Developing Country Coalitions and Deadlocks in Trade Negotiations

PRELIMINARY AND INCOMPLETE

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Abstract

To date, the received theory regarding the underpinnings of trade negotiation does not provide a satisfactory account of the impasses that have plagued both recent World Trade Organisation and Preferential Trade Agreement negotiations. This paper attempts to address this omission by extending the widely cited model of Bagwell and Staiger (1999, 2002) to encompass two small exporters dealing with a common large importer. It is found that the smaller countries prefer to deal as a coalition whereas the large country prefers to deal bilaterally. This characterisation provides an explanation of the observed phenomena of developing country coalition forming and developed country non-cooperation with such coalitions; phenomena that have been a particular feature of impasses within the Doha Development Agenda and in recent PTA discussions. Moreover, this analysis suggests that use of the Kemp-Wan proposition, rather than Article 24, as the deciding metric in the formation of PTAs can potentially mitigate such problems.

1. Introduction

A striking feature of current multilateral and plurilateral trade negotiations is the growing role of developing country coalitions. The influence of such coalitions is certainly not innocuous; Collier (2006), Baldwin (2006) and Narlikar and Tussie (2004) have all noted that the coalitions of the Doha Development Agenda of the World Trade Organisation (WTO) are much more active, cohesive and, ultimately, integral to the eventual outcome of the negotiations than those of previous rounds. The increasing agency of coalitions can be further observed in the recent negotiations of

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several Preferential Trade Agreements (PTAs): ASEAN with China, India and Japan; MERCOSUR with the EU and India; CARICOM with Canada; etc. However, it is clear that negotiations involving such coalitions have been plagued with difficulties. For example, the Doha trade round has stalled several times with a collapse in negotiations at the Cancun ministerial in 2003 and a temporary suspension of proceedings in July 2006. Similarly, trade talks between MERCOSUR and the EU, ASEAN and Japan, ASEAN and India have been marred with hold-ups. Identifying remedies to these difficulties requires sufficient understanding of the mechanisms that create them. However, despite recent advances in the theory of trade negotiations, the literature does not yet provide a satisfactory account of the impasses that have been the source of negotiating deadlocks between large countries and developing country coalitions; a lacuna that this paper attempts to go someway towards addressing.

Clearly, trade negotiations can break down, and have broken down in the past, for myriad reasons and it is beyond the scope of this paper to provide a comprehensive explanation for every past and potential cause of impasse. However, three key phenomena distinguish the present problems from those of the past and merit particular attention: the greater inclusion of developing countries in multilateral and plurilateral trade talks; the emergence of infrangible developing country negotiating coalitions within these talks; and the proliferation of bilateral Preferential Trade Agreements (PTAs). It is the contention of this paper that these three phenomena are related and partly responsible for the present difficulties.

The structure of this paper is as follows. Firstly, a non-technical account of the main arguments is developed with reference to the current problems plaguing trade negotiations involving coalitions. Secondly, a brief exposition is provided of the Bagwell and Staiger (1999, 2002) model regarding the underpinnings of trade negotiation. Thirdly, this model is expanded to include two small exporters and a single large importer. Fourthly, this interpretation of the model is utilised to provide explanations of: the emergence of developing country coalitions; developed country non-cooperation with such coalitions; and the resulting proliferation of PTAs. Fifthly, the potential solution of replacing Article XXIV of the GATT with the Kemp-Wan proposition is addressed within the context of the formal model. Finally, a concluding section summarises and suggests directions for future research.
2. The breakdown of trade negotiations involving coalitions and the concurrent proliferation in PTAs

Coalitions of developing countries that negotiate collectively have been a feature of multilateral trade negotiations for a number of years. However, by the time of the Cancún ministerial there were several major developing country groups: the group of Least Developed Countries (LDC); the Small and Vulnerable Economies (SVE); the Like-Minded Group (LMG); the African Caribbean Pacific group (ACP); the African Group; the Core Group; the coalition on cotton; the alliance on Strategic Products and Special Safe-guard Mechanism; and the G20. Moreover, these coalitions were not as autonomous as this listing suggests; inter-group cooperation lead to a web of related developing country negotiating stances involving logrolling as well as moral support for single issues such as that of the concerns of the cotton producers.

Narlikar and Tussie (2004) argue that existing theories of coalition stability, such as those of Hamilton and Whalley (1989) and Kahler and Odel (1989) etc, predict that cohesion based upon such a multiplicity of interests is susceptible to domino-effect style fragmentation catalysed by bilateral ‘carrots and sticks’ offered by more powerful negotiating partners. However, contrary to theory, the coalitions of the Doha Development Agenda have held their ground in spite of considerable arm-twisting by the developed countries. Possible reasons for this are manifold: superior, hybrid coalition structures incorporating features from both bloc-style and issue-based coalitions; strong leadership from the emerging economies; and well balanced agendas etc. The failure of developed countries to recognise the credibility of developing country threats is posited by Narlikar and Tussie (2004) as the foremost explanation of the collapse of the Cancún ministerial. Essentially, past experience, and knowledge of coalition theory, led developed countries to conclude that compliance with the greater concessions demanded of them by developing country coalitions was not necessary in the endgame as bilateral carrots and sticks should be enough to break coalitions; thus an impasse was reached.

However, an alternative diagnosis of the ailing Doha round has been ventured by authors such as Collier (2006): multilateral trade deals are ultimately the exclusive
pursuit of large, symmetric countries, thus the greater inclusion of developing countries has rendered the WTO useless. Essentially, the formation of developing country coalitions was irrelevant; by expanding developing country participation in the first place, the Doha Development Agenda was doomed from the start. This implies that the initial rationale underlying the inclusion of developing countries stemmed from political concerns rather than welfare considerations; concerns that must have subsequently faded in importance.

Concomitant to the impeded momentum of multilateralism has been the increased rate of PTA formation. Since the early 1990s the number of regional trade agreements has quadrupled to the extent that every member country of the WTO, except Mongolia, is party to at least one PTA, and on average each country belongs to six PTAs (World Bank, 2005). Interestingly, the EU and the US (which traditionally eschewed PTAs until the closing years of the Clinton administration) have actively been pursuing PTAs with developing countries since the collapse of the 2003 WTO ministerial in Cancún. This so-called ‘new regionalism’ encompasses a great deal of North-South trade deals, with approximately 45 developing countries having signed bilateral PTAs with a Northern trading partner (World Bank, 2005).

Whilst it appears that PTAs have supplanted multilateral deals, it would also appear that plurilateral PTAs have been supplanted by bilateral PTAs in cases where such talks have become deadlocked. For example, Japan has recently established Economic Partnership Agreements (EPAs) involving substantial trade liberalisation with Malaysia, the Philippines and Singapore, and has announced agreements in principle to establish similar EPAs with Indonesia and Thailand, thus diminishing the likelihood of success of Japan - ASEAN trade negotiations. Similarly, in 2005 India concluded an Economic Cooperation Agreement with Singapore involving substantial trade liberalisation and in 2003 negotiated a framework for establishing a Free Trade Agreement (FTA) with Thailand, thereby diminishing the likelihood of success of India - ASEAN negotiations.

