

Progress or Retreat in the Doha Round? **Analysing underlying policies in the WTO and the Harbinson proposal**

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Abstract:

This paper tracks the very few changes in members' negotiation positions in the WTO since our last study, Bjørnskov and Lind (2002), in the period November 2001 until September 2003. We assess that there is no convergence towards a consensus and therefore ask two questions: has chairman Harbinson's draft proposals reflected a genuine compromise effort; and have the drafts been balanced? By employing cluster analysis, we conclude that the drafts have indeed been true compromises as they belong to an average cluster in the WTO. By performing a principal components analysis, we find three underlying general policies, which show that the drafts are slightly unbalanced as they fail to take specific concerns of developing countries into account. We also find a set of determinants for these underlying policies.

JEL Codes: K33, O19, Q17

Keywords: Agriculture, International Law, International Organisations

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1. Introduction

At the ministerial Meeting in Doha in November 2001, members of the World Trade Organisation (WTO) agreed to launch a new round of multilateral negotiations. All agreed that this round is supposed to be a development round that in particular addresses the needs and interests of developing countries. As about half of the population in a typical developing country is employed in agriculture, this sector has special significance for these countries, and although the outcome of the Doha meeting is a multifaceted amalgam of issues and interests, the negotiations on agriculture therefore form a vital component of the agenda. Above all, developing countries seem particularly interested in gaining improved access to developed countries' food and agricultural markets and curbing the use of domestic support. Indeed, a number of studies show that such outcomes could prove considerably effective in furthering their development (e.g. World Bank, 2002; FOI, 2003).

An analysis of the initial negotiation positions of 120 members of the WTO nevertheless revealed that there was substantial initial disagreement on how the round should proceed, as a number of agricultural issues stuck out where key players strongly disagreed (Bjørnskov and Lind, 2002). Most notably, agricultural protection and support remained (and remains) an unfinished agenda in the WTO. Analyses of the initial positions on these issues identified nine distinct groupings in the WTO out of which the EU and Israel formed a rather isolated group. Conversely, the African group was closely positioned to a cluster consisting of the US and most of the so-called Cairns group. Based on these analyses, potential country groups were identified that developing countries could form alliances with in the Doha round in order to gain bargaining power.

Roughly 1½ years have passed since the Doha round was initiated. The first phase of the negotiations concerning the modalities – the basic framework of a potential new agreement on agriculture – was scheduled to be concluded by March 31. In February, the chairman of the agricultural committee Stuart Harbinson produced a draft text of an agreement on the modalities to further the difficult negotiations. However, we have now passed the March deadline without having concluded the agreement, but negotiations continue. In this paper, we therefore address two main questions: 1) have member positions converged, i.e. are we closer to an agreement than in November 2001; and 2) did Harbinson's draft proposal reflect a genuine and balanced compromise between rival positions that ought to have furthered a convergence towards consensus.

We find that there are very few signs of convergence of members' positions in the WTO. Although they did not get the intended effect, the Harbinson drafts do reflect a genuine compromise. While the drafts are not imbalanced in the way certain developed countries have claimed, we conclude that Harbinson has not taken the specific concerns of a number of developing countries sufficiently into consideration, creating some imbalance in the drafts. This insight is obtained by extracting three underlying policy dimensions along which members place their negotiation positions. We also explore the determinants of these policy dimensions, which prove to be somewhat different for developed and developing countries. The determinants yield extra insight in the specific

problems that developing countries fear they will have to face as the result of liberalisation of world agricultural trade.

The rest of the paper is structured as follows. Section 2 tracks the few substantial changes in members' positions. Section 3 answers the question whether the drafts are genuine compromises by performing a cluster analysis, after which section 4 addresses the imbalance question. Section 5 concludes.

2. Movements in members' positions and the Harbinson draft

This section tracks the movements in WTO members' positions since November 2001 up to September 2003. Furthermore, China has participated in a joint proposal allowing us to include China in the analysis. The sections also analyse Harbinson's draft proposals for a compromise in the negotiations. The 121 WTO member countries that have submitted proposals in the negotiations plus the Harbinson proposal, which in this case counts as a 'country', are subjected to a cluster analysis in order to identify clusters of countries with common positions. Subsequently, the resulting clusters are discussed and their relative positions and distances from one another are studied.

Members' positions on WTO negotiation issues are mapped into an ordered scale producing a dataset, which is subsequently used for statistical analyses. The scale consists of the ratings 0, 1, 2, 3, and 4, where the higher the number the more liberal/free trade oriented is the position.¹ Thirteen issues have been identified as being contended in the negotiations, see Bjørnskov and Lind (2002). This section tracks the few changes that are in members' negotiation positions. We restrict ourselves to changes that are sufficiently substantial to induce an adjustment of one or more ratings of that country. The present framework, presented in Bjørnskov and Lind (2002), naturally cannot capture all elements of the negotiation agenda. Specifically, the issue of formula approaches, i.e. which specific formula is to be used for tariff reductions, is not captured above the extent that it is included in the ratings on 'peaks and escalation'. However, we believe that it encapsulates the bulk of the information contained in members' official statements and negotiation positions. It is therefore the framework within which we work in the rest of the paper.

2.1. Central players

The EU has a distinct position in the negotiations that places the union at a distance from most other players. Indeed, the EU's negotiation position was and continues to be isolated in the WTO (Bjørnskov and Lind, 2002). Furthermore, any potential movements in the ratings based on either the comprehensive proposal put forward in the agriculture negotiations or the recent reform of the Common Agricultural Policy are difficult to track for two reasons: first of all, EU proposals couple different issues by clearly offering a 'full package'. As such, the Union offers reductions in domestic support, tariffs and export subsidies, but with the caveat that these reductions are bought with the inclusion of a range of non-trade concerns, thus broadening the negotiation

¹ Note that we use 'liberal' in the European sense of the word.

agenda considerably.² For example, the recent reform efforts aim at reducing overall domestic support. They do, however, also seek to enhance the scope for supporting various non-trade concerns. These new ‘postmodern’ support measures are thought to be given in the same way as the former traditional domestic support. Many countries therefore suspect that the EU is simply trying to relabel their agricultural support and thereby sidestep the WTO division of support in three boxes (Swinbank, 2001).³ Why such coupling of issues is particularly problematic will be clear in the next section. Nevertheless, as the EU has decided to propose a modest reduction in export subsidies, we adjust their rating on this issue upwards.

The United States continues to hold that total agricultural support should be reduced and has not changed their official position in the WTO. However, as the saying goes, actions speak louder than words and by the passing of the Farm Bill in 2002, the US moved in the opposite direction, mainly by making previous years’ ad hoc crisis aid permanent. We therefore adjust their rating on AMS levels downward.⁴

2.2. Other members

Very few countries have conveyed new opinions since the Doha meeting. A number of African countries have restated their concerns for ensuring special and differential treatment in the new round and exempting staple crops from liberalisation. Certain developing country members have also restated their support for the introduction of a development box. However, none of the official statements have given rise to changes in the ratings of these countries, as practically all have simply confirmed their commitment to specific earlier proposals. Overall, Table 1 summarises the movements in the central players that have induced adjustments in ratings. It thus shows very few substantial changes. We use this set of adjusted ratings for the remainder of the paper.

The singular most important development tracked in Table 1 is, however, that of India. As a consequence of the joint Brazilian-Indian-Chinese proposal for the September Ministerial Meeting in Mexico, these countries have changed specific aspects of their negotiation positions.⁵ Most notably, India now argues for eliminating all blue box support and introducing appropriate disciplines for the use of the green box. This development is of potential importance to the convergence of positions in the

² The EU has within its preferential trade agreements attempted to put a focus on postmodern issues. The Union for example offers extra tariff margins for countries adopting a ‘social clause’, i.e. a contract that forces countries to adopt certain labour standards. In addition, another tariff margin is offered to countries that guarantee that they will adopt certain environmental standards (EU, 2001). Only Moldova has signed the social clause; no other country has shown interest in the offers. See Oxley (2003) for a background of coupling environmental standards and trade sanctions.

³ Swinbank (2001) and Ruffer and Swinbank (2002) document that EU support for multifunctionality and other non-trade concerns will be given like the current blue box support. The Union works actively for changes that would place all support for postmodern issues in the green box and thus exempt it from future reductions.

⁴ The EU and US also put forward a joint proposal for the negotiations in the Cancun Ministerial Meeting in late August. However, the proposal is so vague that we have not been able to extract sufficient meaning in order to induce changes in the ratings.

⁵ The proposal, although a joint initiative by the three countries, have been supported by Argentina, Bolivia, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Paraguay, Peru, the Philippines, Thailand and South Africa.

organisation, since India until now has taken a somewhat hesitant position. The proposal also enables us to rate China on several issues; see Table 2.

Table 1. Movements in WTO members' positions

Member	Issue	Rating	
		Nov. 2001	Sep. 2003
African group	Restated issues		
	<i>Average</i>	2.57	2.57
Canada	No announcements		
	<i>Average</i>	2.74	2.74
EU	Export subsidies	0	1
	Postmodern issues		
	<i>Average</i>	1.48	1.56
India	Green box	0	2
	Blue box	-	4
	<i>Average</i>	2.23	2.45
Japan	Restated issues		
	<i>Average</i>	1.91	1.91
South Africa	Green box	4	3
	AMS	2	3
	<i>Average</i>	3.08	3.08
United States	AMS levels	3	2
	<i>Average</i>	2.98	2.91

Table 1 displays the members and issues for whom we have identified significant changes from the positions in Bjørnskov and Lind (2002). This study analysed countries' positions as of ultimo November 2001. The present study updates the positions to September 2003. Thus, the table shows that India received a rating of 0 on green box issues in November 2001, but in new proposals India has taken a more liberal standpoint on this issue and now receive a rating of 2. India's ratings averaged over all issues have also moved in the more liberal direction from an average of 2.23 in 2001 to 2.45 in 2003.

2.3. China and the Harbinson draft

As a first step, we rate the Harbinson proposals on all 13 issues as we have previously done with 120 member countries. As the differences between the two proposals mainly lie in details and the formula approach, both receive the same ratings. Table 2 provides an overview of these ratings. It also shows that Harbinson has not presented a clear position on three issues: the desired broadness of the round, the special safeguard clause and the future of the green box. In addition, Table 2 gives an overview of the ratings on China, which we extracted from the joint Brazilian-Indian-Chinese proposal for the September 2003 Ministerial Meeting in Cancún, Mexico.

