trade in services until it had achieved domestic reforms and assured itself that the Thai companies would be able to compete.

Thus, it may be said that Thailand achieved its goals. The GATS was successfully negotiated and is seen as promoting international trade in services by providing transparency and progressive liberalization. However, as noted by the WTO's Trade Policy Review of Thailand in 1995 : "despite overall satisfaction with the results of the Uruguay Round, the Thai government had expressed the following concerns: ... (e) Thailand's weakness in terms of capital and experience in certain services activities might allow developed country transnational corporations to dominate domestically" (page 20).

To examine if and how Thailand achieved its twin objectives of providing the framework for service trade liberalization without committing itself to liberalizing immediately the insurance and telecommunications sectors were examined. The objectives in each and the results are as follows.

(a) Insurance

The ultimate objective was to liberalize. However, in the short run Thailand wished to protect its market to allow the Thai insurance companies to grow and become competitive. Thailand achieved these goals, as the groundwork for future liberalization negotiations was set down, but no concrete liberalization was decided. In fact, Thailand only inscribed in its schedule what had previously been permitted and thus did not liberalize at all. Thus, Thailand actually fully met its goals here.

Further more, Thailand's commitment to further liberalization has also been confirmed as it recently allowed foreign shareholding in Thai companies to increase from 25% to 49% and further steps towards liberalization are planned. However, as was noted in the paper on the insurance sector, Thailand may wish to reconsider its goals for the insurance sector as the Thai companies may prove unable to compete with foreign life insurance transnationals if past performance of Thai companies is any indicator of future performance.

The structure of the life insurance industry in Thailand is one of foreign dominance. Although there is only one foreign firm in the market, it controls at least 50% of the market, as may be seen in Table 6.1 below. The Thai companies, in comparison to this foreign firm, are uncompetitive and inefficient. Thus the life insurance industry may be characterized as one where the Thai companies are weak and one in which the government's fears about transnationals dominating the market may prove true.

Table 6.1

Market Shares

Type of Insurance	Market Share (%)					
	Thai Companies		Foreign Companies		Top five companies	
	1990	**1992**	**1990**	**1992**	**1990**	**1992**
Ordinary	45	44	55	55	94	94
Industrial	100	100	0	0	100	100
Group	56	51	44	49	86	79
Total	**47**	**52**	**43**	**48**	**92**	**91**

Source: Vichyanond (1996).

A good example of just how inefficient the Thai life insurance companies are compared to the sole foreign company (AIA) is the expense ratios. The expense ratio is the underwriting expense divided by the net premium. As may be seen in Table 6.2 below: AIA's expense ratios are about 4% while the "Big" Thai companies are in the region of 20% and the "Small" Thai companies are even higher than their bigger compatriots.

Table 6.2

Expense ratios by company and year.

Expense Ratio				
Year	AIA	Big	Small	Foreign 25%
1990	4.25	20.17	36.30	29.56
1991	4.67	21.83	35.42	25.56
1992	4.78	20.15	28.17	23.20
1993	3.90	17.76	21.47	20.36

Source: Vichyanond (1996).

The non-life insurance industry is markedly different from the life insurance industry in its structure. Not only are there many more firms competing, but many Thai firms perform better than the foreign companies. This is partly because of the nature of the Thai non-life insurance market. Its a very connection driven one which will grow proportionally with economic growth. Thus, for non-life insurance the government's fear are unfounded. As one may see from from Table 6.3 (i) below, no one firm dominates the market, and Thai companies account for most of the market.

Table 6.3 (i)

Non-life insurance: Market shares of premium.

