen, Germany.

Helpman, E., (1995), "Politics and Trade Policy", *CEPR Discussion Paper*, no 1269, November, London.

Herin, J. (1986), 'Rules of Origin and Differences Between Tariff Levels in EFTA and in the EC, European Free Trade Association', Economic Affairs Department, Occasional Paper No. 13.

Hertel, T.W, E. Ianchivichina, and B. McDonald (1997), "Multi-Region General Equilibrium Modeling," Chapter 9 in J.F. Francois and K.A. Reinert, eds., *Applied Methods for Trade Policy Analysis: A Handbook,* Cambridge University Press.[8] Francois, J.F., B.J. McDonald, and H. Nordstrom.

Hillman, A., (1982), "Declining Industries and Political-Support Protectionist Motives", *The American Economic Review*, vol. 72, no. 5, December.

_____,(1989), *The Political Economy of Protection* , Harwood Academic Publishers, Chur.

Hillman, A & H. Ursprung, (1996), "The political economy of trade liberalisation in the transition," *European Economic Review* 40, pp. 783 – 794.

Hoekman, B. (1993), Rules of Origin for Goods and Services, Conceptual Issues and Economic Considerations, Journal of World Trade, 27 (4):81-99.

Hoekman, B. and D. Konan, (1999), " Deep Integration, Nondiscrimination, and Euro-Mediterranean Free Trade." Discussion Paper no. 2095. Centre for Economic Policy Research. London.

Hong, C., (2005), "The Political Economy of Tariff Protection in China: Evidence from

WTO Accession," Manuscript, University of California, Davis.

Imada, P., M. Montes, and S. Naya (1991), "*A Free Trade Area,*" Singapore: Institute of Southeast Asian Studies, 1991.

Inama, S. (2003), "Trade Preferences for LDCs: An Early Assessment of Benefits and

Possible Improvements", UNCTAD, ITCD/TSB.

Itakura, K., T. Hertel, and J. Reimer, (2003), "The Contribution of Productivity Linkages to the General Equilibrium Analysis of Free Trade Agreements," GTAP Working Paper No. 23.

JETRO, (2004), "ASEAN's FTAs and Rules of Origin," Japan External Trade Organization Overseas Research Department

Johnson, H., (1965), "An Economic Theory of Protectionism, Tariff Bargaining, and the Formation of Customs Unions," *Journal of Political* Economy, 73, June, pp. 256-83.

Karacaovali, B., (2005), "Productivy Matters for Trade Policy: Theory and Evidence," *Policy Research Working Paper Series*, 3925, The World Bank.

Kawai, M., and S. Urata. (2004), " Trade and Foreign Direct Investment in East Asia." Gordon de Brouwer and M. Kawai, eds., *Economic Linkages and Implications for Exchange Rate Regimes in East Asia (*forthcoming).

Kemp, M., & T. Negishi, (1970), " Variable Returns to Scale, Commodity Taxes, Factor Market Distortions and Their Implications for Trade Gains," *Swedish Journal of Economics* 72 , 1- 11.

Krauss, M., (1972), "Customs Union Theory: Ten Years Later," *Journal of World Trade Law,* (May-June).

Krishna, P. and K. Gawande, (2001), "The Political Economy of Trade Policy: Empirical Approaches." Brown University, Working Paper Number: 2001-38.

Krugman, P., (1981), "Trade, Accumulation and Uneven Development," *Journal of Development Economics*, VIII, pp. 149 – 61.

_____, (1991), "History versus Expectations," *Quarterly Journal of Economics*, CVI (1991), pp. 651 – 67.

Lecler, E. (2002), "The Cluster Role in the Development of the Thai Car Industry." *International Journal of Urban and Regional Research.* Vol. 26, Issue 4, p.799, December.

Lee, J, and I. Park, (2005), "Free Trade Areas in East Asia: Discriminatory or Non-discriminatory?" *The World Economy*, Blackwell Synergy.

Lee, J., and P. Swagel, (1997), "Trade Barriers and Trade Flows Across Countries and Industries," *Review of Economics and Statistics* 79, pp. 372-382.

Lehmann, W., (2003), "Lobbying in the European Union: Current Rules and Practices," Luxembourg, European Parliament.