Table 2. Ratings of China and the Harbinson draft proposal

Issue	Harbinson		China		WTO	
					average	median
Broad vs. narrow round		-		-	2.32	2
Tariffs	Reduce	3	Reduce	3	2.37	2
Escalation and peaks	Reduce	3		-	2.88	3
TRQ size	Discipline	2	Increase	3	2.72	3
Special safeguard		-		-	2.18	2
Green box		-	Reduce	3	2.37	3
Blue box	Reduce	3	Reduce	3	3.20	4
Development box	In green box	2		-	1.49	2
AMS levels	Reduce	3	Reduce	3	2.65	3
Export subsidies	Eliminate	4	Eliminate	4	3.20	4
Export credit	Reduce	3		-	2.30	2
De minimis levels	Reduce	3		-	1.83	2
Postmodern issues	Opposed	3		-	2.29	2
Average rating		2.76		2.72	2.45	2.64

Note. The WTO average is calculated for all countries that have a position on the issue. The median is the most common position on the issue for all countries that have a position.

Table 2 presents the ratings that Harbinson and China receives. On the issues of tariff levels Harbinson calls for a significant reduction and, thus, receives a rating of 3. Likewise, China wants significant reductions in tariffs and, therefore, also receives a rating of 3 on the issue. The table also presents the ratings on the issues averaged over all countries in the WTO that have a position on the particular issue. In the case of tariffs, the average position in the WTO is 2.37, whereas the most common position is 2.

3. Is the Harbinson draft a genuine compromise?

As the previous section documents, there are only very modest movements towards consensus in the Doha round. Harbinson's draft proposal is an attempt to further this process and thus speed up the negotiations. However, a number of members have complained that the drafts do not take their specific concerns and positions into consideration, i.e. these members implicitly indicate that the drafts do not present a genuine compromise. We therefore devote this section to answering this question: is Harbinson's draft proposal a genuine compromise? We do this by entering the set of ratings of the draft in a cluster analysis alongside those of the 121 members that have stated official positions on sufficiently many issues. If the draft reflects a compromise position, we would expect it to end in the 'average' cluster and preferably close to Canada, which was identified as the most average, centrally placed member in Bjørnskov and Lind (2002).

3.1. Cluster analysis

Cluster analysis is a mathematical-statistical method to collect objects into clusters with similar characteristics. In this case, the objects are members of the WTO and the characteristics are their positions on negotiation issues. Cluster analysis thus provides a partition of the countries that shows groups sharing similar positions and thus similar objectives in the negotiations. The analysis in this section is built upon previous work in Bjørnskov and Lind (2002) where further details of the method and the data can be

found.⁶ The analysis differs from previous work in that it includes the Harbinson proposal, China and the positional movements documented in section 2. The resulting clusters are reported in Table 3 below. The table also reports how large a proportion of the world population is included in any of the nine clusters.

Compared with the results in Bjørnskov and Lind (2002), which was evaluated as of November 2001, the updated results show both similarities and differences. First of all, the ‘average’ cluster identified in Bjørnskov and Lind (2002) dissolves into three clusters. This is a natural consequence of the added information acquired from members’ submissions in the period between the former study and the present one. The former average cluster contained a number of countries with weakly identified overall positions. These countries, mostly transition and middle-income economies, are now grouped together in cluster 3 (‘Few positions’), which therefore becomes a residual cluster. The remaining average countries are now grouped in the new cluster 1 (‘Average’) that includes Canada, the original average country, as well as giants China and Indonesia. This cluster thus covers 35% of the total population in the WTO, or roughly one third of the entire global population. We find this clustering of the bulk of the human population at the average politically comforting.⁷ Finally, four countries joined by a middle-income island state originally placed in the average cluster now form a ‘special and differential treatment’ cluster.

⁶ In short, the analysis begins with a hierarchical technique known as Ward’s method, which provides the number of clusters yielding the most appropriate partition of the objects. In this case, this number is nine. Subsequently, we perform a non-hierarchical analysis based on least-squares estimation and Euclidean distances, known as the k-means technique, which yields the final refined partition of the objects.

⁷ The reverse would have been a situation where a substantial part of the worlds’ population was situated at one end of the distribution of positions. This would probably constitute a problem for an essentially democratic organization.

Table 3. Clusters of WTO members and the Harbinson draft

Cluster	Members	Rating	Population %
1. Average	Cameroon, Canada, China, Costa Rica, Ecuador, Guinea, Harbinson , Indonesia, Mauritius, Mexico, Morocco, Philippines, Swaziland, Thailand, Uruguay	2.67	35.35
2. Market access	Cuba, Haiti, Nicaragua	2.65	0.48
3. Few positions	Albania, Antigua, Brunei, Bulgaria, Burma, Croatia, Czech Republic, Dominica, Estonia, Grenada, Jamaica, Jordan, Kyrgyz Republic, Latvia, Lithuania, Mongolia, Poland, St. Kitts, St. Lucia, Singapore, Slovakia, Slovenia, Surinam, Trinidad, Tunisia, Turkey, Venezuela	2.45	3.58
4. S&D	Hungary, India, St. Vincent, South Korea, Switzerland	2.45	21.25
5. Liberalisation	Angola, Argentina, Australia, Benin, Bolivia, Botswana, Brazil, Burkina Faso, Burundi, Central African Republic, Chad, Chile, Colombia, Congo, Côte d'Ivoire, Djibouti, Fiji, Gabon, Gambia, Ghana, Guatemala, Guinea-Bissau, Lesotho, Madagascar, Malaysia, Malawi, Mali, Mauritania, Mozambique, Namibia, New Zealand, Niger, Paraguay, Rwanda, Senegal, Sierra Leone, South Africa, Tanzania, Togo, USA, Zambia	2.67	19.19
6. Broad round	EU, Israel, Japan	1.72	10.02
7. Free trade	Dominican Republic, Egypt, El Salvador, Honduras, Kenya, Nigeria, Pakistan, Peru, Sri Lanka, Uganda, Zimbabwe	2.82	9.40
8. Norway	Norway	1.25	0.09
9. DC multi-functionality	Barbados, Democratic Republic of Congo	2.15	1.00
	All WTO	2.48	100.00

Note: Population gives the percentage of the full population covered by a given cluster. The 121 countries included in the analysis in total count 5.4 billion people. Rating is the average rating on all issues for the countries in the cluster.

Table 3 displays the nine identified clusters containing countries that share similar positions in the negotiations. We have named the clusters according to the dominant traits of the cluster position. In the second last column the ratings averaged over all issues and countries in the cluster is presented. The last column provides the share of total WTO members' population situated in the clusters.

With regard to the draft proposals laid forward by Stuart Harbinson, Table 3 shows that these drafts are placed in cluster 1 ('Average'), the new average cluster. In other words, the draft proposal is a genuine effort to reach a compromise that is in accordance with the position of the average WTO member and thus a balance of special positions and wishes. Although Bjørnskov and Lind (2002) warned that the former average cluster was relatively weakly identified, a set of sensitivity analyses reveals that the placement of the draft in the average cluster is correct. The identification is even robust to rating Harbinson's proposal as if he agreed with the EU on the broadness of the negotiation agenda by re-rating the proposals to one on broad versus narrow and postmodern issues. These changes prove to be far from sufficient in order to induce any substantial changes in the clustering of neither the draft nor the WTO members; it hence does not modify the conclusions above.

It is worth noting a few features with respect to the remaining clusters. Firstly, the former EU/Israel cluster is expanded with the inclusion of Japan. This constitutes the group of influential countries that are most opposed to liberalising world agricultural trade and for broadening the negotiation agenda as much as possible. We thus term this the ‘broad round’ cluster. Secondly, cluster 4 (‘S&D’) contains India and a number of relatively affluent countries that seem to want special treatment. Thirdly, the former ‘gradual liberalisation’ and ‘narrow round’ clusters now compose only one cluster, number 5 (‘Liberalisation’). This cluster therefore includes both the US and certain members of the Cairns group as well as most African countries. We term this the ‘liberalisation’ cluster. Table 4, which gives the inter-cluster distances, shows more results of the updated cluster analysis.

Table 4. Distances between clusters

Cluster	1	2	3	4	5	6	7	8	9
1. Average	-	3.33	1.77	2.40	1.44	5.57	2.82	6.17	3.59
2. Market access	3.33	-	3.11	3.19	4.11	5.69	2.03	6.37	3.19
3. Few positions	1.77	3.11	-	1.70	2.03	4.28	2.83	5.04	2.78
4. S&D	2.40	3.19	1.70	-	2.95	4.31	3.46	5.03	3.05
5. Liberalisation	1.44	4.11	2.03	2.95	-	5.87	3.30	6.38	3.93
6. Broad round	5.57	5.69	4.28	4.31	5.87	-	6.33	4.36	4.83
7. Free trade	2.82	2.03	2.83	3.46	3.30	6.33	-	6.77	3.51
8. Norway	6.17	6.37	5.04	5.03	6.38	4.36	6.77	-	4.57
9. DC multi-functionality	3.59	3.19	2.78	3.05	3.93	4.83	3.51	4.57	-
WTO average	3.01	3.45	2.62	2.89	3.33	4.58	3.45	4.97	3.27

Note: Reading from left to right, the bolded distance gives the cluster closest to the row cluster. The distances are Euclidean distances.

The table displays, which clusters are most likely to be able to cooperate in the WTO negotiations based on the distance between the clusters. The distances are euclidean distances in a space. Thus, the distance between say cluster 2 and 4 is not the same as the distance between cluster 2 and 3 plus the distance between cluster 3 and 4. The most interesting finding here is that the average cluster containing Canada, China and Harbinson is situated surprisingly close to the liberalisation cluster, which includes African countries, some of the Cairns group and the United States, with a distance of only 1.44. Countries in these two clusters clearly have similar objectives and could probably benefit from combining their bargaining power. The other result to note is that cluster 6 (‘Broad round’), the EU, Israel and Japan, remains isolated in the WTO. As will become obvious in the following, these countries also agree the least with the Harbinson draft.