Company	Market Share (%)		
	1990	1991	1993
"Big"[8] Thai			
B1	8.63	8.44	7.09
B2	1.32	0.57	1.02
B3	2.71	1.66	1.97
B4	2.28	2.95	2.35
"Small"[9] Thai			
S1	0.87	0.67	0.71
S2	0.60	0.54	0.44
S3	0.16	0.07	0.21
S4	0.57	0.50	0.19
Foreign			
F1	1.05	0.78	0.69
F2	0.40	0.37	0.26
F3	4.50	1.06	2.80
F4	2.28	1.72	1.61
F5	0.80	1.91	1.50
Total of 5 Foreign	**9.02**	**5.85**	**6.86**
Total 56 Thai	**90.19**	**92.71**	**93.14**

Source: Vichyanond (1996).

Table 3 (ii) below shows the expense ratios of the non-life insurance companies. As may be seen, on average the big Thai companies perform better than the foreign companies. This confirms that the Thai companies in this industry should be able to compete in a liberalized market.

[8] This refers to the four biggest Thai companies.

[9] This refers to the smallest four Thai companies.

Table 6.3 (ii)

Expense Ratios by company type and year.

Company	Expense Ratio				
	1990	1991	1992	1993	Average
Thai Companies					
Big 4 Companies	31.50	25.20	24.19	22.34	**25.81**
Small 4 Companies	32.06	38.21	43.87	32.59	**36.68**
Foreign Companies					
The 5 companies	31.25	33.56	33.58	28.97	**31.84**

Source: Vichyanond (1996).

The last indicator chosen to demonstrate the competitiveness of the Thai companies in the non-life insurance market is the returns on assets (ROA). Table 3 (iii), below, provides the staticstics for this indicator.

Table 6.3 (iii)

Return on Assets by company type and year.

Company	ROA				
	1990	1991	1992	1993	Average
Thai Companies					
Big 4 Companies	7.38	8.99	6.77	4.97	**7.03**
Small 4 Companies	-2.18	2.50	3.51	-1.03	**0.70**
Foreign Companies The 5 companies	7.13	10.70	8.70	15.83	**10.59**

Source: Vichyanond (1996).

These ROAs indicate that the foreign companies have the best returns on assets, closely followed by the big Thai companies. The small Thai companies, however, seem to be facing difficulties in making their assets perform well and this is reflected in their low average ROA. Thus, the overall picture in the non-life insurance industry is one where no one company, foreign or Thai, dominates the market. Furthermore, the big Thai companies perform on or above par with the foreign companies. Only the small Thai companies seems be having problems competing