Leidy, M. & B. Hoekman ,(1992), "What to expect from Regional and Multilateral Trade Negotiations: A Public Choice Perspective," *CEPR Discussion Paper Series*, no. 747, London.

Levy, P.I., (1997), "A Political Economic Analysis of Free-Trade Agreements", *American Economic Review*, vol. 87, pp. 506-19.

Lloyd, P., and D. MacLaren, (2003), "The Case for Free Trade and the Role of RTAs," Paper presented in the Seminar on Regionalism and the WTO, 14 November, Geneva.

Magee, S., Brock, W., & L. Young (1989), *Black Hole Tariffs and Endogenous Policy Theory: Political Economy in General Equilibrium,* Cambridge University Press.

Manchin, (2006), 'Preference utilisation and tariff reduction in EU imports from ACP countries', World Economy, forthcoming

Manchin, (2006), "Preference utilisation and tariff reduction in EU imports from ACP countries", *The World Economy*, forthcoming

Manchin, M, and A. Balaoing, (2006), "Rules of Origin in the Web of East Asian FTAs," *paper presented to the World Bank Conference on Standards, Technical Barriers and Rules of Origin,,* 28 June, Hainan, China.

Mansfield, E., & M. Busch, (1993), "The Political Economy of Nontariff Barriers: A Cross-National Analysis," Paper presented at the 1993 Annual Meeting of the American Political Science Association, Washington, D.C., 2-5 September.

Markusen, J., (1989), "Trade in Producer Services and in Other Specialized, Intermediate Inputs," *American Economic Review*, 79, pp. 85 – 95.

_____, (1990), "Derationalizing tariffs with specialized intermediate inputs and differentiated final goods," *Journal of International Economics*, 28, 375-383.

Marvel, H., & E. Ray, (1983), "The Kennedy Round: Evidence on the Regulation of International Trade in the United States," *American Economic Review*, Vol. 73, No. 1, pp. 190-97.

Matschke, X., (2004), "Labor Market Rigidities and the Political Economy of Trade Protection," University of California, Santa Cruz, Working Paper, 04/02.

Matsuyama, K., (1991), "Increasing Returns, Industrialisation and Indeterminacy of Equilibrium," *The quarterly journal of Economics*, 106 , 617-650.

Mayer, W., (1984), "Endogenous tariff formation," *The American Economic Review*, 74, 970-985.

McCalman, P., (2004), "Protection for Sale and Trade Liberalization: An Empirical Investigation," *Review of International Economics,* Vol. 12, No. 1, pp. 81 – 94.

McKibbin, W., (1996), "Quantifying APEC Trade Liberalisation: A Dynamic Analysis," Paper presented for the Economic Modelling Bureau of Australia conference on "Changing Patterns of Interdependence in the Asia-Pacific Region," Cairns, August 29-31

Menon, J., (2005), "Building Blocks or Stumbling Blocks?" ADB Institute Discussion Paper No. 41, Tokyo.

Messerlin, P., (2001), "Measuring the Costs of Protection in Europe: European Commercial Policy in the 2000s," Institute of International Economics, Washington D.C., September.

Mitra, D., D. Thomakos and M. Ulubasoglu, (2004), "Protection Versus Promotion: an Empirical Investigation," *Economics & Politics* 16 : 147–162.

Mun Heng, T., & L. Low, (1992), "Is the ASEAN Free Trade Area a Second Best Option?" Manuscript, Department of Business Policy, National University of Singapore.

Nadal de Simone, F., (1995), "A Macroeconomic Perspective of AFTA's Problems and Prospects," in: Contemporary Economic Policy, 1995, Volume 8, p. 49-62.

Nelson, D., (1988), "Endogenous Tariff Theory: A Critical Survey," *American Journal of Political Science*, Vol. 32, no. 3, pp. 796 – 837.

O'Halloran, S., (1994), *Politics, Process and American Trade Policy*, University of Michigan Press, Ann Harbor.

Olson, M., (1965), *The Logic of Collective Action,* Cambridge, Mass., Harvard University Press.

Panagariya, A., (1981), "Variable returns to scale in production and patterns of specialisation," *The American Economic Review*, 71 , 221-230.