3.2. Harbinson vs. central players

To get a better overview of how Harbinson has positioned himself in relation to the central players, Table 5 gives correlations and distances to the proposals as well as the average ratings. These distances should be interpreted as relative, which is the reason for including the percentage of the maximum distance. So although many members would find it difficult to agree with the Harbinson proposals, the table documents that some central members are substantially more in line with the draft than others. Thus, the African Group, which has an overall average rating of 2.57, is placed at a distance (Euclidean) of 2.99 from the Harbinson proposal corresponding to 28.7% of the

maximum obtainable distance. African Groups' correlation (a correlation lies between -1 and 1 according to how much a country disagrees or agrees with the Harbinson proposal) with the Harbinson proposal is 0.22 showing some agreement.

Table 5. Correlations with central players

Country	Average rating	Distance from Harbinson	Percent of max distance	Correlation
African group	2.57	2.99	28.7	0.22
Canada	2.74	1.95	18.7	0.65
China	2.72	2.24	21.5	0.55
EU	1.56	5.34	51.3	0.14
India	2.23	3.56	34.2	0.62
Japan	1.91	4.41	42.4	0.29
Norway	1.25	6.52	62.7	0.12
South Africa	3.08	2.62	25.2	0.36
United States	2.91	3.32	31.9	0.22
Harbinson	2.76	0.00	0.00	1.00
<i>Average</i>	2.47	2.03	19.5	0.57
<i>Median</i>	2.47	2.11	20.3	0.53

Note: as we rate member positions on a discrete scale, Harbinson cannot achieve a zero distance to the average position. Given that we rate the proposal on ten issues, the minimum obtainable distance to the average is 0.89; the maximum distance to Harbinson is 10.14. Correlation is with the Harbinson proposal.

Table 5 confirms the main conclusions from Bjørnskov and Lind (2002), as Harbinson's proposal is placed in the average cluster. Norway, which has the most extreme position in the organisation, is placed furthest away from the draft. The country is placed 6.52 from the draft, or 63% of the maximum distance. The table also reveals the isolation of the EU position, since the Union is placed 51% of the maximum distance away from Harbinson. At the other end, Canada is the central player that most agrees with the draft, being placed only 19% of the maximum distance away. This is slightly closer than the average or median country. Finally, the African group, the US and South Africa (which has a somewhat different negotiation position than most African countries), which Bjørnskov and Lind (2002) identified as potential negotiation partners, are all placed about 25-30% of the maximum distance away from Harbinson. We can therefore conclude that no country is in full agreement with the draft, although certain countries seem to be positioned close to it. We can also dismiss the EU allegations that Harbinson's proposal is not a true compromise effort. We therefore move on to examine members' positions more closely in order to understand the substantial disagreement in more detail. This also enables us to examine whether the draft is balanced and in which way.

4. Balance of the Harbinson proposal

The previous section established that Harbinson's draft proposal was a genuine compromise between strongly divergent interests and political positions in the organisation. We now turn to the second main question: whether the proposal is balanced between the issues and countries. At a mini-Ministerial conference in Tokyo on 14-16 February, EU farm commissioner Franz Fischler complained that the proposal was "unbalanced" and would place the burden of adjustment solely on the shoulders of

the Union.⁸ Similar complaints have come from Japan. We provide a first answer to this question through a two-pronged approach. We first explore the underlying dimensionality of our positional data by factor analysis. This yields a number of dimensions along which countries seem to have placed their negotiation positions. Secondly, we explore whether Harbinson's draft proposal deviates from an average position on either of these dimensions, which provides the answer to the question.

4.1. Principal components analysis

In Bjørnskov and Lind (2002) and the preceding section, the purpose was to collect objects, in casu countries, into clusters that share similar characteristics, in casu similar positions on WTO negotiation topics. Thus, the purpose of the cluster analysis was to reduce the number of objects by grouping countries into clusters. Principal component analysis (PCA) does so to speak the opposite. Instead of reducing the number of objects PCA is a method to reduce the number of characteristics, or in a sense to construct "clusters" of characteristics instead of objects as in the previous study. In PCA the "clusters" consist of linear composites of the positions on negotiation topics, the characteristics. The hypothesis behind is that positions on issues will show a tendency to covary across characteristics, or in other words, a country's position on one issue is not independent on the position taken on another issue. Thus, the particular positions as measured by the ratings on different issues are determined by a fewer number of underlying or latent characteristics of the country.

The PCA-procedure begins by constructing a linear combination, a principal component, which maximises the amount of variation explained. Subsequently, the next component is constructed by maximising the remaining variation while at the same time the new component is uncorrelated with (orthogonal to) the first. The procedure continues to create new components until all the original variance in the data is exhausted while at the same time the components are all mutually independent (mutually orthogonal). The next stage of the procedure is to determine the number of principal components needed to account for the essential variation in the data leaving the remaining variation randomly and independently distributed. Naturally, the last components created account only for a very small and insignificant proportion of total variance, unless the particular positions taken on specific issues are all entirely independent of each other. Therefore, the last components can be safely discarded. However, this raises the question of how many principal components are needed to account for the essential variation in the data? Identifying the number of principal components to retain as well as testing whether any co-dependency exist among the positions in the first place is done using various tests and statistics. Details can be found in the appendix. The tests convincingly prescribes that the original variables are indeed highly correlated. Thus, it can be concluded that a reduced number of underlying latent traits determine the particular positions taken by countries. Furthermore, the tests conclude that three principal components are needed to account for the essential variation in the data. The set of three principal components is robustly identified.

⁸ His further comments cleared some of the reason for the unhappiness. Fischler argued that the paper did not target American export credit sufficiently and left no room for supporting so-called non-trade concerns, which the EU has been pushing for.

The result of three principal components implies that three different general policy directions have formed countries' positions as stated in the proposals in the WTO negotiations. Consequently, WTO members' positions in the negotiations can be described by three fundamental standpoints, which in turn is a result of the policy making process in the member countries. The policies cannot be observed directly in the dataset but can be deduced from the positions taken on the issues.

Having determined the number of principal components the next step is to interpret the resulting components. Often, principal components fail to lend themselves to easy interpretation as the first component ordinarily displays a general factor with high loadings (significant numbers showing that the particular issue an important element in this principal component) on all issues. Consequently, all negotiation issues play a role in determining this component making it difficult to obtain a particular interpretation of this policy. Therefore, the components are rotated to produce components with high loadings on only a few issues, thereby easing the interpretation of the factors. The rotation does not alter the total variation accounted for, only the partial variation accounted for by the individual components change. Several rotation methods have been used in the literature; however, most often Kaiser's Varimax procedure is applied, which is the one used here. The objective of this procedure is to produce a pattern of loadings on each component that is as diverse as possible. The particular method entails maximising the squared column loadings, which gives the intuitive idea. In essence, if there are two loadings each equal to one the squared column loadings produce a sum of 2. Applying the variance maximising criterion would in this case produce a loading of 2 and one of 0 resulting in a sum of squared column of 4. Rotating the components by employing the Varimax procedure produce the components in table 6 where it immediately appears that the loadings are adequately dispersed across the issues. We label the three components as the *liberalisation dimension*, *elite development dimension* and *market access dimension*, a labelling that will be explained below.

Table 6. The rotated principal components

	Component 1 Liberalisation	Component 2 Elite development	Component 3 Market access
Broad vs. narrow round	0.691	0.123	0.415
Tariffs	-0.035	0.079	0.799
Escalation and peaks	-0.024	0.782	0.270
TRQ size	0.907	0.052	-0.089
Safeguard clause	0.746	-0.309	-0.079
Green box measures	0.822	-0.045	-0.070
Blue box measures	0.938	-0.057	-0.171
Development box	-0.167	-0.705	0.452
AMS	-0.162	0.787	0.284
Export subsidies	0.929	0.104	0.025
Export credits	0.112	0.833	-0.323
De minimis levels	0.561	-0.139	0.556
Postmodern issues	0.732	0.253	0.205
Correlation with overall rating	0.93	0.18	0.28
Variance explained, %	40.71	20.28	12.13

Note. The loadings come from the rotated principal components, which in turn are derived from the standardised space where all variables are standardised to a variance of one.

Table 6 displays the three rotated principal components. Bold numbers show where the component loads highly (in absolute number) on an issue. Recalling, that a high rating denotes a liberal position on an issue, whereas a low rating denotes a protectionistic position (Table 6 is produced from the standardised space, that is all variables are standardised to a variance of one), positive loadings thus correspond to a liberal position and negative components to a protectionistic one. Hence, component 1 displays a policy that produce a loading 0.691 on the issue of a broad versus a narrow round. Since this number is highly positive, i.e. reflecting a liberal standpoint, this policy is against introducing additional rules related to e.g. labour and environment that could impede trade. Indeed, the first component has eight loadings significantly different from zero and they are all positive and hence expressions of a policy with a firm liberal tendency. Consequently, this policy is denoted a *liberalisation dimension*. The liberalisation dimension alone explains about 40 % of the variation in the data as shown in the last row, and its correlation with the average overall rating is moreover 0.93 as seen in the second row from the bottom in table 6, reflecting its overarching importance.⁹ Clearly, of the three policy directions in the negotiations the liberalisation dimension is the most important. Members that correlate positively with this dimension are, consequently, in favour of substantial lowering of trade barriers and significant reductions in domestic as well as export support. Naturally, members that correlate negatively with this policy dimension displays a much more protectionistic attitude. We therefore believe that this clearly measures a *liberalisation dimension*.

Component 2 is, on the other hand, probably the weakest identified component. High factor loadings are found on the issues of tariff escalation and peaks and AMS levels, i.e. countries scoring above zero are in favour of abolishing all tariff escalation and peaks and substantially lowering the allowable aggregate domestic support. These countries may also require opportunities in the short to medium run for developing agricultural processing industry. The same countries do not want a development box, probably because they fear that introducing this element might enhance the scope for overall agricultural support. They also seem to want the use of the special safeguard clause restricted to developing countries. The final issues loading onto this component are post-modern issues and export credit. The factor loading of the former is quite weak while closer inspections reveal that the substantial loading of export credit is attributable solely to countries in cluster 7 ('Free trade') that want the complete elimination of all types of export support. Countries in clusters 2 ('Market access') and 7 ('Free trade') that contain some relatively affluent developing countries with a high profile in the negotiations stick out along this dimension with significant positive correlations. Thus, this policy apparently is specific to a political elite of developing countries, wherefore we denote it an *elite development dimension*.