In both the multilateral and plurilateral cases it is clear that the opportunity cost of multi/plurilateral trade agreements is that of the value of bilateral PTAs foregone. Thus, the threat-point of developing country coalitions during such trade negotiations
is not total non-agreement, but a move to bilateral negotiation. Whilst economists have sought to ascertain whether PTAs have a positive or negative impact upon the goal of universal free trade as reflected in Bhagwati’s (1993) memorable phrases “building blocks” and “stumbling blocks”, what has not yet been considered in the literature is the impact that developing country coalitions within multi/plurilateral trade negotiations have on the relative desirability of PTAs. Whilst liberalisation is not a zero sum game, the actions of trade negotiators are often viewed as mercantilist in nature, as noted by Krugman (1991) and explained by Bagwell and Staiger (1999, 2000). Hence, from the point of view of developed country negotiators, a better deal for developing countries is viewed as a worse deal for developed countries. Consequently, a large proportion of the problems of the Doha Development Agenda and the ailing plurilateral PTA negotiations can be explained thus: the deal sought by resilient developing country coalitions reduced the relative merit of multi/plurilateral negotiation, from a developed country perspective, to such an extent that bilateral PTAs became more desirable. Impasses were not caused by naive developed country logic, but by the well informed choice of developed countries to pursue bilateral outcomes, which, for them, would be superior to the successful conclusion of trade talks involving coalition-based negotiation. Essentially, the new found fortitude of developing country coalitions and the rise in PTAs can be viewed as cause and effect with multi/plurilateral based negotiation being victims in the process.

2.4 Non-technical overview of model

This paper develops a formal model of trade negotiations consistent with both of the above explanations. This is achieved via extending the Bagwell and Staiger (1999, 2000) framework to an asymmetric setting incorporating three countries (one large importer and two smaller exporters) that have the option to negotiate bilaterally or via the WTO. A taxonomy of welfare effects is developed to show the benefits to each country under a variety of different scenarios. It is found that the large developed country prefers to deal bilaterally, whereas the smaller countries prefer to deal as a coalition. This result lends direct support to the views of Collier (2006); as long as a multilateral trade deal involves large countries extending MFN treatment to smaller trading partners, large countries will prefer bilateralism. This implies that the initial establishment of the Doha round was irrational from a strictly economic perspective.
However, if it is assumed that initial developed country participation in the Doha trade round was not irrational, then it is clear that MFN must yield some benefits to developed countries that mitigate the terms-of-trade losses associated with multilateral rather than bilateral negotiation with its smaller trading partners.\(^2\) In this case, the model lends support to the former diagnosis of the problems of the Doha Development Agenda: the emergence of credible developing country coalitions has reduced the benefits of multilateralism from the perspective of developed countries to such an extent that, where bilateralism was once a lesser option, it is now optimal. In either case a solution to salvage multilateralism would be to remove the ability of the developed countries to “divide-and-conquer” via PTAs. It is shown in this paper that use of the Kemp-Wan proposition (that PTAs should not reduce the trade volumes of non-participating countries) as opposed to Article 24 (that PTAs should not raise the tariffs levied on non-participating countries), as a governing rule over the formation of PTAs, achieves this end.

2. The model

The current model consists of three countries and two goods. Country A is a large country that exports good \(y\); and countries B and C, are two smaller identical countries who both export good \(x\). Whilst, countries B and C are smaller, it is assumed that they still have sufficient market power to entice country A to engage in negotiations with them. For simplicity it is also assumed that countries B and C do not trade with each other.\(^3\) Let the local relative prices faced by producers and consumers be defined as \(p' = P_i^j / P_j^i\) for \(i \in \{A, B, C\}\) and define the world price of each good as \(P_j^j\) for \(j \in \{x, y\}\). Given that good \(y\) is the export good in country A, the price will correspond with the world price such that \(P_y^A = P_y^*\). Likewise, the domestic price of good \(x\) in countries B and C will correspond with the world price such that \(P_x^i = P_x^*\) for \(i \in \{B, C\}\). Ad valorem import tariffs applied to imports from countries B and C by the government of country A are denoted as \(t_{AB}\) and \(t_{AC}\) respectively, whereas tariffs on

\(^2\) See Horn and Mavroidis (2001) for a survey of the literature regarding the rationale underpinning the MFN principle.

\(^3\) This avoids the possibility of trade deflection as discussed by Richardson (1994).
imports of good $y$ in countries B and C are denoted as $t^i$ for $i \in \{B, C\}$; all tariffs are assumed not to be of a prohibitive magnitude. Expressing the terms of trade in each bilateral relationship as $p^{AB} = P_x^B / P_y^A$ and $p^{AC} = P_x^C / P_y^A$ respectively and defining $\tau^i = (1 + t^i)$ for $i \in \{AB, AC, B, C\}$ allows the following relationship among the local relative prices to be derived utilising the fact that the law of one price necessitates that local prices in country A must be the same irrespective of the origin of the imports of good $x$:

$$p^A = \tau^{AB} p^{AB} = \tau^{AC} p^{AC}$$  \hspace{1cm} (1)

$$p^B = p^{AB} / \tau^B$$  \hspace{1cm} (2)

$$p^C = p^{AC} / \tau^C$$  \hspace{1cm} (3)

Production in each country is determined by selecting the point on the production possibilities frontier that represents equality between the local relative price and the marginal rate of transformation such that output is given as $Q_j = Q_j(p^i)$, for $i \in \{A, B, C\}$ and $j \in \{x, y\}$. Consumption is a function of both local relative prices and tariff revenue and is given as $D_j = D_j(p^i, R^i)$ for $i \in \{A, B, C\}$ and $j \in \{x, y\}$. Tariff revenue is denoted by $R^i$ for $i \in \{A, B, C\}$ and is measured in units of the local export good in terms of domestic production prices. It is defined as:

$$R^B = [D^B_y \left( p^B, R^B \right) - Q^B_y \left( p^B \right)] \left[ 1 / p^B - 1 / p^{AB} \right] = R^B \left( p^B, p^{AB} \right)$$  \hspace{1cm} (4)

$$R^C = [D^C_y \left( p^C, R^C \right) - Q^C_y \left( p^C \right)] \left[ 1 / p^C - 1 / p^{AC} \right] = R^C \left( p^C, p^{AC} \right)$$  \hspace{1cm} (5)

$$R^A = [D^B_y \left( p^B, R^B \right) - Q^B_y \left( p^B \right)] \left[ p^A - p^{AB} \right] + [D^C_y \left( p^C, R^C \right) - Q^C_y \left( p^C \right)] \left[ p^A - p^{AC} \right] = R^A \left( p^A, p^{AB}, p^{AC} \right)$$  \hspace{1cm} (6)

Where the derivation of $R^A$ follows from the fact that balanced trade must exist in both bilateral trading relationships such that the volume of imports of good $x$ from country B must be equal to country B’s imports of good $y$, and likewise for country C.
Note that each country’s tariff revenue is an increasing function of its terms of trade under the assumption that goods $x$ and $y$ are normal.