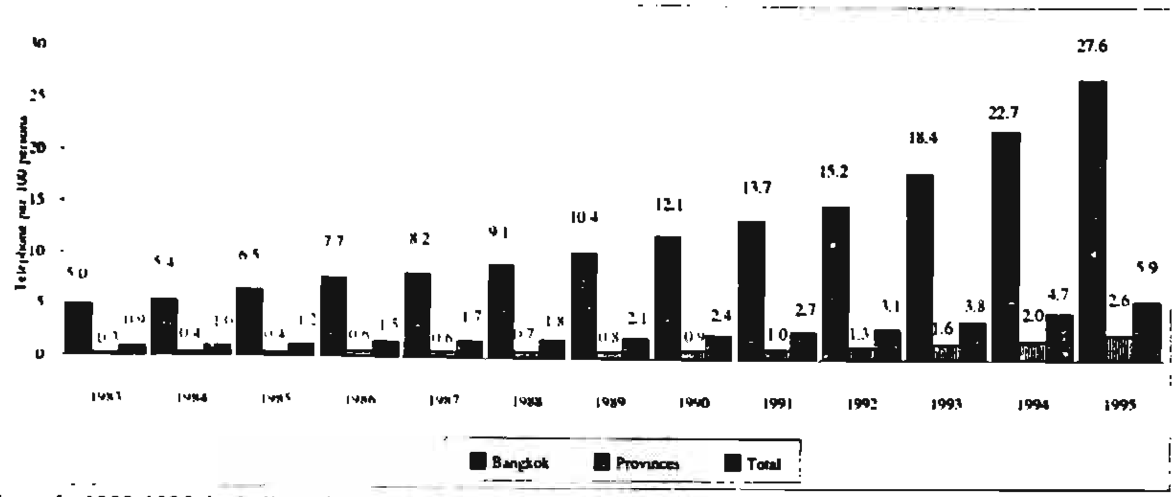
(b) Telecommunications

The Thai objectives for the telecommunications sector were the same as for the insurance sector, however, the motivations were different. The Thai government had to re-negotiate its commitments with private service providers in Thailand before it could liberalize the Thai market. However, the Thai government ultimate policy objective was to liberalize this sector. As in the previous sector, Thailand achieved its dual goals. Not only was the framework for future liberalization in this sector laid down but Thailand also did not have to liberalize its sector any further than it wished to. In fact, Thailand did not commit to its national schedule anything that had not already been open to foreign competition and did not add any further commitments. However, as in other service sectors, Thailand committed itself to future liberalization.

Thus once the domestic commitment have been resolved, Thailand can pursue a liberalization policy. Unlike the case of the insurance companies, the private Thai telecommunication companies are prepared to compete in a liberalized market. This assessment may be verified by examining the structure of the Thai telecommunication industry.

The telecommunications sector used to be dominated by the two government enterprises: Telephone Organization of Thailand and the Communications Authority of Thailand. These in effect were the regulators and the monopoly suppliers of telecommunication services. However, they proved unable to meet increased demand and as a result concessions were awarded to private companies. These companies, two in fixed line service provision and two more in mobile phones, along with other concessions in other services, have effectively doubled the provision of telephony services in the past four years (for fixed line service this may be seen in the graph below).

Figure 6.1 Telephone Density : A Comparison Between Bangkok and Provinces



Note : In 1993-1995, including telephone lines installed by TA and TT&T.
Source : TOT

As may be seen from Figure 6.1 above, the telephone densities of both the provinces and Bangkok have more than doubled since 1992, the year in which the first concession was awarded. Additional concessions to other private firms are being considered currently. The present performance of these companies would indicate the ability, and willingness, to compete in a liberalized market. However, a major weakness remains in the Thai telecommunications sector, this is the two public enterprises which have proved to be inefficient and uncompetitive. Their fate needs to be resolved prior to liberalizing the market.

7. Trade and the Environment

(a) The Trends

A major hurdle that the WTO will have to clear in the coming years is the one of the environment. Specifically, how will the WTO deal with environmental concerns and issues that impinge on international trade and its disciplines. An examination of the current trends will provide some idea of the challenges with which the WTO will be faced.

There are three main trends in the field of international trade and the environment. The first trend is the incorporation of environmental rules in international trade agreements. The main trend-setter here is NAFTA. As links between international trade and the environment become explicitely included in trade agreements, the WTO will have to modify or add new rules and disciplines to adapt to the new reality.

The second trend is unilateral moves. The degree of importance attached to the protection of the environment varies between countries and as such the measures they take will correspondingly vary. However, the WTO will face major challenges to its disciplines if these measures infringe on the trading rights of member countries. A now notorious example of a unilateral measure that impinged on the trading rights of a fellow member country is the Tuna-Dolphin case between the USA and Mexico. The WTO is likely to face more such challenges and will have to use the mechanisms at its disposals to deal with these.

The third and last trend is the one of voluntary measures. Examples of such measures are eco-labelling and ISO. The WTO need not concern itself with these as they are voluntary and ultimately place the choice of environmental protection in hands of the consumers. Thus unless these become mandatory then the WTO will not face any challenges from this type of measure.

(b) To intervene or not to intervene?

The question of when the WTO should intervene in the case of a trade dispute involving environmental measures will gain importance as environmental awareness increases and governments are increasingly pressured to take measures to protect the environment. This is a complex and difficult question, yet through the use of the table below it can be simplified into four situations. The following table depicts a two by two matrix that covers all possibilities for trade disputes. First, whether the product in question is covered by a Multilateral Environmental Agreement (MEA) or not, second, are both or only one of the countries signatories to the MEA.