Turning to the final component, the one issue loading most strongly onto component 3 is tariffs as well as some support for decreasing tariff escalation and peaks. Therefore, this policy emphasises the aspect of lowering import barriers. Hence, we denote this policy as a *market access dimension*. Furthermore, the policy calls for lowering *de*

⁹ This is moreover emphasized by the fact that a simple average of the ratings is an adequate overall measure as indicated by Cronbach's Alpha, which is 0.82. Applying the common rule of thumb that a Cronbach's Alpha above 0.7 is acceptable, this alone would suggest that an average is a sufficient measure of an underlying or latent policy **trait**.

minimis levels, although asymmetrically. This asymmetry is important, since there is a strong reverse association between the number of preferential trade agreements that a given developing country takes part in and the score on this dimension (see the next section), which reflects the very real problems of preference erosion that these countries could experience once full liberalisation is a fact. We explore this and other explanations in the next section. The positive factor loading on development box issues is congruent with the notion that members scoring highly on issues along this dimension want *either* a development box *or* increased provisions for placing development initiatives within the green box, reflected in the *de minimis* ratings. Finally, members who want a narrow round tend to have positive scores along the third dimension, which is not surprising since many developing countries fought hard to avoid the inclusion of any non-trade concerns in the Doha round (Bjørnskov and Lind, 2002; Panagariya, 2002).

In order to present a clear picture, we plot the scorings of some of the major players along the three dimensions; for the sake of exposition we once more include Norway as the most extreme member country. In figure 1 the countries are displayed along the first and second component. Clearly, the EU ('Broad round') is situated to the extreme left of the liberalisation dimension and scores almost zero on the elite development dimension but also Israel, Japan ('Broad round') and Norway are placed in the lower left corner. In the upper right corner, developing countries such as Pakistan, Cuba, Kenya and Nicaragua ('Market access' and 'Free trade') are positioned. The bulk of the countries score high on the liberalisation dimension but low on the elite development direction. Thus, the African Group along with the Cairns group are placed in the lower right corner ('Liberalisation').

Figure 2 displays the first and third component. Again the EU ('Broad round') is positioned at a distance from most other countries. In the market access dimension the EU (as in the elite development dimension) scores a zero. Most of the WTO countries are more inclined towards liberalisation but differ on the two other directions.

Figure 3 displays the elite development and market access dimensions. Here the picture is more scattered. The EU ('Broad round') can be seen to be close to zero on both dimensions, whereas the US is clearly inclined towards the market access direction being closest to the South African position. The Harbinson proposal is placed relatively far to the right, closest to clusters 5 ('Liberalisation') and 4 ('S&D'), while countries in the developing country elite like Kenya ('Free trade') are inclined towards the elite development dimension. Norway, our extreme case, is against either of the directions.