Park, I., (2000), "Trade Liberalization and Long-run Economic Growth - A CGE Model Analysis of AFTA," *Korea Review of International Studies*, Vol 3. Korea University

Payphone, Petty, (1963), "A Tentative Model for the Volume of Trade between Countries", *Weltwertschaftliches Archiv* 90 (1), 93-99.

Pelkmans, J., (2006), *European Integration: Methods and Economic Analysis,* 3rd Ed., Pearson Education.

Pincus, J.J., (1975), "Pressure Groups and the Pattern of Tariffs," *Journal of Political Economy,* 83, pp. 775-778.

Puga, D., & A.J. Venables, (1998), "Trading Arrangements and Industrial Development," *World Bank Economic Review* , vol. 12, pp. 221-49.

Ray, E.J., (1981), "The Determinants of Tariff and Non-Tariff Restrictions in the United

States," *Journal of Political Economy*, 89, pp. 105 – 121.

_____, (1991), "US Protection and Intra-Industry Trade: The Message to Developing Countries," *Economic Development and Cultural Change*, Vol. 40, No. 1, pp. 169 – 187.

_____, (1990), "Empirical Research on the Political Economy of Trade," in: *Imperfect Competition and Political Economy*, A.F. McCalla & J. Sharples (ed.s), Westview, Boulder, CO, pp. 175 – 214.

Richardson, D., (1987), "International Coordination of Trade policy", *NBER Working Paper*, No. 2293, June, Cambridge, MA.

_____, (1993), "Endogenous protection and trade diversion," *Journal of International Economics*, vol.34.

_____, (1995), "Tariff revenue competition in a free trade area", *European Economic Review*, Vol. 39, 7, August.

Roland-Holst, R., J. Verbiest, and F.Zhai, (2005), "Growth and Trade Horizons for Asia: Long-term Forecasts for Regional Integration," ERD Working Paper Series, No. 74, Asian Development Bank, Manila.

Rodrik, D., (1996), "Understanding Economic Policy Reform", *Journal of Economic Literature*, 34 , 9-41.

Rutherford, T., (2005), "GTAP6inGAMS: The Dataset and Static Model", Paper prepared for the workshop on Applied General Equilibrium Modeling for Trade Policy Analysis in Russia and the CIS, Moscow, December.

Sakakibara, E., & S.Yamakawa, (2005), "Market-driven regional integration in East Asia," in *Regional Economic Integration in a Global Framework*, G-20 Workshop, 22-23 September 2004. Eds, J. McKay, M. Armengol, G. Pineau.

Saunders, R., (1980), "The Political Economy of Effective Tariff Protection in Canada's Manufacturing Sector," *Canadian Journal of Economics*, Vol. 13, No. 2, pp. 340 – 48.

Schiff, M., & L.A. Winters, (1997), "Regional Integration as Diplomacy", *World Bank Policy Research Working Paper*, no. 1801, August, Washington.

Schwarz, A. and R. Villinger, (2004), 'Integrating Southeast Asia's economies', *McKinsey Quarterly* 1: 37–47.

Scollay, R, & J. Gilberg (2000), "Measuring the Gains from APEC Trade Liberalisation: An Overview of CGE Assessments," Blackwell Publishers, Oxford.

Severino, R., (2006), Speech delivered on East Asian Economic Integration, Institute of Southeast Asian Studies, Singapore, 5 January 2006, http://www.iseas.edu.sg/rof06/rof06rs.pdf

Shibata, H., (1971), " A theory of free trade area," abridged and amended version of Shibata, 1967, in Robson, ed.,.

Soloaga, I., and L.A. Winters. (1999a). " How Has Regionalism in the 1990s Affected Trade?" Policy Research Working Paper Series no. 2156. World Bank, Washington, D.C.

___. (1999b). " Regionalism in the Nineties: What Effect on Trade?" Discussion Paper Series no. 2183. Center for Economic Policy Research. Cambridge, Massachusetts.

Tinbergen, J., (1962), *Shaping the World Economy: Suggestions for an International Economic Policy* (New York).