Countries Status	Covered by MEA	Not covered by MEA
Both Members	1.	2.
One Member one non-member	3.	4.

Case 1. : Product is covered by MEA and both countries are Members of the MEA. In this case if one of the Members imposes trade sanctions on the other for a breach of the MEA then the WTO should not intervene. There should be dispute settlement mechanism in the MEA and the fact that it is covered by the MEA means that for signatories the WTO rules will not apply for this product.

Case 2. : Product is not in MEA but both countries are signatories. In this case the imposition of trade sanctions on the part of one country upon the other is contrary to WTO rules and as such the WTO may intervene. This is because the product does not fall under MEA and therefore is subject to WTO disciplines.

Case 3.: The product is covered by a MEA but one of the countries involved in the trade dispute is a non-members to the MEA. The WTO should intervene as the non-member cannot be sanctioned under an agreement to which it is not party to.

Case 4.: Neither the product is covered in the MEA nor are both countries members of the MEA. The only time that the WTO should not intervene in this case is if the country that applies the trade sanction does in a National Treatment fashion. That is to say that internally there are equivalent measures against the product in question and so, in effect, the exports from the other countries are not discriminated against. However, if it is not the case of National Treatment then the WTO should intervene.

(c) Policy Recommendations

Thailand will have to monitor external events and trends concerning the environment to insure that it remains abreast of the issue. Thailand should survey its own environmental institutions and policies to assess if they are sufficient to insure that trade and development policies are implemented in a sustainable manner. Furthermore, the natural resource and environmental policies should be strengthened and devised in such a manner that sustainable development is assured.

Free trade and protection of the environment both increase societal welfare. To sacrifice one for the other would be a short-sighted and ultimately injurious decision. To favour one over the other would eventually lead to a decrease in societal welfare as such it is the task of the Thai policy makers to devise an appropriate balance of the two.

8. Lessons for the future

(a) Trade Rules

The lessons for Thailand in the field of trade rules are quite simple. Now that the trade disciplines have been negotiated there promises to be a less chaotic international trading system. Thailand must insure that these disciplines are actually enforced and respected. This may be approached in a dual manner.

First, Thailand should insure that its legislation is in line with the WTO rules and that they are adhered to by the Thai trade authorities. Second, Thailand should defend these rules, whenever they are infringed. This should be done using the new trade dispute mechanism. This mechanism allows for consultations prior to the actual establishment of a panel. Therefore Thailand may not actually need to go before the trade dispute panel if the issue can be resolved in such consultations. Using the DS mechanism will lend credence and also encourage other countries to utilize it. Also, Thailand is likely to receive a fairer deal if it goes through the DS mechanism than if it engages in bilateral discussions, especially if the other party is a powerful trading nation or bloc.

Furthermore, the Thai trade authorities must change their attitude towards infringements of trade rights from a passive to an aggressive one. If Thailand allows other nations to infringe on its trading rights then it is tacitly agreeing to the weakening of the trade disciplines that were dearly sought for in the Uruguay Round.

This change in attitude may be possible only after internal changes to the institutional structure in Thailand. There will be an increasing need for Thailand to have a permanent organization that negotiates and protects Thai trading rights. This may take the form of the USTR or the Japan MITI or a third Thai version. There will also have to be improved monitoring procedures on the part of the Thai international trade authorities. This is to insure not only that the agencies hired to represent Thailand fulfill their contracts but also, more importantly, that the Thai officials gain experience and technical expertise in trade laws and disputes.

There is one more important lesson to be learnt from previous trade disputes is the need to the 'clean'. By "clean" it is meant that the Thai government and Thai companies should abide by WTO rules and by Thailand's own domestic laws. To illustrate this lesson two actual trade dispute cases may be drawn upon. These are the US-Thailand Canned Pineapple anti-dumping case and the New Zealand-Thailand Condensed Milk case.