Figure 1. Components 1 and 2

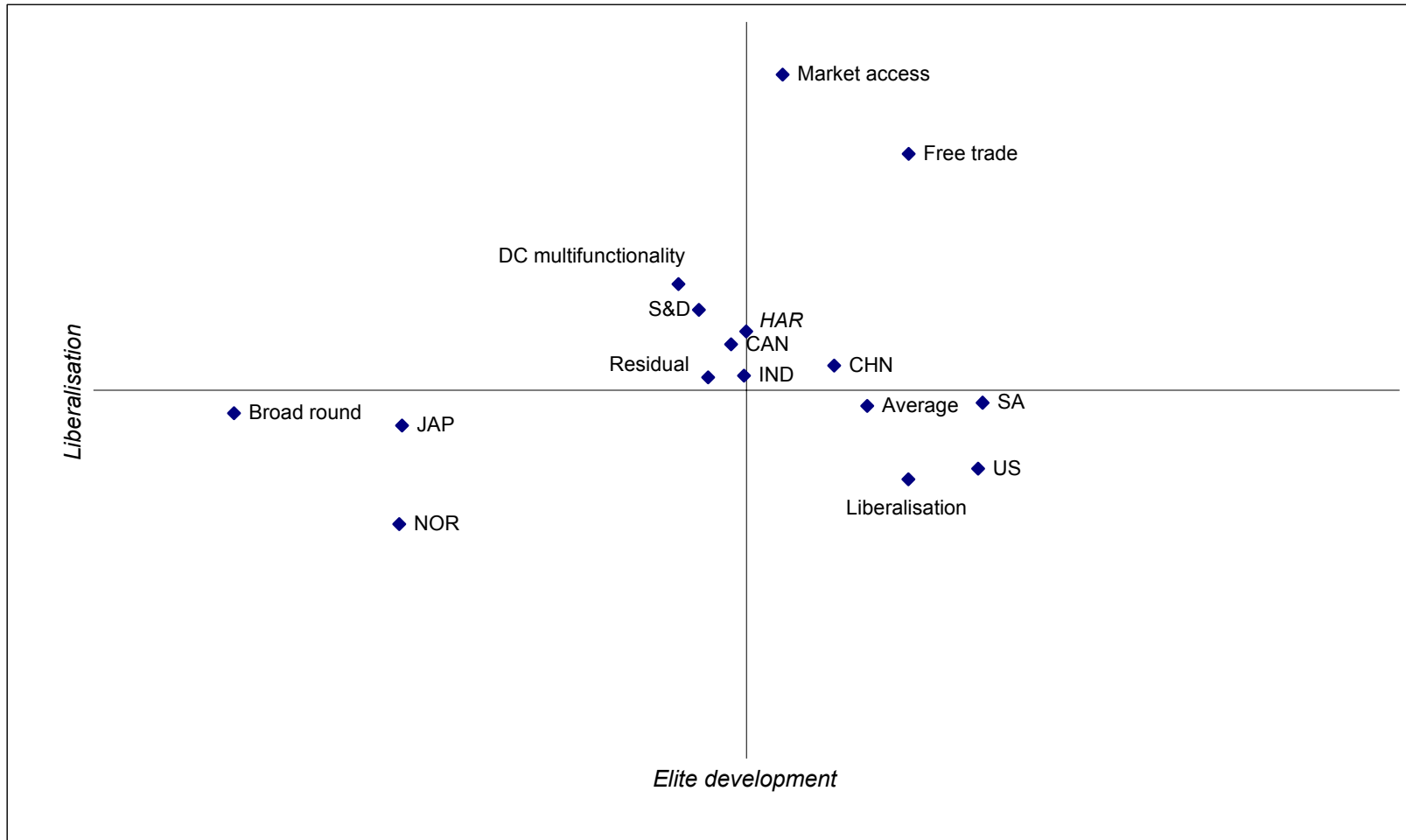


Figure 2. Components 1 and 3

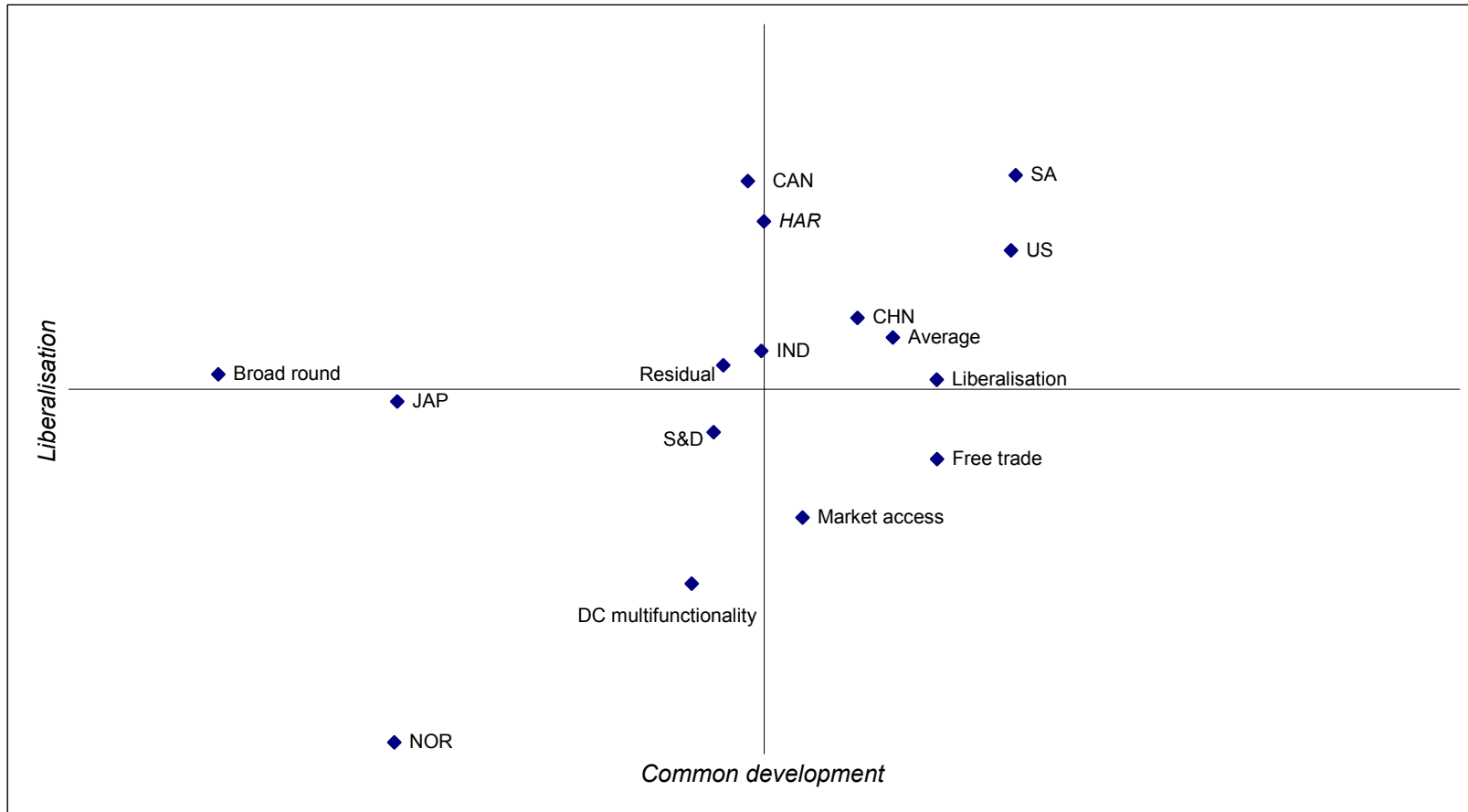
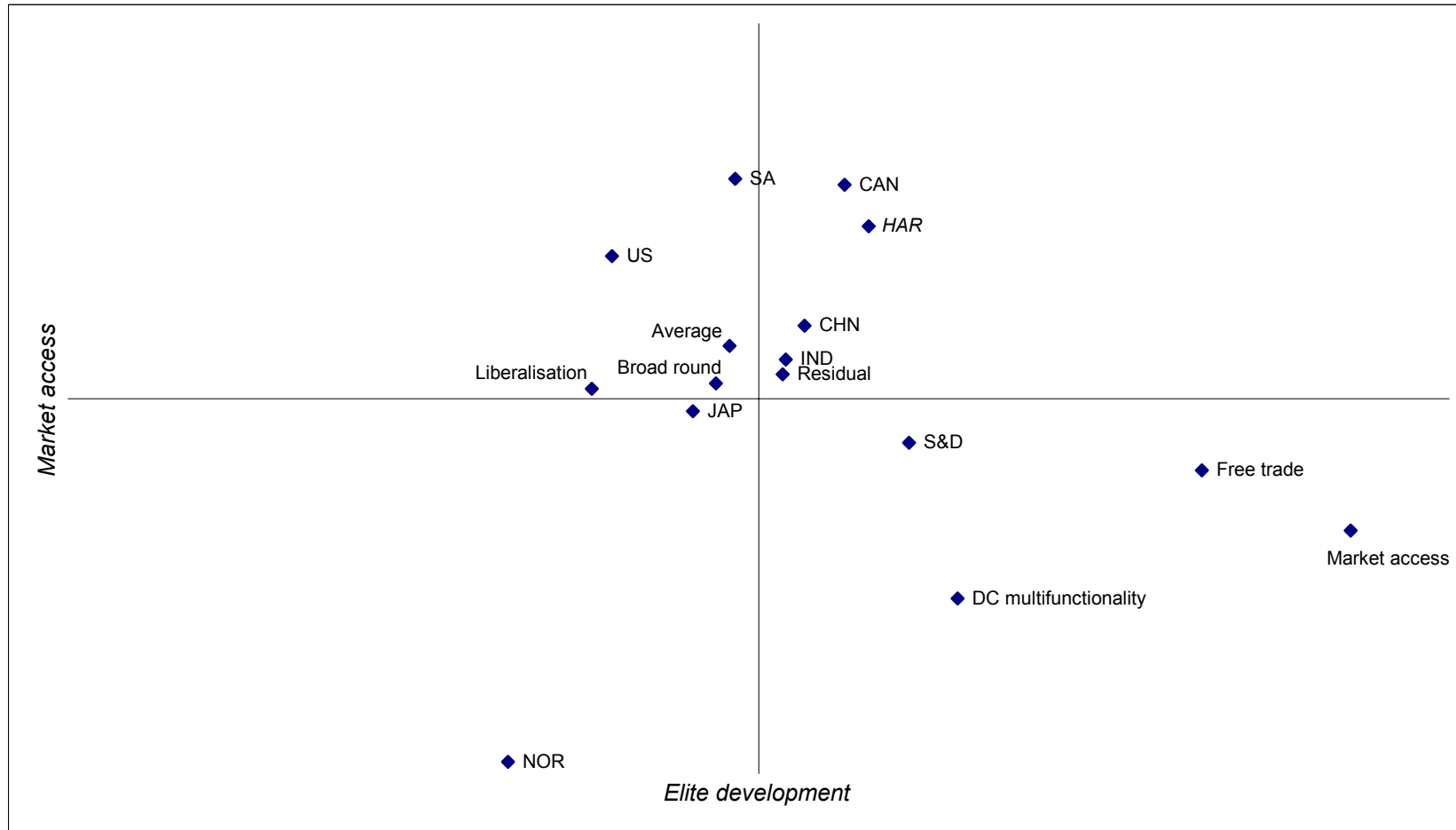


Figure 3. Components 2 and 3



4.2. Players' positions along the dimensions

In addition to the figures above, Table 7 reports the factor scores for a set of central players, Norway and the nine clusters, including the Harbinson proposal. The African Group scores highly in the liberalisation dimension with a factor loading of 0.61, whereas the loadings in the two other dimensions are significantly negative with scores of -1.20 and -0.93. In this respect, the African Groups policy is clearly defined as being in the liberal direction. In contrast to the African Groups well defined policy, cluster 3's ('Few positions') is much more vague with loadings around zero in all three policy directions. This result is as expected since cluster 3 ('Few positions') consists of countries with stated positions on only a few issues. Therefore, any distinct policy direction for this cluster would be difficult to identify.

The Harbinson factor score on the liberalisation dimension is exactly situated in the middle with a score of 0.00. This shows clearly that Harbinson's proposal is in concordance with the objective of the WTO to strive for a freer international trading regime. Along this dimension, Harbinson has clearly achieved a perfectly balanced stance of neither being too liberal nor too protectionistic relative to the positions of the WTO members. The background for the grievances of the EU and to a less extent Japan are also made clear by the PCA: both members score negatively on this dimension, the EU even to an extreme degree.¹⁰ At the other end of the scale is the African group, the United States and South Africa with the latter scoring above one.

Table 7. Dimensional positions of central players and clusters

	Component			Average rating
	Liberalisation	Elite development	Market access	
African group	0.61	-1.20	-0.93	2.57
Canada	0.09	0.37	1.80	2.74
China	0.34	0.20	0.58	2.72
European Union	-2.33	-0.19	0.19	1.56
India	-0.45	0.19	0.99	2.23
Japan	-1.19	-0.25	0.18	1.91
Norway	-1.41	-1.05	-2.60	1.25
South Africa	1.28	-0.62	1.42	3.08
United States	0.97	-0.12	1.59	2.91
Cluster 1	0.46	-0.13	0.42	2.67
Cluster 2	0.14	2.57	-1.06	2.65
Cluster 3	-0.15	0.10	0.19	2.45
Cluster 4	-0.18	0.65	-0.35	2.45
Cluster 5	0.62	-0.73	0.08	2.67
Cluster 6	-1.96	-0.19	0.12	1.72
Cluster 7	0.62	1.93	-0.57	2.82
Cluster 9	-0.26	0.86	-1.59	2.15
<i>Harbinson</i>	-0.00	0.48	1.38	2.76
Average	0	0	0	2.47
Median	0.39	-0.10	0.04	2.47

¹⁰ The appropriateness of our ratings on EU positions also becomes clear: all EU concessions situated along the liberalisation dimension that would tend in a positive direction in this component are connected to the introduction of various non-trade concerns and postmodern issues and thus a broadening of the negotiation agenda and additional blue box support that would tend in the opposite direction.

Along the second dimension, which we denoted the elite development dimension, the African group receives a substantially negative score while clusters 2 ('Market access') and 7 ('Free trade') are positive. The US, India and the EU are close to zero, the latter two only just significantly on each side. Both Canada, which we initially identified as a centrally placed player, and the Harbinson proposal also receive moderately positive scores.

Finally, India, South Africa and cluster 1 ('Average') attain highly positive scores on the third dimension, which we denoted a market access dimension. The African group as a whole, on the other hand, also attains a very large negative score on this dimension, yet Table 7 shows that Canada, the US and Harbinson strongly supports such developments as would be entailed in negotiating along the market access dimension. At first sight, it might seem puzzling that Africa and the countries in clusters 2 ('Market access') and 7 ('Free trade') should attain negative factor scores on a market access dimension.¹¹ However, at closer look, many of the countries with negative scores along this dimension participate in preferential trade agreements with the EU and other major players. It would therefore seem rational to oppose the erosion of such preferences, which could very well be the result of following this dimension (e.g. Yu and Jensen, 2003). In addition, there is a strong negative correlation between scores along this dimension and a measure of budgetary dependence on import duties, i.e. developing countries are less inclined to support movements along this dimension the more they depend on tariff revenue in financing government activities. The negative correlation thus arises because liberalisation efforts distributed along the third dimension would entail that developing countries too would have to open their agricultural markets for each other as well as for developed countries and thus would lose tariff revenue.

4.3. Balance across policy dimensions

The main question in this section is whether the Harbinson proposal is balanced across policy dimensions. We try to answer this in terms of our three orthogonal dimensions. Ideally, a perfectly balanced proposal ought to score close to zero on all three dimensions. However, as Harbinson's role is to spur the negotiations on in an attempt to fulfil the purpose of the WTO, we might expect a balanced proposal to be slightly positive on all dimensions for practical reasons. As table 7 and the figures unmistakably show, the proposal is unbalanced in two dimensions, although not in the way the EU has suggested. The core of the EU allegations that the Harbinson proposals are unbalanced are directed against the manner in which Harbinson treats non-trade concerns and in particular the scope for supporting agriculture's so-called multifunctionality that the Union wants to place in the blue box.¹² These issues are placed primarily along the liberalisation dimension, as is the hotly disputed issue of export subsidies. Yet, the results reported in Table 7 demonstrate that Harbinson's proposal is perfectly balanced along this dimension; the factor score is exactly zero.

¹¹ Norway has the most negative score of all countries, which is not surprising given its emphasis on strengthening 'food security' through the use of tariff protection and amber box support. As a consequence, Norway emerges as the most protectionist country on dimensions two and three and the average rating.

¹² See Swinbank (2001) for a thorough discussion of the EU stance on multifunctionality and the problems connected to it in an international context.

Harbinson nevertheless produced proposals that are unbalanced in another direction, as the scores on his drafts are significantly positive on both the elite development and the market access dimensions. He thus probably attempts to match the positions of clusters 2 ('Market access') and 7 ('Free trade') along the second dimension and of India, South Africa and countries in the average cluster along the third dimension. It therefore seems reasonable to speculate that Harbinson has taken the development content of the Doha Development Round quite seriously. However, despite the overall similarities between most developing country positions documented in section 3, these dimensions show substantial heterogeneity among the developing countries, which Harbinson seems to fail to appreciate. Instead, he adopts a 'development-friendly' position not unlike that of Canada that, however, seems to fail to appreciate problems such as how to replace tariff revenues.