Tavares, S., (2001), "The Political Economy of Tariff Determination in the European Union." Paper prepared for the ETSG Conference, August 31, 2001.

__, (2004), "Deeper Integration and Voting on the Common European External Tariff." Manuscript, November 11.

Trefler, D., (1993), "Trade Liberalisation and the Theory of Endogenous Protection: An econometric Study of US Import Policy," *Journal of Political Economy* 101 :138-60.

Tyers, R., (2004), "Implicit Policy Preferences and Trade Reform by Tariff Aggregates," Australian National University economics and econometrics working paper no 445, November.

Tyters, R., (1990), "Implicit Policy Preferences and the Assessment of Negotiable Trade Policy Reforms," *European Economic Review* 17:2 :1399-1426.

Viner, J., (1950), *The Customs Union Issue*, Carnegie Endownment, New York.

Wei, S., & J. Frankel, (1994), "Can Regional Blocs be Building Blocs to Global Free Trade?" Unpublished, Harvard University and University of California at Berkeley.

_____, (1995), "Open Regionalism in a World of Continental Trade Blocs," *NBER Working Paper*, no. 5272, September.

Whalley, J., (1996), "Why do Countries Seek Regional Trade Agreements?" *NBER Working Paper,* No. W5552.

Winters, A., (1996), "Regionalism vs. Multilateralism," Center for Economic Research, Disc. Paper, no. 1525.

Wonnacott, R., (1996), "Free trade agreements: for better or worse?" American Economic Review, Vol. 86, no. 2.

Yoshimatsu, H. (2002), "Preferences, interests, and regional integration: the development of the ASEAN Industrial Cooperation Arrangement." *Review of International Political Economy.* Vol. 9, Number 1/March.

Zedillo, E., P. Messerlin, and J. Nielson, (2005), "Trade for Development," Task Force on Trade, *UN Millennium Project*, London.

Web Sources used for FTA Rules of Origin Agreements:

http://app.fta.gov.sg/asp/fta/ourfta.asp (for Singapore- Australia; Singapore – New Zealand; Singapore-Japan; Singapore-Korea; Singapore- New Zealand; Transpacific SEP)

http://www.aseansec.org/12025.htm (for AFTA; ASEAN-China; ASEAN-Korea)

http://www.bilaterals.org/article.php3?id_article=3564 (for Japan-Malaysia EPA)

http://www.dfat.gov.au/geo/new_zealand/anz_cer/anz_cer.html (for Australia-New Zealand CER)

http://www.dfat.gov.au/trade/negotiations/aust-thai/tafta_toc.html (for Thailand-Australia Free Trade Area)

http://www.mfat.govt.nz/tradeagreements/thainzcep/thaiindex.html (for Thailand-New Zealand CEP)

Nederlandse Samenvatting (Summary in Dutch)

Dit boek is gestimuleerd door de analytische vraag, hoe het politieke evenwicht tussen landen kan worden gekarakteriseerd, indien regionalisme bepaald wordt door de noodzaak agglomeratie uit te lokken middels het integreren van markten alsmede de bevordering van directe buitenlandse investeringen. De retoriek die de snelle opkomst van regionale integratie (RIAs in de studie) ondersteunt, staat bol van verwijzingen naar de noodzaak van het bereiken van schaaleffecten, en tevens naar het nog aantrekkelijker maken van de regio als een productie " hub" voor wereldwijd opererende sectoren. Dit noopte Ethier tot de suggestie dat handelsschepping en handelsverlegging niet langer de drijvende krachten achter regionalisme zijn, zoals we hebben kunnen waarnemen tijdens de jaren negentig, maar juist de toenemende globalisering van productieprocessen.

Bij de zoektocht naar het verband tussen agglomeratie en regionalisme is het echter onvermijdelijk om eerst buiten het kader van constante schaalopbrengsten te treden, waar de politieke economie literatuur meestal op is gebaseerd. De opdracht in dit boek is daarom om het verband tussen schaaleffecten en endogene protectie explicieter te maken. Dit boek doet dat in twee stappen. Hoofdstuk 2 behelst een literatuuroverzicht van drie aspecten : endogene protectie, toenemende schaalopbrengsten en regionalisme. Dit wordt gevolgd door een poging in hoofdstuk 3 om de theoretische implicaties nader te onderzoeken van het invoeren van schaaleffecten in de analyse van endogene protectie.