Thus, national consumption in each country can be defined as:

\[
C_i^A \left(p^A, p^{AB}\right) = D_i^A \left(p^A, R^A \left(p^A, p^{AB}\right)\right) \text{ for } i \in \{x, y\} \tag{7}
\]

\[
C_i^B \left(p^B, p^{AB}\right) = D_i^B \left(p^B, R^B \left(p^B, p^{AB}\right)\right) \text{ for } i \in \{x, y\} \tag{8}
\]

\[
C_i^C \left(p^C, p^{AC}\right) = D_i^C \left(p^C, R^C \left(p^C, p^{AC}\right)\right) \text{ for } i \in \{x, y\} \tag{9}
\]

In order to determine equilibrium world prices it is necessary to express the trade balance condition. Accordingly, notation must be introduced for exports and imports.

For country A, imports ($M$) of $x$ and exports ($E$) of $y$ are denoted as:

\[
M^A \left(p^A, p^{AB}\right) = C_i^A \left(p^A, p^{AB}\right) - Q_i^A \left(p^A\right) \tag{10}
\]

\[
E^A \left(p^A, p^{AB}\right) = Q_i^A \left(p^A\right) - C_i^A \left(p^A, p^{AB}\right) \tag{11}
\]

Similarly, for countries B and C, imports of $y$ are denoted as $M^B \left(p^B, p^{AB}\right)$ and $M^C \left(p^C, p^{AC}\right)$ respectively; and exports of $x$ are denoted as $E^B \left(p^B, p^{AB}\right)$ and $E^C \left(p^C, p^{AC}\right)$ respectively.

The two equilibrium trading prices, $\tilde{p}^{AB} (\tau^{AB}, \tau^B)$ and $\tilde{p}^{AC} (\tau^{AC}, \tau^C)$, are those that satisfy the trade balance condition given as:

\[
E^A \left(p^A \left(\tau^{AB}, \tilde{p}^{AB}, \tau^{AC}, \tilde{p}^{AC}\right), \tilde{p}^{AB}, \tilde{p}^{AC}\right) = M^B \left(p^B \left(\tau^B, \tilde{p}^{AB}\right), \tilde{p}^{AB}\right) + M^C \left(p^C \left(\tau^C, \tilde{p}^{AC}\right), \tilde{p}^{AC}\right) \tag{12}
\]

In order to incorporate WTO negotiations into the model, the framework developed by Bagwell and Staiger (1999, 2002) is initially applied before being adapted to incorporate PTAs. According to Bagwell and Staiger, the sole purpose of trade agreements is to alleviate the negative effects of terms-of-trade externalities that arise
from the imposition of tariffs by countries with market power. The WTO facilitates this by mediating trade agreements involving reciprocal tariff reductions that leave world relative prices unchanged. Such agreements allow liberalisation to take place up until the level of politically optimal tariffs, i.e. those tariffs imposed independently of a country’s ability to manipulate its terms of trade. Utilising this approach involves specifying government preferences by the following general functions:

\[ W^A(p^A(t^{AB}, \tau^{AC}, \tilde{p}^{AB}, \tilde{p}^{AC}), \tilde{p}^{AC}) \]  
\[ W^B(p^B(t^B, \tilde{p}^{AB}), \tilde{p}^{AB}) \]  
\[ W^C(p^C(t^C, \tilde{p}^{AC}), \tilde{p}^{AC}) \]

Thus, each government’s welfare is determined by the local and bilateral relative prices implied by domestic and foreign tariffs. The key restriction placed on government preferences is that, holding local prices constant, terms-of-trade improvements, i.e. a rise in the relative price of the export good, engender higher welfare:

\[ \frac{\partial W^A(p^A, \tilde{p}^{AB}, \tilde{p}^{AC})}{\partial \tilde{p}^{AB}} < 0 \quad \text{and} \quad \frac{\partial W^A(p^A, \tilde{p}^{AB}, \tilde{p}^{AC})}{\partial \tilde{p}^{AC}} < 0 \]  
\[ \frac{\partial W^B(p^B, \tilde{p}^{AB})}{\partial \tilde{p}^{AB}} > 0 \]  
\[ \frac{\partial W^C(p^C, \tilde{p}^{AC})}{\partial \tilde{p}^{AC}} > 0 \]

Essentially this representation of government preferences incorporates both the domestic redistribution and traditional optimal tariff motivations for protectionism. Moreover, it does not specify the exact mechanism through which domestic redistribution affects government welfare. In this way, the Bagwell and Staiger model of government preferences is sufficiently general to assimilate elements from previous models such as the lobbying models of Grossman and Helpman (1994, 1995), the median-voter model of Mayer (1984), and myriad political economy models of trade protection associated with Hillman (1982), Findlay and Wellisz (1982) and Brock and Magee (1978) amongst others.
Given the preferences defined above, unilateral tariff setting yields the following first-order conditions:

\[
\left( \frac{\partial W^A}{\partial p^A} \right) \left( \frac{dp^A}{d\tau^{AB}} \right) + \left( \frac{\partial W^A}{\partial \bar{p}^{AB}} \right) \left( \frac{d\bar{p}^{AB}}{d\tau^{AB}} \right) = \left( \frac{\partial W^A}{\partial p^A} \right) \left( \frac{dp^A}{d\tau^{AC}} \right) + \left( \frac{\partial W^A}{\partial \bar{p}^{AC}} \right) \left( \frac{d\bar{p}^{AC}}{d\tau^{AC}} \right) = 0 \tag{19}
\]

\[
\left( \frac{\partial W^B}{\partial p^B} \right) \left( \frac{dp^B}{d\tau^B} \right) + \left( \frac{\partial W^B}{\partial \bar{p}^{AB}} \right) \left( \frac{d\bar{p}^{AB}}{d\tau^B} \right) = 0 \tag{20}
\]

\[
\left( \frac{\partial W^C}{\partial p^C} \right) \left( \frac{dp^C}{d\tau^C} \right) + \left( \frac{\partial W^C}{\partial \bar{p}^{AC}} \right) \left( \frac{d\bar{p}^{AC}}{d\tau^C} \right) = 0 \tag{21}
\]

By letting:

\[
\lambda^{AB} = \left( \frac{\partial \bar{p}^{AB}}{\partial \tau^{AB}} \right) \left( \frac{dp^A}{d\tau^{AB}} \right) \leq 0
\]

\[
\lambda^{AC} = \left( \frac{\partial \bar{p}^{AC}}{\partial \tau^{AC}} \right) \left( \frac{dp^A}{d\tau^{AC}} \right) \leq 0
\]

\[
\lambda^B = \left( \frac{\partial \bar{p}^{AB}}{\partial \tau^B} \right) \left( \frac{dp^B}{d\tau^B} \right) \leq 0
\]

\[
\lambda^C = \left( \frac{\partial \bar{p}^{AC}}{\partial \tau^C} \right) \left( \frac{dp^C}{d\tau^C} \right) \leq 0
\]