To summarize the balance of the drafts, Harbinson seems to have achieved a perfect balance on the obvious dimension, namely overall liberalisation. However, a number of developing countries have special requests for the Doha round which he does not address adequately. These requests lie along two dimensions that we have termed elite development and market access. The problems of poor members along these dimensions seem first and foremost to consist of worries of decreasing tariff revenues, as many countries rely on such revenues as an important part of budgetary resources, as well as the related problem of tariff preference erosion as a result of multilateral liberalisation. Before concluding and drawing policy implications, we therefore explore the determinants of the three identified policy dimensions in order to gain further insight into the background for countries' preferences and reservations and underlying determinants of the formulated positions.

5. Explaining the dimensions

The final question to be touched upon in this paper is: what defines these policy dimensions? In other words, why do countries choose specific general policies in the first place? We answer this question by performing standard regressions with a set of ex ante relevant and available data, which enable us to explain the bulk of the variation along the three policy dimensions.

5.1. Data

Data definitions and sources are displayed in table 8. We first include a set of obvious variables that could be expected to influence countries' underlying policies and hence their negotiation positions in the WTO. The variables are absolute GDP, GDP per capita and trade volume (imports plus exports) as a percentage of GDP. We include absolute GDP as a proxy for the size of the home market for the reason that countries with large home markets may be less dependent on trade, which could be negatively reflected in their underlying policies. GDP per capita (naturally) measures how rich a country is; however, the expected sign of the effect of wealth is uncertain. On one side, rich countries have historically been relatively open to trade, being one of the reasons for their affluence (Estevadeordal et al. 2003, Dollar and Kraay, 2003). Such historical preferences for openness could still be reflected in their overall policies. On the other side, research on subjective well-being has revealed that increases in income in relative rich countries contributes very little to average well-being (Easterlin, 1995; Bjørnskov,

2003). This may well be reflected in voting behaviour and thus in underlying policies, drawing in the opposite direction as voters place greater weight on postmodern issues such as animal welfare, food standards and an (ill-defined) fear of globalisation.¹³ As the third variable, we include trade in our baseline specifications. The sign of the trade to GDP variable cannot be determined ex ante. On the one hand, one could expect a negative sign since already open countries may have relatively little to gain from liberalisation in terms of trade expansion. On the other hand, countries that trade a lot may have larger potential gains from lowering of tariffs. Furthermore, actual trade volume also reflects the size of the home market.

¹³ Overall, such preferences reflect post-industrial values. Inglehart and Baker (2000) show that most rich countries have converged towards such values in the past 30 years.

Table 8. The variables used in the regressions

	Variable	Explanation	Source
1	GDP_pc	GDP per capita	WDI (2003)
2	GDP	GDP	WDI (2003)
3	Openness	(Exports + Imports)/GDP	WDI (2003)
4	Rural population	Share of people employed in agriculture	FAO: apps.fao.org/
5	Preferential agreements	Number of preferential trade agreements with the US, the EU, Japan or Canada that the country is a member of	Constructed on the basis of information at www.wto.org
6	CBI	Dummy: 1 if the country is a member of the Caribbean Basin Initiative, 0 otherwise	Constructed on the basis of information at www.wto.org
7	Democracy	Gastil Index; discrete measure from 1 to 7 measuring the protection and adherence to political rights including free and fair elections. Countries are deemed democratic if the index is below 3.	Freedom House (2003)
8	DC	Dummy: 1 for developing countries, 0 otherwise	Constructed on the basis of information from WDI (2003)
9	LDC	Dummy: 1 for least developed countries, 0 otherwise	Constructed on the basis of information from WDI (2003)
10	NFIDC	Dummy: 1 for net food importing developing countries, 0 otherwise	Constructed on the basis of information from WDI (2003)
11	India	Dummy: 1 for India, 0 otherwise	
12	EU	Dummy: 1 for EU country, 0 otherwise	
13	Political ideology	Leftwing parties are -1, centre parties 0 and right wing parties 1. The measure is averaged over the 1995-2000 period to account for potential system change.	Database on Political Institutions, see Beck et al (2001)
14	ELF	Ethnolinguistic fractionalisation: Probability that two randomly picked persons from a national population do not have the same ethnicity and primary language	Roeder (2001)
15	Agricultural support	Agricultural support in percent of GDP	OECD: www.oecd.org
16	Percentage PSE	Percentage Producer Subsidy Equivalent: Agricultural support in percent of total gross farm receipts	OECD: www.oecd.org

As a second cluster of explanatory variables, we enter a set of other potentially relevant country characteristics. This set includes the percentage of the population that is employed in agriculture. These are the people that are likely to be directly affected by a liberalisation of world agricultural trade. However, it is uncertain whether they will be positively or negatively affected, depending on the trade composition of the country. The set also includes a variable that counts the number of preferential trade agreements that any given country has signed with the US, the EU, Japan or Canada. As liberalisation would imply an erosion of tariff preferences obtained in such agreements, we expect the effect of this variable to be negative. Alternatively, we employ dummies

for membership in specific preferential agreements to account for the substantial differences between such agreements.¹⁴ As the final variable in this cluster, we supplement our baseline specification with a measure of the degree of democratisation.

We attempt to capture special characteristics by including four dummies. Firstly, we enter a dummy for developing countries and a dummy for least developed countries (LDCs). As developing countries have the most immediate interest in liberalising world agricultural trade, we expect this to emerge with a positive coefficient. On the other hand, LDCs may have practical difficulties in reaping the gains from liberalisation making the expected sign negative (see e.g. Stevens and Kennan, 2001). Furthermore, we add a dummy for net food importing countries. These countries may have reservations towards liberalising too much since this could lead to higher food prices and, hence, would increase their import bill. Secondly, we enter dummies for India and the EU to capture specific institutional characteristics, as both entities consist of several states. In such entities, underlying policies themselves represent the result of negotiations between parties with potentially opposing ideologies and objectives.¹⁵ The EU in particular may be expected to be less inclined to liberalise due to its institutional arrangement where all 15 members in practice have to reach unanimous decisions. In other words, the principle of the lowest common denominator may define joint European policies.¹⁶

We use two additional indicators inspired by the literature on social and public choice. The first is political ideology, which we capture by using a categorisation of the left-right orientation of the ruling party coded from -1 to 1 and averaged over 1995-2000. This period is relevant as it is the period in which the WTO has existed; it also rules out at least some of the uncertainty of the measure. The second variable is the index on ethnolinguistic fractionalisation (ELF), which measures the probability that two persons drawn at random from a national population do not share the same ethnicity and primary language.¹⁷ This variable is included as the literature on social choice states that increasing polarisation – in our case increasing ELF – under certain fairly general conditions creates pressure to replace or bypass restricting institutional arrangements, thereby increasing the potential magnitude of policy changes and thus creating political instability. This is normally considered a problem, yet in the present situation, such instability may enable substantial reforms. Another complementary explanation connected to the ELF is offered by the related literature on public choice. According to this view, there can be expected to be less lobbying for protection and special treatment of specific groups in more polarised societies, as there by definition is more competition. As governments by their nature are monopsonies in this respect, lobbying

¹⁴ For example, the European Cotonou Agreement is a complex of both trade preferences and political conditions and declarations of intention whereas the Caribbean Basin Initiative seems a more narrowly trade-oriented agreement.

¹⁵ The US is also such an entity, but we refrain from including a US dummy since the government has obtained ‘fast-track’, i.e. the possibility to bypass the institutional inertia created by this characteristic.

¹⁶ It is worth noting that the European strategy of putting forward full packages of positions across several issues can in itself be interpreted as an attempt to avoid negotiating issue by issue, which social choice theory suggests would make comprehensive liberalisation more likely.

¹⁷ The data used here are updated as of 2000; however, the definition of the variable dates back to a famous anthropological atlas collected by a group of Soviet scientists in the early 1960s. By now, there is a substantial literature using this measure, which lends substantial validity to the measure.

becomes substantially more costly and thus a less viable option in countries characterised by a high degree of fractionalisation.¹⁸

Finally, for a subset of developed countries, we include the level of agricultural support relative to GDP and to the size of the agricultural sector. The latter measure is usually called ‘percentage PSE’ in OECD jargon; we therefore keep this name. With respect to full agricultural support, we expect that this may influence policies both ways. Firstly, the budget pressure of a high level of support may push for liberalisation, but it may also entail relatively large transition costs and difficulties in disbanding the support, which would indicate a negative influence. Percentage PSE, on the other hand, measures the degree to which agricultural production is subsidised. We therefore expect this to be a measure of the strength of the agricultural organisations that will lobby for protection and a continuation of support. The expected sign of percentage PSE is therefore negative.

5.2. Estimation

We use these data to test whether we can explain the underlying policies. We regress the variables in table 8 on each principal component from which the underlying policies have been extracted by applying Ordinary Least Squares. This is a valid estimation strategy since the positions from which the underlying policies have been extracted deals with wishes for the *future* of the world trading system; hence, any reverse causality is by definition ruled out. Furthermore, the principal components are extracted under the condition that they are mutually orthogonal thus ruling out any covariation among them by definition.

Table 9 reports overall results where all countries are included, which restricts coefficients to be identical for developed and developing countries. In this regression, the variables ‘agricultural support’ and ‘percentage PSE’ are not included because they are only available for OECD countries. The policies of both the developed and the developing countries may be formulated based on much the same determinants. However, these determinants’ impact on the policy making process is probably different in developed and developing countries making the assumption of identical parameters too restrictive, although some differences are controlled for using dummies. In table 10, equivalent regressions are reported for a sample consisting only of developed countries and table 11 reports the results from a sample comprising the developing countries. The first column of each component in the tables shows the unrestricted model, whereas the second column is a regression where variables have been tested out so that only variables with a t-value above one remains.¹⁹ It should be noted that the regressions are the outcome of an explorative search for determinants of the policy making process. Thus, we do not claim to present a comprehensive and coherent explanation of how positions and policies are formed. Instead, the regressions provide statistical support to ex ante hypotheses on factors influencing the policy making process whereas others are rejected.

¹⁸ We are grateful to Gert Tinggaard Svendsen for making this point. For a full treatment of the argument, see Svendsen (2003).

¹⁹ We performed an iterative search where the least significant variable was excluded in each step until no variable obtained a t-statistic below unity.