Uit hoofdstuk 2 blijkt duidelijk dat de verwachte welvaartseffecten van handelspolitiek uiteenlopen afhankelijk van de vooronderstellingen omtrent de aard van de goederen (intermediaire of eindprodukten); marktstructuur ; de bron en reikwijdte van externe effecten ; en de aanvankelijke omvang van de markt. Zo mag het bekend worden verondersteld dat belangen uit de sectoren met sterke invoerconcurrentie niet noodzakelijk zijn geholpen met toenemende protectie, en evenzeer dat vrijhandel niet altijd de optimale politiek is die algehele efficiency en welvaart bevordert. Er zijn omstandigheden waaronder een toename van het aanbod van protectie, bijvoorbeeld, niet zonder meer leidt tot hogere politieke kosten voor de regeringen, opgevat als dalende welvaartsniveau's voor de kiezers. Aangezien handelspolitiek potentieel in staat is om een economie te doen bewegen van een lage-groei naar een hoge –groei evenwicht en omgekeerd, kan bovendien het politiek optimale niveau van protectie verwacht worden te veranderen naarmate de handels- en productiepatronen in vergelijkbare mate verschuiven.

Een belangrijk aspect is dat zodra met schaaleffecten en agglomeratie rekening wordt gehouden, de omvang van de markt niet langer als een marginaal element in de analyse van het politieke tarief

evenwicht kan worden beschouwd. In de huidige literatuur is het belang van de grootte louter van betekenis voor de omvang van de lobby inspanningen of de consequenties voor de invloed van de industrie op beslissende stemmingen. In een kader met toenemende schaalopbrengsten daarentegen, krijgt de grootte van de markt een centralere rol omdat het de kracht van de schaaleffecten bepaalt alsmede de doeltreffendheid van handelspolitiek om een drempel te overschrijden waardoor de economie potentieel zou kunnen overspringen naar een hoger evenwicht.

In dit verband is de politieke steun voor het bereiken van een regionale overeenkomst dan ook gebaseerd op de welvaartsberekening die de effecten van grotere productieschaal op de winsten en inkomens in beschouwing neemt. Het is mogelijk evenwichtsvoorwaarden te formuleren waarbij een vermindering van protectie tot hogere winsten leidt voor ondernemingen, vooral die bedrijven met toenemende schaalopbrengsten. Omdat ondernemingen die met invoer concurreren, zeker in ontwikkelingslanden, uitgerekend in sectoren werken met overcapaciteit, kan men verwachten dat de beleidsvoorkeuren van deze producenten verschuiven in de richting van minder protectie.

Hoofdstuk 3 graaft dieper in de dynamiek van het beleidsproces ingeval er sprake is van positieve en negatieve effecten, waarbij aandacht wordt geschonken aan de interactie van de politiek en de productiesectoren, bovenal tijdens industriele overgangsperiodes. De analyse laat de wijze zien waarop politieke interacties een impuls in de reeele sector teweeg kunnen brengen, die de economie over een drempel helpt en daardoor naar een hoger niveau van industriele nijverheid. Meervoudige evenwichten impliceren echter dat het politieke evenwicht niet globaal is, waardoor er geen garantie bestaat dat het lobbyen dat tot hogere tarieven leidt tevens tot hogere inkomens voert. Hoe groter de aanvankelijke werkgelegenheid , en/of hoe groter de schaalopbrengsten (bv. middels hogere openbare uitgaven in infrastructuur), des te groter is de waarschijnlijkheid dat agglomeratie die lobbies bepleiten tot stand komt. Veranderingen in de reele sector daarentegen zoals een ruilvoeteffect kunnen evenzeer tot blijvende politieke wijzigingen lieden. Het zou de netto vruchten van lobbyen kunnen verlagen (middels een lagere schaalopbrengst) en de kosten van hogere protectie kunnen opdrijven, waardoor evenwichtstarieven lager uitvallen.