(19), (20) and (21) can be rewritten as:

\[
\left( \frac{\partial W^A}{\partial p^A} \right) + \lambda^{AB} \left( \frac{\partial W^A}{\partial \bar{p}^{AB}} \right) = \left( \frac{\partial W^A}{\partial p^A} \right) \left( \frac{dp^A}{d\tau^{AC}} \right) + \lambda^{AC} \left( \frac{\partial W^A}{\partial \bar{p}^{AC}} \right) = 0 \tag{22}
\]

\[
\left( \frac{\partial W^B}{\partial p^B} \right) + \lambda^B \left( \frac{\partial W^B}{\partial \bar{p}^{AB}} \right) = 0 \tag{23}
\]

\[
\left( \frac{\partial W^C}{\partial p^C} \right) + \lambda^C \left( \frac{\partial W^C}{\partial \bar{p}^{AC}} \right) = 0 \tag{24}
\]

The Nash equilibrium tariffs are a set of four tariffs \((\bar{\tau}^{AB}, \bar{\tau}^{AC}, \bar{\tau}^B, \bar{\tau}^C)\) which simultaneously satisfy (22), (23) and (24). Note that satisfaction of (22), (23) and (24) implies that \(\left( \frac{\partial W^A}{\partial p^A} \right) < 0\), \(\left( \frac{\partial W^B}{\partial p^B} \right) > 0\) and \(\left( \frac{\partial W^C}{\partial p^C} \right) > 0\), i.e. that, at the Nash equilibrium, each government would prefer an expansion in trade. Bagwell and Staiger (1999, 2002) show formally that the Nash equilibrium tariffs between two
countries are inefficient. Bagwell and Staiger’s logic is reproduced below; in this case for countries A and B. Firstly, note that locus of efficient tariff combinations is defined as all points of tangency between the iso-welfare functions of the two governments:

\[
\left. \frac{d\tau_{AB}^B}{d\tau_B^B} \right|_{\omega^A = 0} = \left. \frac{d\tau_{AB}^B}{d\tau_B^B} \right|_{\omega^B = 0}
\]

(25)

Note that either side of (25) can be rewritten as:

\[
\left. \frac{d\tau_{AB}^B}{d\tau_B^B} \right|_{\omega^A = 0} = - \left( \frac{\partial \bar{p}_{AB}^A}{\partial \tau_B^B} \right) \left( \frac{\partial W_A}{\partial \bar{p}_A} + \frac{\partial W_A}{\partial \bar{p}_{AB}} \right)
\]

(26)

\[
\left. \frac{d\tau_{AB}^B}{d\tau_B^B} \right|_{\omega^B = 0} = - \left( \frac{\partial \bar{p}_{AB}^B}{\partial \tau_B^B} \right) \left( \frac{\partial W_B}{\partial \bar{p}_B} + \frac{\partial W_B}{\partial \bar{p}_{AB}} \right)
\]

(27)

From (19) and (20) it is clear that the Nash equilibrium tariffs cause \( \left. \frac{d\tau_{AB}^B}{d\tau_B^B} \right|_{\omega^A = 0} = \infty \) and \( \left. \frac{d\tau_{AB}^B}{d\tau_B^B} \right|_{\omega^B = 0} = 0 \); i.e. the iso-welfare functions of the two governments are not tangential and thus the Nash equilibrium does not lie on the efficiency locus as defined by (25).

Bagwell and Staiger (1999, 2002) then argue that a reciprocal trade agreement, i.e. one that maintains world relative prices, leads to welfare improvements for both countries (providing they are sufficiently symmetric). Consider reciprocal tariff reductions such that \( \bar{p}_{AB} = 0 \). The impact of a small amount of such reciprocal liberalisation on government welfare is given as:

\[
- \left( \frac{\partial W_A}{\partial \bar{p}_A} \right) \left( \frac{\partial \bar{p}_A}{\partial \tau_{AB}} \right) d\tau_{AB}^A
\]

(28)
\[
- \left( \frac{\partial W^A}{\partial p^A} \right) \left( \frac{\partial p^A}{\partial \tau^B} \right) d\tau^B
\]  

(29)

Starting at the Nash equilibrium, these are strictly positive until the point where:

\[
\min \left[ -\frac{\partial W^A}{\partial p^A} , \frac{\partial W^B}{\partial p^B} \right] = 0
\]  

(30)

Thus the welfare of both governments is improved by reciprocal tariff reductions up until the point defined by (30). If both countries are symmetric then the eventual tariff combination will be the political optimum, i.e. the point on the efficiency locus that corresponds with the original terms of trade, and which is determined solely by the political motivations for protection in either country. In the special case where governments are only concerned with national welfare maximisation, i.e. where \( \lambda = 0 \), a reciprocal tariff agreement would produce free trade.

To add further clarity to the exposition, the symmetric version of the Bagwell and Staiger model is illustrated utilising offer curves, shown in Figure 1 below.
Country A’s exports of Y
Country B’s imports of Y

Figure 1: Tariff setting behaviour prior to a reciprocal trade agreement

OC_A records the quantities of good y that country A is willing to supply for export and the quantities of good x that it imports in return, for all possible relative prices. Similarly, OC_B records the quantities of good x that country B is willing to supply for export and the quantities of good y that it imports in return, for all possible relative prices. The terms of trade are determined by the slope of the line that connects the origin to the point of intersection of the offer curves OC_A and OC_B, i.e. EQ*. Given a country B offer curve of OC_B, the government of country A can do better than OC_A from a national welfare perspective; it can impose an ‘optimal’ tariff in order to shift the offer curve such that it intersects OC_B at point O_A, which engenders the highest possible indifference curve, IC_A*. However, in the Bagwell and Staiger (1999, 2002) model, governments are also politically motivated to impose tariffs for domestic redistribution purposes. Consequently, the offer curve that prevails is OC’_A, which lies further to the left than that which would prevail for traditional optimal tariff reasons alone. This causes a shift in the terms-of-trade line from TOT* to TOT_A, which is favourable for country A but unfavourable for country B. Similarly, given a country A
offer curve of $OC_A$, the government of country B will impose a tariff to induce a downwards movement of their offer curve from $OC_B$ to $OC'_B$, which again bypasses that which would prevail for traditional optimal tariff reasons alone. The terms of trade in this instance are shifted from $TOT^*$ to $TOT_B$ which is beneficial to country B but detrimental to country A. The Nash equilibrium that results from unilateral tariff setting is shown by the intersection of $OC'_A$ and $OC'_B$, i.e. $EQ_N$. This equilibrium generates the same terms of trade, i.e. $TOT^*$, as the initial free trade equilibrium but is associated with lower indifference curves, $IC_A^3$ and $IC_B^3$. In essence this is the inefficiency that trade agreements endeavour to correct according to Bagwell and Staiger (1999, 2002). A reciprocal agreement neutralises the terms-of-trade motivation for protection by mediating tariff reductions that maintain the same world price. Therefore, trade agreements facilitate an equilibrium at some point between $EQ_N$ and $EQ^*$, which engenders higher indifference curves for both countries. The position of the equilibrium is determined by the politically optimal tariff levels for either country, i.e. the tariff levels imposed independently of the terms-of-trade motivation for protection.