Table 9. Explaining policy dimensions - all countries

	Component 1 <i>Liberalisation</i>		Component 2 <i>Elite development</i>		Component 3 <i>Market access</i>	
GDP per capita	-0.004 (-0.032)		-0.391 (-1.988)	-0.270 (-2.542)	0.254 (1.243)	
GDP	0.080 (1.223)	0.069 (1.113)	0.011 (0.103)		0.004 (0.035)	
Openness	-0.134 (-1.472)	-0.106 (-1.286)	-0.097 (-0.687)		-0.162 (1.103)	
Political ideology	0.188 (2.888)	0.178 (2.850)	0.038 (0.373)		0.044 (0.421)	
ELF	0.083 (1.051)	0.098 (1.315)	-0.114 (-0.933)	-0.131 (-1.374)	0.097 (0.768)	
EU	-0.544 (-5.879)	-0.528 (-6.278)	0.081 (0.566)		0.015 (0.100)	
India	-0.015 (0.224)		-0.058 (-0.577)		-0.125 (1.149)	
Democracy	-0.023 (-0.273)		0.299 (2.267)		0.138 (1.008)	0.211 (2.129)
DC	0.208 (1.846)	0.265 (3.089)	0.205 (1.173)		0.561 (3.088)	0.408 (3.573)
LDC	0.130 (1.222)	0.123 (1.481)	-0.311 (-1.876)	-0.429 (-4.218)	-0.479 (-2.785)	-0.207 (-1.907)
NFIDC	0.031 (0.411)		0.155 (1.337)	0.121 (1.322)	-0.392 (-3.257)	-0.212 (-2.366)
Rural population	-0.126 (-1.249)	-0.106 (-1.199)	-0.082 (-0.523)		0.110 (0.680)	
Preferential agreements	-0.015 (-0.154)		-0.281 (-1.928)		-0.213 (-1.411)	-0.501 (-4.523)
Observations	80	81	80	113	80	120
Adjusted R ²	0.708	0.713	0.296	0.200	0.242	0.276

Note: All regressions include a constant, t-values in parentheses. Bold numbers are significant at the 15% level.

Table 9 reports the regressions where all countries are included. In the liberalisation dimension four variables are significant as shown in the third column, and three of them are highly significant. First, the EU dummy, which shows that the EU in and of itself is against liberalisation (the parameter is negative with a value of -0.528). This is probably a result of the institutional set-up in EU where unanimity among EU members are needed on all issues leading to the principle of the “lowest common denominator”. Second, the developing country dummy shows that developing countries are in favour of liberalising (the parameter is positive with a value of 0.265), stemming from the fact that DCs suffer from the current agricultural policies in the developed countries. And thirdly, the political ideology of a country influences the country’s attitudes towards liberalisation. Thus, the more right-winged a government is the more liberal its policy will be (the parameter is positive with a value of 0.178), which is also in concordance with prior expectations and the European use of the word ‘liberal’. The fourth significant variable is the LDC dummy implying that absolutely poor countries are even more in favour of liberalisations than developing countries in general. Three less significant variables are GDP, ELF and rural population. The signs imply that the bigger the economy is and the more fractionalised in ethnic groupings a country is the more inclined towards liberalisation it will be coinciding with the hypotheses on ELF described under the data section. However, larger shares of rural population pull a

country towards a more protectionistic position, since they stand to lose from more liberalistic policies. The coefficient of determination shows that around 70% of the variation in the liberalisation dimension is explained by the chosen variables.

In the elite development direction the two significant variables GDP per capita and LDC both imply that the poorer a country is the less likely they are to support this policy. Also more ethnic fractionalisation correlates negatively with this policy, whereas net food importing countries may be more inclined to favour this direction. The elite development direction argues for the introduction of a development box and advocates retaining provisions for using the special safeguard clause. Thus, poorer countries are generally against these forms of special and differential treatment.

The third component labelled market access displays five significant parameters. The more preferential access a country has the less it supports the market access direction (with a very high significance). This result obviously derives from the fact that lowering of import barriers in rich countries entails an erosion of trade preferences thereby hurting countries that have been granted such privileges. Developed countries in general are in favour of lowering market access barriers, thus providing the opportunity for them to compete on the international markets. However, LDCs and NFIDCs lean less strongly towards the market access direction maybe due to the fact that they have often been granted privileged preferential access that would face erosion in case of substantial lowering of import barriers.²⁰ Another important point is that poor countries' tax bases are very slim and often rely heavily upon revenues from tariffs. Unless viable alternative for government revenues can be envisaged poorer countries are reluctant to lowering tariff barriers. The degree of democratisation also correlates significantly and positively with the market access policy dimension, thus more open and free societies are in favour of supporting the international division of labour and easing the exchange of goods and services.

²⁰ Note that all NFIDCs and LDCs are also developing countries. Hence, the total effect of being a net food importing least developing country is insignificantly different from zero, as all three effects must be added.

Table 10. Explaining policy dimensions - developed countries only

	Component 1 <i>Liberalisation</i>		Component 2 <i>Elite development</i>		Component 3 <i>Market access</i>	
GDP per capita	0.011 (0.051)		-0.724 (-2.861)	-0.429 (-1.990)	-0.130 (-0.413)	
GDP	0.114 (0.737)		-0.033 (-0.165)		0.299 (1.207)	0.148 (1.009)
Trade	-0.273 (-1.630)	-0.294 (-2.055)	0.137 (0.648)		0.077 (0.295)	
Political ideology	0.230 (1.526)	0.293 (2.371)	-0.420 (-2.337)	-0.371 (-2.288)	-0.398* (-1.789)	-0.301 (-2.088)
ELF	0.063 (0.475)	0.200 (1.364)	0.331 (1.935)	0.295 (1.379)	0.503** (2.376)	0.195 (1.243)
EU	-0.554 (-3.362)	-0.397 (-2.654)	0.019 (0.101)		0.077 (0.320)	
Rural population	-0.159 (-0.986)		-0.012 (-0.057)		0.091 (0.364)	
Preferential agreements	0.000 (-0.004)		0.028 (0.179)		0.091 (0.470)	
Ag. Support		0.236 (1.477)		0.300 (1.336)		
Percentage PSE		-0.303 (-1.816)		-0.249 (-1.019)		-0.624 (-4.086)
Observations	31	25	31	25	31	25
Adjusted R ²	0.625	0.665	0.367	0.402	0.029	0.566

Note: All regressions include a constant, t-values in parentheses. Bold numbers are significant at the 15% level.

Table 10 displays the regression including only developed countries in the sample. In the second column of each component the ratio of agricultural support to GDP and the percentage PSE are included, however, these two variables are only available for OECD countries resulting in a decrease in the sample size of six countries.

Again the EU dummy proves to be significantly negative in the liberalisation dimension, but also the ratio of trade to GDP shows that countries with substantial trade are less inclined to liberalise. Countries with high current trade have less to gain from a general liberalisation of international trade and may even be subject to increasing competition should the international trading regime change towards a more free and transparent system. The political ideology plays a significant role where left-wing oriented governments are less inclined towards liberalisation. The two variables on support to agriculture are significant with opposite signs. The higher agricultural support relative to GDP the more liberal oriented is the policy, whereas the higher farm support is to farm production the less likely is the government to condone liberal oriented positions. Percentage PSE can be seen as a proxy for the strength of the farm lobby making their influence against drastic cuts in farm support felt. On the other hand, the more agricultural support comprise out of GDP the higher are the gains to consumers and taxpayers in the event of a liberalisation. A less significant variable is ethnolinguistic fractionalisation, which correlates positively with the liberalisation dimension thereby supporting the hypotheses of more liberal policies in less homogenous societies.

Poorer countries and right-winged governments are against the elite development direction mirroring the fact that it is a group of relatively affluent and highly profiled developing countries that support this policy. Combining this result with the characteristics placed along this dimension, it seems that leftwing governments in rich countries are more inclined to reduce escalation and peaks, reduce all export support and provide room for special development initiatives in the green box. Again the ELF variable on the other hand correlates positively with this policy. Similarly, the two farm support measures load equivalently in this direction as they do in the liberalisation dimension.

In the market access direction political ideology is significantly negative displaying that left-wing governments in rich countries are against lowering import barriers, which may seem somewhat odd. However, it should be noted that many right-wing parties have historically relied on political support from the farm sector. This component also shows the strength of the farm lobby as percentage PSE is significantly negative. In addition, there is small support for more affluent countries to be more positive towards improving market access. We also note that political ideology exercises a similar effect on this dimension as on the elite development dimension, implying that relatively leftwing governments are more inclined to liberalise along the elite development and market access dimensions rather than a general reduction of farm support in the liberalisation dimension.

Table 11. Explaining policy dimensions - developing countries only

	Component 1 <i>Liberalisation</i>		Component 2 <i>Elite development</i>		Component 3 <i>Market access</i>	
GDP per capita	-0.098 (-0.357)	-0.206 (-1.111)	-0.638 (2.222)	-0.198 (-1.712)	0.484 (-1.976)	0.260 (1.825)
GDP	0.075 (0.314)		0.153 (0.613)		-0.040 (-0.189)	
Trade	0.553 (1.920)	0.239 (1.341)	-0.508 (1.690)	-0.279 (-2.684)	0.090 (0.352)	
Political ideology	0.619 (2.300)	0.371 (2.670)	0.134 (0.476)		0.083 (0.348)	0.145 (1.258)
ELF	0.144 (0.567)		-0.352 (-1.325)		0.240 (1.060)	
India	0.106 (0.425)		-0.138 (-0.533)		-0.021 (-0.095)	
Democracy	-0.007 (-0.025)		0.457 (1.666)		-0.098 (-0.419)	
LDC	0.452 (1.518)	0.494 (2.124)	-0.329 (-1.061)	-0.443 (-3.458)	0.140 (0.530)	-0.244 (-1.465)
NFIDC	0.237 (0.897)		0.054 (0.195)		-0.178 (-0.756)	-0.406 (-3.232)
Rural population	-0.327 (-1.208)	-0.234 (-1.339)	-0.114 (-0.402)		0.051 (0.212)	
Preferential agreements	-0.654 (-2.209)	-0.210 (-1.197)	0.111 (0.358)	-0.121 (-1.075)	-0.462 (-1.756)	-0.257 (-2.063)
CBI member				0.393 (3.718)		
Observations	26	49	26	83	26	49
Adjusted R ²	0.094	0.152	0.014	0.315	0.283	0.415

Note: All regressions include a constant, t-values in parentheses. Bold numbers are significant at the 15% level.