Briefly, the facts of the cases are as follows. For the Pineapple case, the USTR initiated an anti-dumping case against Thai exports. This was because Thailand had lowered its export price to match the Indonesian prices, while having higher costs. The results of the case were that anti-dumping duties were imposed on the Thai companies. The reason why dumping was found rests solely on the shoulders of the Thai companies.

The explanation is as follows: the Board of Investment (BOI) of Thailand provided tax relief for the production of pineapple juice. Many of the pineapple exporting countries took advantage of this policy by fudging their accounts. In effect, what they did was to overstate the proportion of juice to canned production, thus receiving tax relief for what was in reality a portion of their canned production. Unfortunately for the Thai companies, the American investigators used the data from the BOI and thus found dumping.

The other case is the New Zealand-Thailand Condensed Milk Case. In this one, the company accused of receiving subsidies from the Thai government actually did not accept any subsidies from the government. As such, the company was cleared and no counter-vailing duties were applied. This company had been 'clean' and had thus avoiding being forced to pay additional duties.

(b) Negotiations

The main issue here is whether Thailand should pursue negotiations in individual sectors or participate in broad multi-sectoral negotiations. When the cases of the Thai insurance and telecommunications sectors are examined, it would seem to be that Thailand would be best served by individual sector negotiations. This is because the Thai companies in one sector may be prepared for liberalization while this may not be the situation in another sector. A brief analysis of the insurance and telecommunications sectors will provide the rationale for pursuing individual sector negotiations.

The Thai insurance companies are unprepared to compete in a liberalized market, especially in the domain of life insurance provision. Though liberalizing the market may force the Thai companies to become more efficient and competitive and weed out the uncompetitive companies, there are several risks involved in such a policy.

Insurance policies are a form of long-term savings for consumers. Thus there need to be prudential conditions imposed to insure that these savings are protected. If foreign firms were to dominate the market, and subsequently suffer financial difficulties and collapse, then Thai consumers would lose these savings even though their savings are in theory in Thailand and the Thai government would lack the means to intervene. Additionally, as these savings represent investment funds, there would be the risk that the foreign companies would not invest in Thailand, but rather repatriate these funds and invest in their home markets. In effect this would be a form of capital flight, which would be injurious to the Thai market. Thus the Thai policy makers need to consider whether the best interests of Thailand would be served by liberalizing.

Whereas liberalizing the insurance sector merits further consideration, the telecommunication sector would benefit now from such a policy, though with certain caveats. First, the Thai government need to re-negotiate the concessions for the private service providers. Second, the issue of the two public enterprises, Telephone Organization of Thailand and Communication Authority of Thailand, needs to dealt with, either by privatizing them or separating the roles of operator and regulator.

The Thai private service providers are not only competitive domestically, but also on a regional basis. Regional liberalization of telecommunications should be the goal for the Thai negotiators. This will enable the Thai companies to expand their external operations and become regional telecommunication service providers.

Thus, for trade in services, there exists a situation where Thailand would benefit from liberalization of one services sector but not from another. Therefore, individual sector negotiations would be best for Thailand as this would allow the liberalization of one sector and not the other. However, other countries may face similar situations involving other sectors, therefore, there may be a need to a broad multi-sectoral negotiations if there is to be any liberalization. This is because countries would be able to bargain cross-sector and thus have more elbow-room in the negotiations than if only a single sector was under negotiation.

A last lesson to drawn from previous negotiating experiences is the need for allies. Allies allow a division of labour in the negotiations and lend weight to the negotiating position. Thus, Thailand should seek to forge strong ties with its ASEAN partners in future negotiations. This will strengthen the Thai-ASEAN position in the negotiations and also allow each country to concentrate on a specific issue or sector.

9. Political economy of Thai negotiating policy

Externally, Thailand faced two major constraints in trying to achieve its objectives: it lacked bargaining power; and it lacked the resources, expertise and analytical skills to handle the range of complex issues being negotiated.