De resultaten illustreren eveneens dat, hoewel schaaleffecten zowel vraag als aanbod van hogere tarieven zouden kunnen versterken, ze net zo goed het tijdelijke karakter van protectie kunnen ondersteunen. Indien productie groeit en productiviteit toeneemt, zou de economie naar een hoger groeipad kunnen overgaan maar dan met een lager protectieeffect of zonder enige protectie. Vandaar dat, terwijl tarieven eerder industrialisatie financieren, de groei van de industrie uiteindelijk een benedenwaartse druk op protectie uitoefent. Dit komt overeen met historische

trends van hoge industriele groei en lagere protectieniveau's over langere periodes, niet alleen in ontwikkeldelanden maar recentelijk ook in zich industrialiserende landen (of NICs).

   Naast de zichtbare trend ten gunste van liberalisatie, valt tegelijk enige blijvende selectieve sectorale protectie waar te nemen in regionale blokken. Niettegenstaande de uitgesproken ambities voor regionale economische integratie, worden producenten steeds geconfronteerd met de dagelijke werkelijkheid van piektarieven en marktversplintering, zoals in het geval van ASEAN. Het tweede deel van deze studie gaat dieper in op de actuale praktijken van regionalisme, en vooral op de politieke bepalende factoren van de structuur van de handelsbescherming van de EU, alsmede de huidige staat van de economische integratie van ASEAN.

   In hoofdstuk 4 onderzoeken we de aard van de EU handelspolitiek, beginnend met het testen van enkele eenvoudige correlaties tussen tarieven en industriele indicatoren die in de literatuur worden aangewend als 'proxies' voor variabelen in de politieke economie.   We concluderen dat industrieen met een grotere productie een lagere bescherming ervaren , hetgeen het gevolg zou kunnen zijn van coordinatieproblemen die inherent zijn aan grote groeperingen. Het is eveneens mogelijk de verklaring te zoeken in de schaaleffecten die in eerdere hoofdstukken besproken zijn. Wanneer een economie gekenmerkt door toenemende schaalopbrengsten (IRS in de studie) zich bevindt in een evenwicht met grote afzet, dan blijkt dat producenten welvaart alsmede de algehele welvaart gediend zijn met lagere en niet hoge protectie. Hieruit volgt dat de lobby inspanningen van politiek invloedrijke groeperingen zou moeten leiden tot een daling in de tarieven.

   De landenoorsprong van de industrie doet er eveneens toe in de EU handelspolitiek. Experimenten laten op consistente wijze zien dat de Fransen en de Britten de meest prominente spelers zijn bij de formulering van EU tarieven. Het is interessant om op te merken dat de handelspolitieke structuur van EU landen   t.o.v. elkaar nog steeds consistent is met hun oorspronkelijke tariefstructuur in 1958, voorafgaand aan de vaststelling van het gemeenschappelijk buitentarief van de Unie.

   In recente empirische   toetsen van het Helpman-Grossman model, geldt nog steeds als belangrijkste uitdaging om geschikte indicatoren te vinden voor lobby inspanningen, gegeven de centrale rol die het model toekent aan politieke beinvloeding door belangengroepen. Zelfs in studies over de VS waar gegevens over campagne bijdragen bestaan, brengen de resultaten onwaarschijnlijke schattingen voort van de relatieve gewichten betreffende beleid die de regering hanteert voor diverse sectoren.

   In hoofdstuk 4 bewandelen we een alternatieve weg om het relatieve belang te beoordelen van de industrie tegenover het algemene belang bij de bepaling van EU handelspolitiek. Gebruikmakend van een numeriek algemeen evenwichtsmodel van de EU, blijken de waarden die

we afleiden voor de empirisch gevonden beleidsgewichten te sporen met de theoretische verwachtingen : het belang dat gehecht wordt aan industriele winsten is om en nabij 2 a 3 maal het belang dat wordt toegekend aan het nationale inkomen. Bovendien blijkt dat hoge handelsbescherming niet noodzakelijkerwijs altijd wordt verklaard door het grotere politieke gewicht van de sector. In feite vinden we dat het beleidsgewicht van de minder beschermede sectoren vergelijkbaar zijn met dat van de sectoren met hoge protectie. Ofschoon de neiging om de landbouw te beschermen evident was in onze resultaten, bijvoorbeeld, lijkt het er op dat de lage beleidsgewichten ons vertellen dat landbouwtarieven momenteel hoog zijn, niet zozeer vanwege de politieke macht van de boerenlobbies, maar vanwege de geringe effecten van de landbouw in de economie die samenhangt met de landbouwprotectie.