Under asymmetric conditions, a reciprocal trade agreement will produce a tariff combination different to that of the political optimum. Reciprocal liberalisation will occur up until the point where one country achieves its preferred local price first; thus the eventual tariff combination will not lie on the efficiency frontier. Indeed, Johnson (1953/54), Mayer (1981) and Kennan and Riezman (1988) argued that sufficient asymmetry will completely eliminate any scope for trade agreements, i.e. the stronger country will prefer the non-cooperative tariff outcome to any alternative outcome that could be obtained via negotiation. The specific form of asymmetry that is of relevance to the remainder of this paper is that of differing market power between the two countries. A country’s market power is reflected in the curvature of the offer curve of its trading partner: the straighter the offer curve of country B, the less the market power of country A, and vice versa. The less market power a country has, the less ability it has to influence the world price and hence the more muted is the terms-of-trade motivation for protectionism. The extreme case is shown in Figure 2 below in which, for the purposes of presenting a contrasting scenario, it has been assumed that country B has negligible market power in its dealings with country A.
Point A in figure 2 represents the initial, free trade position associated with tangential indifference curves of IC_A^1 and IC_B^1. Given that country B has an infinitesimally small level of market power, any imposition of tariffs unambiguously leads to the deterioration of national welfare as is shown by the movement from OC_B to OC'_B and the corresponding shift from IC_B^1 to IC_B^2. However, country A has virtually complete market power such that its offer curve is a straight line and thus singularly determines the terms of trade. Consequently, country A can increase its welfare by imposing tariffs, which will improve its terms of trade at the expense of country B's welfare. Again, the level of tariffs imposed will be greater than that required to reach the ‘optimal’ point from a national welfare perspective, i.e. O_A. The offer curve OC'_A that maximises government welfare, fully dictates the terms of trade. The equilibrium trade levels are determined by the intersection of the two offer curves at point EQ.

Under the conditions described above, there is little scope for a reciprocal trade agreement as country B’s lack of market power precludes it from affecting the world
price and thus it has nothing it can offer country A to induce it to reduce its tariff rate. Any intermediate situation between Figure 1 and Figure 2 involves greater liberalisation on the part of country B than country A. It is at this point that the present paper diverges from the Bagwell and Staiger (1999, 2002) framework in order to extend their model to explain coalition forming in WTO negotiations.

3. Using the model to explain coalition forming

Extending the model to incorporate more than two countries necessitates deeper consideration of the nature of the bargaining process involved. Accordingly, the remainder of this section investigates three possible scenarios relating to the nature of negotiated tariff liberalisations. In the first scenario country A negotiates a bilateral PTA with country B before also negotiating a bilateral PTA with country C. At this stage such agreements are modelled as complying with WTO Article 24. In the second scenario the MFN principle applies to any agreement conducted. In the final scenario countries B and C negotiate as a coalition by setting a Common External Tariff (CET) between them and making a collective trade agreement with country A. Welfare comparisons are made between all three scenarios such that a ranking from each government’s perspective is obtained.

It is assumed throughout that country A initially treats both countries B and C equally with respect to tariffs. In addition, it is assumed that country B is the instigator of the negotiations, i.e. that it makes an offer of a tariff concession of $\Delta \tau^A$ to country A. In order for the liberalisation between countries A and B to be regarded as reciprocal in the Bagwell and Staiger sense, the following condition must hold:

$$\frac{\partial \hat{P}^{AB}}{\partial \tau^{AB}} d\tau^{AB} = \frac{\partial \hat{P}^{AB}}{\partial \tau^{B}} \epsilon$$

Equation (31) states that the effect upon world prices of country A’s tariff liberalisation must be equal to the effect upon world prices of country B’s liberalisation such that the combined effect is zero, i.e. such that their bilateral terms of trade, $\hat{P}^{AB}$, are maintained.
3.1 Scenario 1: A PTA adhering to Article 24

In the first scenario, countries A and B initially conduct a PTA followed by a secondary PTA between countries A and C. Article 24 says: “if a free trade area or customs union is created, duties and other trade barriers should be reduced or removed on substantially all sectors of trade in the group. Non-members should not find trade with the group any more restrictive than before the group was set up” (WTO, 2006). For the purposes of the present model, this is interpreted as requiring that liberalisation between countries A and B is conducted such that tariffs levied on country C’s exports, i.e. $\tau^{AC}$, are held constant.

In the present case it is assumed that, given its relatively larger size, country A has a greater degree of market power than country B such that:

$$\frac{\partial p^{AB}}{\partial \tau^{AB}} > \frac{\partial p^{AB}}{\partial \tau^{B}}$$

(32)

Thus, from (31), it is clear that a reciprocal trade agreement between countries A and B will necessitate a greater degree of liberalisation on the part of country B than on the part of country A. Consequently, the direct welfare effects for the governments of countries A and B of a PTA between them can be expressed as:

$$dW^A = \left( \frac{\partial W^A}{\partial p^A} \right) \left( \frac{\partial p^A}{\partial \tau^{AB}} \right) d\tau^{AB}$$

(33)

$$dW^B = \left( \frac{\partial W^B}{\partial p^B} \right) \left( \frac{\partial p^B}{\partial \tau^{B}} \right) \epsilon$$

(34)

Where $\epsilon > d\tau^{AB}$

The liberalisation removes the domestic distortions associated with the tariffs and thus engenders trade creation between country A and country B. However, countries A and B do not exist in a vacuum; changes in bilateral trade volumes between A and B necessarily affect country C. Given that the bilateral trading price between A and B
remains unaffected by the liberalisation, and the restrictions on $\tau^{AC}$ imposed by WTO Article 24, equation (1) can be modified as follows:

$$p^A = \tau^{AB} \bar{p}^{AB} = \bar{\tau}^{AC} p^{AC}$$

(35)

Thus, it is clear that, given (35), any reduction in $\tau^{AB}$ engenders a proportionate reduction in the value of $p^{AC}$, i.e. country C’s terms of trade. This arises because of trade diversion; a portion of country A’s import demand shifts from country C to country B following the liberalisation such that the trade volume between country A and country C decreases. This reduces the welfare of the government of country C by:

$$dW^C = \left( \frac{\partial W^C}{\partial p^{AC}} \right) \left( \frac{\partial p^{AC}}{\partial \tau^{AB}} \right) d\tau^{AB}$$

(36)

Moreover, the deterioration in country C’s terms of trade is concomitantly an improvement in country A’s terms of trade. Thus, country A’s welfare change given in (33) must be expanded to include the indirect effect on government welfare generated by the terms-of-trade improvement:

$$dW^A = \left( \frac{\partial W^A}{\partial p^A} \right) \left( \frac{\partial p^A}{\partial \tau^{AB}} \right) d\tau^{AB} + \left( \frac{\partial W^A}{\partial p^{AC}} \right) \left( \frac{\partial p^{AC}}{\partial \tau^{AB}} \right) d\tau^{AB}$$

(37)

At this juncture it is important to recognise that there will now be diminished scope for a PTA between country A and country C. To see why consider again the reciprocity condition when country C offers a liberalisation of $\varepsilon = \Delta \tau^C = \Delta \tau^B$ after a PTA has already been formed between countries A and B:

$$\frac{\partial \bar{p}^{AC}}{\partial \tau^{AC}} d\tau^{AC} = \frac{\partial \bar{p}^{AC}}{\partial \tau^C} \varepsilon$$

(38)

In this instance, as country A has already undertaken a PTA with country B, it is less trade dependent upon country C and can therefore be assumed to have a greater degree
of relative market power in its dealings with C in comparison with the power it could command in its initial dealings with B:

\[
\frac{\partial p^{AC}}{\partial \tau^{AC}} > \frac{\partial p^{AB}}{\partial \tau^{AB}} > \frac{\partial p^{CB}}{\partial \tau^{CB}} > \frac{\partial p^{AC}}{\partial \tau^{AC}}
\] (39)

Consequently, \( \varepsilon > d\tau^{AB} > d\tau^{AC} \), i.e. country A will liberalise less under a second PTA with country C than it did in the first PTA with country B. Moreover, a second PTA would maintain the diminished terms of trade between countries A and C caused by the initial PTA. There is thus significant first mover advantage for the smaller countries in striking a PTA deal with country A under these conditions. However, it is important to note that the second PTA would involve concession diversion from the perspective of country B, i.e. it will lead to a terms-of-trade deterioration for country B due to trade being diverted to country C.