For some of the time, having little bargaining power meant doing nothing while the major powers did all the talking. Sometimes this led to a feeling of helplessness, particularly during the 1991-92 period when agriculture became a bilateral US-EU issue. But much of the time Thailand, and a number of other countries, tried to increase their bargaining power and to inject some of their own input into the final agreements. The main means was through coalition building.

Thailand participated in two major coalitions. It helped set up the Cairns Group and was the most active member of the group among ASEAN countries. The final impact of the Cairns Group on the Uruguay Round agriculture agreement is hard to measure because so much of what the Cairns Group proposed was similar or identical to the United States' proposals. The evidence - including comments from a whole range of negotiators interviewed - suggests that the existence of the Cairns Group weakened the resistance of the European Union and probably Japan. Accounts of the launching ministerial meeting in Punta del Este in 1986, the mid-term review in Montreal in 1988 and the abortive concluding conference in Brussels in 1990, all indicate that the Cairns Group's weight was felt.

For Thailand, membership of the Cairns Group undoubtedly meant much greater bargaining power, even when compared to the alternative of a dozen or so like-minded countries working together informally. The group's voice was clear, and its poorer members gained from the technical analysis provided in particular by Australia. But the peformance was not flawless. The Uruguay Round negotiations separated export subsidies, domestic supports and trade barriers on imports. For the crops of interest to countries such as Australia, Canada and Argentina, this distinction was valid, and the focus of the group's criticism against US policy was on export subsidies known as the Export Enhancement Program. For the crop of greatest interest to Thailand, rice, the Export Enhancement Program was a trivial measure because it was hardly ever used. The fact that most of US rice production is exported together with the combined effect of various domestic subsidies blurred the distinction between domestic support and export subsidy. Credit subsidies and income deficiency payments (the latter still permitted under the Uruguay Roung agreements, althoughwith weaker effect) were used specifically to set US domestic prices in a way that would keep rice exports competitive. The domestic supports were being used as export subsidies because such a small proportion of production was consumed domestically. The analysts at the Thai Agriculture Ministry and the negotiators at the Thai Commerce Ministry did not appreciate the distinction. As a result the Cairns Group did not address this issue, and subsidised US rice exports have escaped some of the disciplines imposed on export subsidies by the Uruguay Round agreement.

Thailand' s other major coalition was ASEAN. In some cases, this meant a slight increase in the country's voice. ASEAN was one of the first groups of developing countries to swing away from the hardline opposition to a new round during the preparations of 1985-86. It also made some moderately influential interventions in a number of Uruguay Round issues such as intellectual property and textiles. ASEAN officials met regularly in Geneva as the ASEAN Geneva Committee. Sometimes the outcome was a common ASEAN position, but some participants say the committee's most important role was for exchanging information. This underscores the fact that ASEAN was not just a means of increasing its members' bargaining power. Perhaps the most significant role that ASEAN played was to allow a division of labour among its members, a means of getting around the shortage of expertise and other resources. It allowed Thailand to concentrate on agriculture, Indonesia to concentrate on textiles, Malaysia and the Philippines to concentrate on vegetable oils and other tropical products, and Singapore to concentrate on some of the GATT rules. They were ASEAN's spokesmen in the respective issues.

There were other coalitions, but with a lower profile. The most important was the association of Southeast Asian Central Banks, SEACEN , which submitted an important proposal on financial services.

One of SEACEN's concerns was to prevent liberalization from turning into anarchy and an imprudent banking system.

Internally, the biggest problem for Thaliand was devising a coherent, comprehensive position that balanced the many issues and interests. There were two aspects to this problem. One was the almost complete lack of interest in Uruguay Round subjects in normal domestic political debate. Most of the positions were devised by officials, at best anticipating for example how farmers would react to prices depressed by an international subsidy war. The only industry group to take an interest throughout was textiles and garments. This group was forced to monitor developments because it had to track the quota regimes and bilateral negotiations under the Multifibre Arrangement. Even the Thai Bankers Association, normally a powerful and well-informed pressure group, had little to say on the financial services negotiations.