Table 11 provides the regressions including only developing countries. Political ideology correlates significantly and positively in the liberalisation dimension supporting the result from above that right-wing governments are more inclined to follow this direction. Likewise, LDCs pursue this direction. Concerning the ratio of trade to GDP the result for developing countries is opposite of that for developed countries. DCs that have a high trade ratio are more inclined towards liberalisation. On the other hand, countries with preferential access privileges are hesitant towards liberalisation.²¹

Poorer countries and high traders are opposing the elite development direction. Interestingly, countries that have membership of the Caribbean Basin Initiative are significantly in favour of the elite development dimension. The most striking finding here is therefore that specific preferential agreements seem to draw in opposite directions.

²¹ It is worth noting that after updating the data with the Brazilian-Indian-Chinese proposal, India fails to be different from other developing countries. In earlier versions of the data, the India dummy was always significant.

In the market access direction, we first note that all other things being equal, developing countries score higher on this dimension than richer countries, but that this effect is less pronounced for LDCs and NFIDCs. On market access richer developing countries favour opening up markets although LDCs are against it, the latter probably resulting from loss of preferential access privileges, which furthermore is supported by the significant negative parameter on preferential access. Also net food importing countries are negatively correlated with this policy.

In summary, countries place their negotiation positions along three policy dimensions, but in somewhat different ways whether they are developed or developing. We find substantial effects of political ideology, since leftist governments seem to support liberalisation along the two development dimensions instead of the liberalisation dimension more than other governments, all other things being equal. We also find non-trivial effects arising from being a net food importer, the potential erosion of tariff preferences due to global liberalisation, and in particular from the current level of agricultural support in developed countries. However, the latter effect partly depends on the specific preferential trade agreement that countries participate in. With respect to the market access dimension, we also find some effect of having a functioning democracy. Polarisation, measured by ethnolinguistic fractionalisation, seems to enable developed countries to support more thorough liberalisation. Finally, we find that in particular the EU is substantially less inclined to move ahead along the liberalisation dimension, which we hypothesise is due to specific political-institutional arrangements.

6. Conclusions

This paper has sought to examine the ongoing negotiations in the World Trade Organisation by following movements and integrating Stuart Harbinson's draft proposal in the analysis. We ask two questions: 1) have member positions converged, i.e. is the WTO closer to an agreement than in November 2001; and 2) did the drafts that the chairman of the agricultural committee, Stuart Harbinson, brought forward, reflect a genuine and balanced compromise between rival positions that ought to have furthered a convergence towards consensus? We also explore the policy dimensions along which members place their negotiation positions.

Firstly, we find some evidence of convergence of the negotiation positions. With the introduction of additional domestic support in the 2002 Farm Bill, the US has taken a small step away from the liberal position that they have championed in the organisation. The EU seems to have taken one step forward and another backward with the introduction of the modification of the Common Agricultural Policy. Although the Union seems ready to cut export subsidies and overall domestic support, these concessions come in a package entailing increased support for non-trade concerns and a considerable broadening of the negotiation agenda. The EU has therefore moved only marginally closer to the bulk of WTO members. Nevertheless, some of the remaining members of the organisation have recently advanced a new proposal, which imply that two clusters containing most of Africa and the US, and Canada, China and Indonesia, respectively, are now situated remarkably close to each other in the WTO. Moreover, Stuart Harbinson brought forward two consecutive draft proposals to avoid a deadlock

in the negotiation. These drafts seem to be expressions of genuine compromise, since our cluster analysis places them in the average country cluster with Canada and China.

We also perform a principal components analysis, which shows that the agricultural negotiations take place along three latent policy indicators that we term the liberalisation dimension, the elite development dimension and the market access dimension. This analysis shows that the drafts are perfectly average on the first dimension, which allows us to reject European allegations that Harbinson's efforts have been unbalanced. However, the chairman seems to have been too eager on reforms along the development dimensions, as his drafts receive highly positive scores along these dimensions in the analysis. A main insight arising from exploring the determinants of the policy dimensions is that developing countries' concerns with respect to the potential erosion of tariff preference margins as a consequence of liberalisation is a point that the drafts in particular seem to fail to take into account.

In addition, we find a set of results that may be of interest to political economists and adds insight into how members form their positions. Two results from these analyses should be emphasized. Firstly, political ideology exerts a significant influence on policy positions. Specifically, leftwing governments in developed countries are more inclined to liberalise along the development dimensions while rightwing governments are more inclined to liberalise along the liberalisation dimension. The latter result also holds for developing countries. Secondly, we find that even when controlling for the level of agricultural support, EU countries are substantially less inclined to move ahead along the liberalisation dimension. We hypothesise that the second finding comes from the fact that the Union consist of several states that must agree on a joint set of policies. In theory, this substantially restricts the size of reforms that such states can agree upon, and in particular in Europe where member states have to reach a unanimous decision.

Our findings naturally have implications for the ongoing round of negotiations in the WTO, the so-called Doha round. Firstly, we can reconfirm the main finding in Bjørnskov and Lind (2002) that the EU is isolated in its demands in the round. Of the major players in the WTO, the EU and Japan are by far the least willing to liberalise along the liberalisation dimension, being in sharp contrast to the US and most developing countries. However, neither the US nor Harbinson seem to have taken specific developing country worries sufficiently into account when submitting their proposals to the organisation. Most developing countries are eager to move forward along the liberalisation dimension, yet their positions reflect how broad liberalisation might erode preferential access to the North American and European markets in particular. Our findings thus underline Krueger's (1997) argument that preferential agreements and other agreements that liberalise only selectively and in a discriminatory manner can hinder multilateral liberalisation.

With respect to the immediate future of the negotiations, we note that certain clusters are coming together as a result of subtle changes in negotiation positions. This points to the implication that a majority of members - and the global population - should be able to reach an agreement. The success or failure of the Doha round therefore rests with a limited number of rich laggard countries that have to swallow their pride in order for the entire membership to come to a consensus on how to move forward in world trade.

Appendix

Principal components analysis

PCA is based on the assumption that the ratings correlate across issues. If they are totally uncorrelated then all issues are needed to explain the variation in the data. Thus, as a first step a test is conducted to check for interdependency among the issues. The particular test is Bartlett's Sphericity Test with a null-hypothesis of no correlation, which is χ^2 distributed with 78 degrees of freedom. The test statistic yields a value of 1002.58 against a critical level of 109.96 at the 1% significance level. Hence, the test conclusively supports the hypothesis that a few underlying general policies determine the positions.

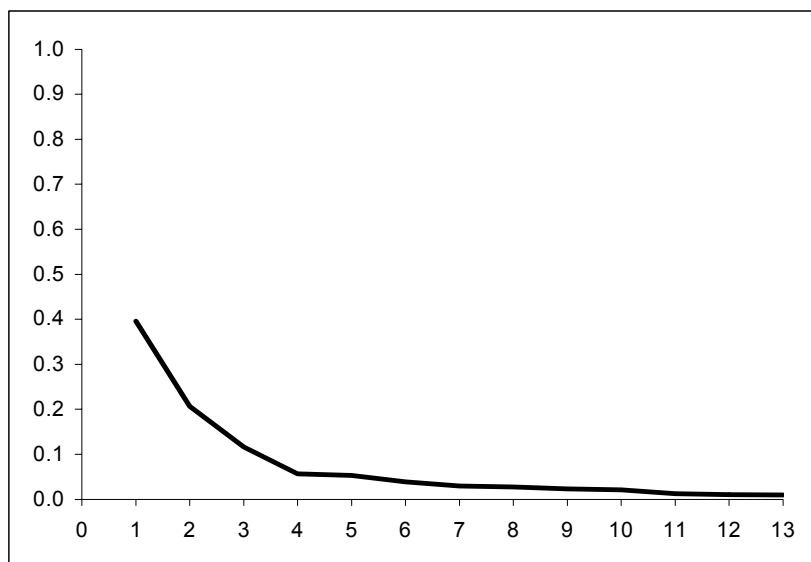
The data set consists of ratings on 122 countries (the Harbinson Draft counts as a "country") and 13 issues. The principal components in the data are found by the linear combinations that explain most of the variation in the data. The criterion by which to extract the appropriate number of components is by looking at the eigenvalues of the linear combinations. The eigenvalues are derived from the standardised space; thus, each variable – each WTO issue - is standardised to a variation of one. In turn, according to Kaiser (1958) only eigenvalues exceeding one is retained. The argument is that a principal component must at least account for the same variance as any single (standardised) variable in the data set. The eigenvalues are shown in table A1 along with the proportion of variance accounted for by the principal component (eigenvalue) and their cumulated values. According to the Kaiser principle three principal components can be identified in Table A1 accounting for 72% of the variance. To test whether this can be reduced further an extension of Bartlett's Sphericity Test is applied. The procedure is to extract r principal components and test whether the residual matrix is uncorrelated. For $r = 1$ this yields a test value of 607.79 against a critical value of 95.63 at the 1% significance level. Thus, the residuals are correlated and at least one more principal component is needed. Testing for $r = 2$ yields a test value of 351.15 against a critical value of 82.29. Consequently, the test convincingly prescribes that all three principal components are needed.

Table A1. Eigenvalues and proportion of variance

Component	Eigenvalue	Proportion of variance	Cumulative proportion of variance
1	5.1384	0.3953	0.3953
2	2.6886	0.2068	0.6021
3	1.5169	0.1167	0.7188
4	0.7366	0.0567	0.7754
5	0.6841	0.0526	0.8290
6	0.5033	0.0387	0.8668
7	0.3844	0.0296	0.8963
8	0.3531	0.0272	0.9235
9	0.3043	0.0234	0.9469
10	0.2666	0.0205	0.9674
11	0.1615	0.0124	0.9798
12	0.1411	0.0109	0.9907
13	0.1211	0.0093	1.0000

Another widely used test is the so-called Scree test by Cattell (1966). The variation accounted for by each principal component is plotted in decreasing order. Hence, the test entails finding the number where the smooth decrease of variation level off. In figure A1 this point is at 4 principal components. Consequently, the first three eigenvalues seem to capture the “essential” variation in the data supporting the choice of three principal components. We can therefore safely conclude that the set of three underlying general policies is robustly identified.

Figure A1. Scree test of number of principal components



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