 Niettegenstaande de collectieve bepaling van handelspolitiek doet nationaliteit er nog steeds toe in de bepaling van EU bescherming. Industrieen die van belang zijn voor bepaalde Lidstaten (VK, Frankrijk en Italie) in termen van relatieve output (aandelen), ontvangen ook hogere niveau's van tariefbescherming.

Voor de hieropvolgende hoofdstukken wordt het zoeklicht gericht op ASEAN. Het is opvallend dat er tijdens een periode van meer dan een decennium van de AFTA (ASEAN Free Trade Area) geen enkele analyse is gemaakt van de effecten van tariefliberalisatie op de feitelijke handelstromen. Het grootste obstakel daarbij is steeds het gebrek aan harmonisatie van de productcodes die gehanteerd worden in de handelsstatistieken, waardoor er geen overeenkomst bestaat tussen handels – en tariefgegevens. Zelfs de meest basale informatie betreffende de feitelijke dekking van AFTA preferenties, gemeten in handelswaarde, is om die reden niet beschikbaar en kernvragen omtrent de relevantie en doeltreffendheid van AFTA kunnen evenmin op bevredigende wijze worden beantwoord.

Zo is er de nadrukkelijke vraag van de mate van benutting van de tariefpreferenties die voortvloeien uit AFTA' s Common Effective Preferential Tariff (CEPT) schema. Opnieuw zijn gegevens omtrent benutting niet beschikbaar aangezien gegevensverstrekking vrijwillig is gebleven in ASEAN. In hoofdstuk 5 wordt een poging ondernomen om een schatting te maken van het belang van AFTA preferenties, hoewel feitelijkegegevens over de aanwending afwezig zijn.

Een blik op gedesaggregeerde gegevens (HS 6) van de goederenhandel maakt duidelijk dat de dekking van ASEAN liberalisatie in termen van handelswaarde (invoer) verregaand is, met 90,9 % van het totaal aan intra-ASEAN invoer in 2003 dat valt onder de AFTA tarieflimiet van 5 %. Dit is nauwelijks lager dan de 94.3 % dekking in termen van tarief- of goederenregels. Ongeveer de helft van de intra-ASEAN invoerwaarde valt onder tariefvrije bepalingen binnen de AFTA. Echter, de snelle daling van de WTO tarieven (ook meestbegunstigingstarieven genoemd, MFN in de studie) in het afgelopen decennium betekent dat voor de meeste intra-ASEAN producten de

preferentiele marge (MFN minus CEPT) inmiddels nul bedraagt. In 2001 62,8 % van de invoer genoot nul-marges,terwijl dat in 2003 was opgelopen tot 65,3 % (zonder Thailand).

Interviews afgenomen in bedrijven door vertegenwoordigers van het ASEAN secretariaat schatten de benuttingsgraag van de preferenties op een lage 5 % van het totaal aan intra ASEAN invoer. Niettemin, omdat de totale aandelen in invoerwaarde van goederen met een marge boven 5 % niet meer dan 14,86 % bedraagt in 2001, (en 12, 62 % in 2003) , zou men kunnen zeggen dat de benutting van de preferenties eigenlijk niet zo laag waren, indien gerelateerd aan die producten waarbij benutting werkelijk zinvol was. Dus, gegeven dat CEPT benuttingsgraden rond de 5 % liggen, en er vanuitgaande dat de administratieve kosten op een uiterst conservatieve 5 % kunnen worden geschat, valt te concluderen dat de benuttingsgraad van de AFTA preferenties die er toe doen eerder in de buurt van de 30 % - 40 % ligt. Hoe hoger de administratieve kosten, hoe groter de kloof tussen de nominale en de werkelijke benuttingsgraad van de preferenties.