The final welfare changes for all three governments of a PTA between countries A and B followed by a PTA between countries A and C are thus given as:

\[
dW^A_i = \left( \frac{\partial W^A}{\partial p^A} \right) \left( \frac{\partial p^A}{\partial \tau^{AB}} \right) d\tau^{AB} + \left( \frac{\partial W^A}{\partial p^A} \right) \left( \frac{\partial p^A}{\partial \tau^{AC}} \right) d\tau^{AC} + \left( \frac{\partial W^A}{\partial p^A} \right) \left( \frac{\partial p^A}{\partial \tau^{AC}} \right) d\tau^{AC}
\] (40)

\[
dW^B_i = \left( \frac{\partial W^B}{\partial p^B} \right) \left( \frac{\partial p^B}{\partial \tau^{AB}} \right) \varepsilon + \left( \frac{\partial W^B}{\partial p^B} \right) \left( \frac{\partial p^B}{\partial \tau^{AC}} \right) d\tau^{AC}
\] (41)

\[
dW^C_i = \left( \frac{\partial W^C}{\partial p^C} \right) \left( \frac{\partial p^C}{\partial \tau^{AC}} \right) \varepsilon + \left( \frac{\partial W^C}{\partial p^C} \right) \left( \frac{\partial p^C}{\partial \tau^{AC}} \right) d\tau^{AC}
\] (42)

The final welfare outcomes expressed in (40), (41) and (42) lead to Proposition 1:

**Proposition 1:** By dealing bilaterally and sequentially, country A captures terms-of-trade gains from both of its trading partners.
3.2 Scenario 2: Bilateral/multilateral deal under MFN

The second scenario involves countries A and B making a bilateral accord within normal WTO negotiations such that any tariff liberalisation is extended to all members under the MFN clause. Furthermore, country C does not initially reciprocate the concession.

Given that all tariff concessions offered to country B must also be extended to country C, it follows that $\tau^{AB} = \tau^{AC} = \tau^A$. Thus, the law of one price condition given in (1) can be rewritten as:

$$p^A = \tau^A p^{AB} = \tau^A p^{AC}$$  \hspace{1cm} (43)

From equation (43) it is clear that adherence to the MFN clause necessitates that the terms of trade between countries A and C are held constant. As with the previous scenario, the maintenance of $p^{AB}$ occurs because of the reciprocal tariff reductions between countries A and B. These reciprocal reductions engender an expansion in trade for both countries A and B such that the volume of trade between them increases. Country C, however, does not reciprocate the tariff concessions offered by country A. Ceteris paribus, this unreciprocated liberalisation would result in a terms-of-trade improvement for country C, however, the expansion in trade between countries A and B causes trade diversion away from country C which offsets this effect and thereby maintains $p^{AC}$.

The welfare effect for country A of an A-B deal subject to MFN can thus be written as:

$$dW^A = \left( \frac{\partial W^A}{\partial p^A} \right) \frac{\partial p^A}{\partial \tau^{AB}} d\tau^{AB} + \left( \frac{\partial W^A}{\partial \tau^{AB}} \right) \frac{\partial p^A}{\partial \tau^{AB}} d\tau^{AB}$$

$$+ \left( \frac{\partial W^A}{\partial p^{AC}} \right) \frac{\partial p^{AC}}{\partial \tau^{AC}} d\tau^{AC} + \left( \frac{\partial W^A}{\partial \tau^{AC}} \right) \frac{\partial p^A}{\partial \tau^{AC}} d\tau^{AC}$$  \hspace{1cm} (44)
The second and third terms in equation (44) are equal and opposite in magnitude, thus (44) collapses to:

\[
dW^A = \left( \frac{\partial W^A}{\partial p^A} \right) \left( \frac{\partial p^A}{\partial \tau^{AB}} \right) d\tau^{AB} + \left( \frac{\partial W^A}{\partial p^A} \right) \left( \frac{\partial p^A}{\partial \tau^{AC}} \right) d\tau^{AC}
\]

(45)

Whilst country A gains from the removal of domestic distortions associated with its tariff on country C, it loses from the resulting terms-of-trade effect, which acts to counteract the terms-of-trade gain it achieves through the reciprocal trade deal with country B. It is implicitly assumed, however, that the net effect upon the welfare of government A of this unreciprocated reduction in \( \tau^{AC} \) is negative. If it were positive, i.e. if the benefits of the removal of domestic distortion outweighed the terms-of-trade effects, then the government would engage in unilateral liberalisation and there would be no scope for trade negotiations.

The welfare effect upon country B is given as:

\[
dW^B = \left( \frac{\partial W^B}{\partial p^B} \right) \left( \frac{\partial p^B}{\partial \tau^B} \right) \varepsilon
\]

(46)

By construction, country C experiences no change in welfare.

Clearly, under these circumstances, there is no incentive for country C to free ride on this agreement; if it were to offer a liberalisation of \( \varepsilon \) it would gain by:

\[
dW^C = \left( \frac{\partial W^C}{\partial p^C} \right) \left( \frac{\partial p^C}{\partial \tau^C} \right) \varepsilon
\]
This leads to Proposition 2:

**Proposition 2:** In the current context there is no incentive for third parties to free-ride on MFN; any MFN-based deal will involve all 3 countries.

Countries B and C clearly prefer scenario 2 to scenario 1, as they do not suffer a terms-of-trade deterioration vis-à-vis country A, yet they still benefit from the removal of domestic distortions associated with tariff liberalisation. Conversely, country A prefers scenario 1 to scenario 2 because, in scenario 2, it does not obtain terms-of-trade improvements. This leads to proposition 3:

**Proposition 3:** Relative to a series of bilateral PTAs, multilateral negotiation subject to the MFN principle diminishes the welfare of country A, but leads to welfare improvements for countries B and C.