Een econometrische toets waarbij gebruik werd gemaakt van een aangepast graviteitsmodel en geaggregeerde gegevens toonde verder aan dat preferenties inderdaad geen belangrijke invloed hebben uitgeoefend op de interne handelsstromen gedurende de periode van de studie. Een ander experiment waarbij gedesaggregeerde gegevens werden aangewend toetste de betekenis van verschillende preferentiele marges voor de intra-ASEAN invoer. Pas bij marges in de orde van 10 % tot 25 % beginnen prefenties een zekere invloed op handelsstromen uit te oefenen. Helaas is de coefficient niet significant. Bij marges van minstens 25 % hebben preferenties een duidelijker aanwijsbaar stimulerend effect op intra-ASEAN invier. Dit lijkt te duiden op nogal hoge administratieve kosten die verbonden zijn met het benutten van preferenties.

In de context van een vrijhandelszone bestaan deze kosten hoofdzakelijk uit het bewijs en de certificatie van de oorsprong van de verhandelde goederen in de regio. Hoofdstuk 6 onderzoekt daarom het thema van de oorsprongsregels, niet alleen in ASEAN maar in geheel Oost Azie waar vrijhandelszones buitengewoon snel in aantal zijn toegenomen gedurende de laatste jaren. Een overzicht van de oorsprongsregels van 12 vrijhandelszones (die ondertekend zijn) is opgenomen teneinde de problemen op te sporen die het gebruik en de implementatie van deze regels met zich mee brengen. Voor landen die de toegevoegde-waarde regel of het binnenlandse/regionale productieaandeel ' in' het product (local contents) toepassen, ligt het voor de hand dat de lage benuttingsgraad samenhangt met de onmogelijkheid voor exporteurs voldoende lokale toegevoegde waarde te cumuleren, gegeven de aanzienlijke fragmentatie van het productieproces in dit soort wereldwijd verhandelde goederen.

Er valt een trend waar te nemen van toenemend gebruik van product-specifieke regels on Oost-Aziatische vrijhandelszones. Een bedreiging daarbij bestaat uit de waarschijnlijkheid dat bilaterale vrijhandelszones met restrictieve product-specifieke regels vervolgens de parameters

zullen bepalen van vrijhandelszones met een groter bereik. Een andere uitdaging is hoe handel te bevorderen en tegelijk handelsverlegging te voorkomen, en wel in een regio die gekenmerkt wordt door steeds meer 'achterommetjes' voor niet-leden en waar zelfs landen met relatief hoge tarieven altijd wel sectoren met lage tarieven hebben. Deze structuren kunnen leiden tot intensievere verificatie procedures die de reeds hoge administratieve kosten in de regio verder zullen opdrijven.

Wat zou de welvaartwinst bedragen indien men overgaat naar een sterk vereenvoudigd regime van oorsprongsregels en naar geharmoniseerde douane procedures, zodat de benutting van preferenties kan worden gemaximaliseerd ? Hoofdstuk 7 verkent enkele antwoorden met behulp van een CGE benadering. Het berekent de baten van een volledige implementatie van AFTA, de vermindering van (alle) tarieven tot het CEPT bereik van 0 % - 5 % . Soortgelijk werk in het verleden simuleerde de AFTA door de eliminatie van intra-regionale tarieven. Echter, slechts zo'n 35 % van alle intra-ASEAN goederen zijn tariefvrij, zodat het inbrengen van CEPT tarieven in de GTAP 6 gegevensbank verwacht kan worden de feitelijk effecten van AFTA voor welvaart, output en handel beter te benaderen. De resultaten laten inderdaad zien dat de voordelen van volledige CEPT benutting marginaal zijn, zodat, gegeven de kosten die het gebruik van preferenties met zich meebrengen, het benutten van MFN tarieven als rationeel kan worden beschouwd. Overigens kan de volledige elinimatie van intra-ASEAN tarieven wel degelijk uitgesproken welvaartseffecten opleveren, vooral voor Maleisie. Dit houdt in dat de beleidsbeslissing om tot algehele verwijdering van tarieven te komen in 2010 voor de ASEAN-6 en in 2015 voor Cambodja, Myanmar, Laos en Vietnam aanzienlijke, positieve economische implicaties voor ASEAN kan hebben.