### 3.3 Scenario 3: Countries B and C form a coalition during multilateral negotiations

The third scenario entails countries B and C forming a coalition in which they set a CET and negotiate collectively with country A, i.e. in which they behave as though they are a single large country. Essentially this involves the smaller countries using their collective market power during negotiations such that the offer curve of country A becomes more curved, i.e. this causes a change from a situation similar to that depicted in Figure 2 to one more akin to that depicted in Figure 1. The benefit of this tactic is simple: greater market power induces greater liberalisation by country A during reciprocal trade negotiations. To elucidate this point consider the reciprocity condition that prevails during coalition-based negotiation:

\[
\frac{\partial p_{AB}}{\partial \tau_{AB}} d\tau_{AB} = \frac{\partial p_{AC}}{\partial \tau_{AC}} d\tau_{AC} = \frac{\partial p_{AB}}{\partial \tau} \varepsilon = \frac{\partial p_{AC}}{\partial \tau} \varepsilon
\]  

\( (47) \)  

Writing the world price as \( p^* \) and the tariffs levied by country A and as \( \tau^A \) and \( \tau^{BC} \) respectively allows the reciprocity condition to be rewritten as:
By negotiating collectively countries B and C raise the amount of market power that can be brought to the table during talks with country A. In this instance, as countries B and C represent the entire market for country A’s exports, it is reasonable to conclude that country A and the union of countries B and C have equal market power such that:

\[
\frac{\partial p^*}{\partial \tau^A} d\tau^A = \frac{\partial p^*}{\partial \tau^{BC}} \varepsilon 
\]  

(48)

The principle of reciprocity therefore ensures that coalition-based trade negotiations will entail symmetric tariff reductions of \( \varepsilon \). However, whilst countries B and C negotiate collectively, welfare implications must be viewed from the perspective of individual countries. Thus, as a result of coalition based negotiation, countries B and C obtain terms-of-trade improvements. To see why consider the again the reciprocity conditions as defined in (31) and (38):

\[
\frac{\partial \tilde{p}^{AB}}{\partial \tau^{AB}} d\tau^{AB} = \frac{\partial \tilde{p}^{AB}}{\partial \tau^B} \varepsilon 
\]  

(31)

\[
\frac{\partial \tilde{p}^{AC}}{\partial \tau^{AC}} d\tau^{AC} = \frac{\partial \tilde{p}^{AC}}{\partial \tau^C} \varepsilon 
\]  

(38)

It was noted in scenario 1 that \( \varepsilon > d\tau^{AB} > d\tau^{AC} \), however, in the current scenario country A liberalises by \( \varepsilon \) with respect to both countries and, as such, the reciprocity condition at the individual level breaks down; as all countries liberalise by the same amount, and as country A has greater market power than country B or country C, country A’s liberalisation engenders terms-of-trade improvements for countries B and C given as:

\[
\frac{\partial \tilde{p}^{AB}}{\partial \tau^{AB}} \left( \varepsilon - d\tau^{AB} \right) 
\]  

(50)
Thus, the welfare effects of scenario 3 for each country are given as:

\[
dW_4^A = \left( \frac{\partial W^A}{\partial p^A} \right) \left( \frac{\partial p^A}{\partial \tau^{AB}} \right) \epsilon + \left( \frac{\partial W^A}{\partial p^{AB}} \right) \left( \frac{\partial p^{AB}}{\partial \tau^{AB}} \right) (\epsilon - d\tau^{AB})
\]

\[
dW_4^B = \left( \frac{\partial W^B}{\partial p^B} \right) \left( \frac{\partial p^B}{\partial \tau^{AC}} \right) \epsilon + \left( \frac{\partial W^B}{\partial p^{AB}} \right) \left( \frac{\partial p^{AB}}{\partial \tau^{AB}} \right) (\epsilon - d\tau^{AC})
\]

\[
dW_4^C = \left( \frac{\partial W^C}{\partial p^C} \right) \left( \frac{\partial p^C}{\partial \tau^{AC}} \right) \epsilon + \left( \frac{\partial W^C}{\partial p^{AC}} \right) \left( \frac{\partial p^{AC}}{\partial \tau^{AC}} \right) (\epsilon - d\tau^{AC})
\]

Proposition 4 follows from equations (52), (53) and (54):

**Proposition 4:** By forming a coalition and acting as a single large country, countries B and C can extract terms-of-trade gains from country A during multilateral negotiations.

From equations (52), (53) and (54) it is possible to rank this final scenario from the perspectives of all three countries. In comparison with scenario 2, scenario 3 represents a decline in welfare for country A; it achieves a greater level of liberalisation but at a cost of terms-of-trade deteriorations with both of its trading partners. Countries B and C prefer scenario 3 to the other scenarios as they obtain both the benefits from the removal of domestic distortions associated with tariff liberalisation and a terms-of-trade benefit. The order of preferences of each country is summarised in table 1 below:

<table>
<thead>
<tr>
<th></th>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
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<tbody>
<tr>
<td>Country A</td>
<td>1st</td>
<td>2nd</td>
<td>3rd</td>
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<tr>
<td>Country B</td>
<td>3rd</td>
<td>2nd</td>
<td>1st</td>
</tr>
<tr>
<td>Country C</td>
<td>3rd</td>
<td>2nd</td>
<td>1st</td>
</tr>
</tbody>
</table>
3.4 Interpretation of these findings

It is pertinent at this juncture to note that, given that country A is best off under scenario 1, the above description of welfare rankings gives no a priori rationale for country A's participation in multilateral trade negotiations involving smaller trading partners. Accordingly, this specification of trade agreements lends support to the notion advocated by authors such as Collier (2006) that, regardless of whether smaller countries form coalitions or not, large country participation in the Doha round is irrational; large countries are made better off by “dividing-and-conquering” smaller countries via PTAs. In this case, the difficulties of the Doha Development Agenda are natural outcomes that flow from rational, welfare maximising behaviour. Accordingly, the demise of the Doha round is inevitable and, indeed, the very future of a WTO featuring developing country membership is questionable.

However, it can be argued that the initial participation of large countries in multilateral negotiations with smaller trading partners was rational, i.e. that there is some benefit from the MFN clause that outweighs the resulting terms-of-trade losses for large countries. Horn and Mavroidis (2001) discuss the myriad reasons that have been ventured in defence of the MFN principle, however, for simplicity, in the present context, it is best to surmise that the costs from making several bilateral deals relative to the costs involved in making a single multilateral deal outweigh the benefits from a web of bilateral deals for country A. In this case, the model presented here lends support to the notion that the difficulties of the Doha Development Agenda stem from the emergence of stronger developing country coalitions rather than the presence of developing countries per se. If the loss of benefits for country A in moving from scenario 2 to scenario 3 is greater in magnitude than the difference in costs between bilateral and multilateral negotiation, then the credible formation of a coalition between countries B and C during multilateral negotiations makes the outside option, i.e. PTAs the most favourable from country A's perspective. Thus, participation in multilateral negotiations with smaller trading partners is rational for large countries when the smaller countries act individually, but when they form a coalition it is not. This scenario can be summarised by revising table 1 accordingly:
Regardless of which of these two explanations pertains in reality, the demise in multilateralism stems from the benefits large countries obtain via regionalism. Eliminating this ability would thus salvage multilateralism. It is shown in section 4 that the source of this ability is actually Article 24. If this Article were replaced with the Kemp-Wan proposition, as has been advocated by McMillan (1993), then country A would have no incentive to “divide-and-conquer” and multilateralism would not necessarily be doomed to failure.

5. Utilising the Kemp-Wan proposition as an alternative to Article 24

The use of Article 24 as a demarcation criterion between desirable and undesirable PTAs has been challenged by numerous authors, such as McMillan (1993), Bhagwati (1991) and Dam (1970) amongst others. The primary focus for such criticism stems from the use of tariffs as the principal variable of concern. Three fundamental problems are associated with the use of tariffs. Firstly, the impact of tariffs on welfare is less direct than that of trade volumes and thus it is widely argued that the latter is a more appropriate deciding variable than the former. Secondly, the full assessment of changes in tariff rates entails a level of measurement detail that is impractical. Thirdly, the exact decision-making criterion, in terms of tariff changes, has been left too vague in the wording of the text of Article 24 to be useful. Accordingly, McMillan (1993) has advocated the use of the framework devised by Kemp and Wan (1976) as the correct test of the desirability of any particular PTA. The crux of the Kemp-Wan proposition is that, given appropriate compensatory lump-sum payments between partners in a PTA, it is possible to select a tariff vector such that all countries, both party and non-party to the PTA, are at least as well off as before the PTA was instated. This hypothesis is illustrated diagrammatically below in Figure. 3, which shows the effects of a PTA between countries A and B from country A’s perspective.
From figure 3 above it can be seen that, prior to the formation of a PTA between country A and country B, the price $p^A$ engenders a total import demand of GS by country A. GV of this import demand is satisfied by country B and VS is satisfied by country C (note that the export supply curve for country C is not shown). Country A collects tariff revenue of area GHUV from country B and area VUIS from country C. Now assume that a PTA conforming to the Kemp-Wan proposition is agreed between countries A and B in which, for ease of exposition, country A eliminates all tariffs between itself and country B. The Kemp-Wan proposition dictates that the demand for imports from country C must be maintained. Consequently, $M^A$, i.e. country A’s post PTA import demand from B, can be derived by subtracting VS from every point on $M^A$. The equilibrium between this and $E^B$, i.e. country B’s post PTA export supply curve, engenders a price of $p^A$ in countries A and B, which, for country A, results in imports of LN (>GV) from country B and NT (=VS) from country C. As the price in country C is held constant at $p^C$, the tariff that country A applies to imports from
country C falls from UV to FN. Accordingly, the PTA has no effect upon the welfare of country C.

The welfare effect for country A is ambiguous. The area representing tariff revenue collected from country C changes from VUIS to NFJT, which entails a loss of revenue equivalent to area GLKV. This loss in tariff revenue is redistributed to country A’s consumers and thus the effect on country A’s national welfare from this is neutral. However, a revenue transfer effect occurs via the scrapping of tariffs between country A and country B. Country A loses area GHUV in tariff revenue, area LHUK of which can be considered a transfer to the exporting firms of country B. It gains area GLNV in trade creation, thus the net effect on country A of the PTA is determined by the difference between area VKN and area LHUK.

Country B necessarily gains from the PTA by area LHUN. LHUK represents the tariff revenue transfer from country A and UNK represents the gain from new trade. The net gain to the union of countries A and B is the area UNV. Clearly, if appropriate intra-union transfers are utilised, a Kemp-Wan conforming PTA can make the parties involved unambiguously better off without harming non-contracting countries.

In the context of the current model, the Kemp-Wan proposition can be regarded as entailing Bagwell and Staiger style bilateral reductions in $\tau^{AB}$ and $\tau^B$ whilst the terms of trade of country C, i.e. $p^{AC}$, are held constant. Consequently, equation (1) can be rewritten accordingly:

$$ p^A = \tau^{AB} \bar{p}^{AB} = \tau^{AC} \bar{p}^{AC} \quad (55) $$

Clearly, any reduction in $\tau^{AB}$ entails an equal reduction in $\tau^{AC}$. Thus, adhering to the Kemp-Wan criterion in this context involves extending MFN treatment to all parties. Country A’s liberalisation with respect to both countries B and C maintains the current terms of trade; however, with country B, this liberalisation compensates for the terms-of-trade effects of country B’s liberalisation whereas, with country C, the liberalisation offsets the reduction in the volume of trade engendered by the PTA. This leads to Proposition 5:
Proposition 5: In the current context, applying the Kemp-Wan criterion to the formation of PTAs necessitates that MFN treatment be extended to the excluded party.

The welfare implications of this would be identical to those of scenario 2. Accordingly, use of the Kemp-Wan proposition would constrain large countries from extracting terms-of-trade benefits from smaller countries via sequential bilateral bargaining. The only remaining options all involve multilateralism.

5. Summary, conclusions and directions for future research (very preliminary!)

This paper develops an asymmetric version of the Bagwell and Staiger (1999, 2002) model of trade negotiations in which 3 countries (one large importer and two smaller importers) engage in trade negotiations under four different scenarios. This form of analysis generates several useful outcomes. The first conclusion stems from consideration of Propositions 1-3

Proposition 1: By dealing bilaterally and sequentially, country A captures terms-of-trade gains from both of its trading partners.

Proposition 2: In the current context there is no incentive for third parties to free-ride on MFN; any MFN-based deal will involve all 3 countries.

Proposition 3: Relative to a series of bilateral PTAs, multilateral negotiation subject to the MFN principle diminishes the welfare of country A, but leads to welfare improvements for countries B and C.

Thus, the current model provides no a priori rationale for large country participation in multilateral negotiations involving smaller trading partners. Accordingly, this lends support to the notion, advocated by authors such as Collier (2006), that the Doha Development Agenda was doomed to failure from its inception. Essentially, this suggests that multilateral negotiation is a forum meant only for symmetric countries and thus the inclusion of developing countries in the WTO means that the success of
the organisation depends upon the political whims of large players in terms of the extent of the charity that they extend to weaker members.

A second, alternative conclusion arises when it is assumed that the initial formation of the Doha Development Agenda was not irrational from a developed country perspective, i.e. when it is assumed that large countries derive some benefit from negotiating multilaterally that compensates them for the resulting terms-of-trade losses. In this case, Proposition 4 sheds some light on the recent difficulties experienced in the WTO

**Proposition 4:** By forming a coalition and acting as a single large country, countries B and C can extract terms-of-trade gains from country A during multilateral negotiations.

Accordingly, even if multilateralism is initially welfare maximising for large countries, the formation of developing country coalitions reduces the benefits of multilateralism and thus may make regionalism, which was initially a lesser option, the optimal outcome for large countries.

In either case, it is clear that the ability of developed countries to utilise bilateralism to their advantage is what causes the demise of multilateralism. Constraining this ability would therefore salvage multilateralism. Proposition 5 offers one potential solution:

**Proposition 5:** In the current context, applying the Kemp-Wan criterion to the formation of PTAs necessitates that MFN treatment be extended to the excluded party.

Thus, replacing Article 24 with the Kemp-Wan proposition removes the benefits of bilateralism for developed countries and thereby forces a multilateral solution.

As Baldwin (2006) notes, history has shown that adjustments to multilateral negotiating outcomes following shifts in the balance of power, such as that which occurred through enhanced EU clout during the Uruguay trade round, can take years to come into effect. However, it seems, that with the proliferation of PTAs, the
developed countries no longer value multilateral outcomes enough to make the necessary adjustments to incorporate the demands of developing countries.

The current model deals with a specific pattern of trade and it is not clear how generalisable the results of this model. This would be an important direction for future research.
References