The second aspect was weakness in coordinating between the ministries concerned. This weakness ran all the way to the top, with Cabinet ministers, sometimes even from the same party, disagreeing on Uruguay Round policy. The clearest instance was when the Finance Ministry, under minister Tarrin Nimmanhaeminda (a Democrat) refused to put an improved market access offer on the table in the closing stages of negotiations in late 1993, early 1994. Deputy Prime Minister Supachai Pantichpakdi (also a Democrat), who was in overall charge of the Thai negotiators,wanted a new conditional offer that would be withdrawn if other countries did not respond. This offer would reduce the proposed bound tariff rates, but the bound rates would still be no lower - and often higher - than the actual rates charged by the Finance Ministry. Finance MinisterTarrin, who was preparing his own unilateral tariff cuts that would take effect from 1995, felt that any increased market access Thai exports might gain would not be worth the loss of flexibility resulting from lower bound rates, even if none of the bound rates were going to affect the rates that were actually being charged.

Sometimes the coordinating weaknesses were caused by territorial jealousy, as in the case of the market access bindings. Sometimes they were worsened by bad personal relations among officials in different as well as among the ministers themselves. Sometimes the weaknesses were simply the result of a lack of interest in some ministries even though those ministries had ultimate responsibility for the sectors being negotiated. For example, arousing the Transport and Communications Ministry's interest in the Uruguay Round proved a difficult task even though telecommunications (and to a lesser extent maritime transportation) became important sectors under negotiation.

But despite these internal weaknesses, externally Thailand acquired the reputation of an active participation in the round. And ultimately there was something for everyone. Even the Commerce Ministry, with its free-trade oriented negotiators, could be satisfied with the opportunities for rent seeking arising form the tariff quotas approved under the Uruguay Round agriculture agreement.

Appendix 1

List of Research Papers

Phanupong Nidhiprabha, P. Wrasai, A. Lim and J. Kennedy. (1996). *Evaluating the Uruguay Round Impact on the Thai Economy.* Thailand Development Research Institute. Bangkok

Wisarn Bupphaves, B. Nidhiprabha, C. Phuengphinij and J. Kennedy (1996). *The Effects of the Uruguay Round on Thailand's Exports* Thailand Development Research Institute. Bangkok.

Nipon Poapongsakorn and J. Kennedy (1996). *The Impact of Uruguay Round on Thailand's Agricultural Sector.* Thailand Development Research Institute. Bangkok.

Suphat Suphachalasai (1996). *The Effect of the GATT's Agreement under the Uruguay Round to Thai Textile Industry.* Thailand Development Research Institute. Bangkok.

Pakorn Vichayanond, N. Boonyaprapatsara and N. Farooq (1996). *The Impact of the Uruguay Round on the Assurance and Insurance Markets in Thailand.* Thailand Development Research Institute. Bangkok.

Nattapong Thongpakde and N.Farooq (1996). *Thailand's Telecommunication Sector and the General Agreement on Trade in Services.* Thailand Development Research Institute. Bangkok.

Tashmai Rikshasuta and N. Farooq (1996). *The Rules of WTO Multilateral Agreement and International Trade Policy Recommendations.* Thailand Development Research Institute. Bangkok.

Isra Santisart and N. Farooq (1996). *Customs Valuations, Pre-Shipment Inspection and Technical Barriers to Trade.* Thailand Development Research Institute. Bangkok.

Appendix 2
Thailand's Macroeconomic Model

Estimation Results

Foreign Trade Block :

(1) $\ln X_1^S = -3.239 + 0.424^{***} \ln P_1^x - 0.094 \ln P_1^d + 0.832^{***} \ln Y_1$

(-3.571) (2.998) (-0.318) (5.109)

Adjusted R-squared = 0.982 S.E. of regression = 0.076

Durbin-Watson stat = 2.347

X_1^S = export values of foods (real)

P_1^x = export price index of foods

P_1^d = domestic price index of foods

Y_1 = value added of foods

(2) $\ln X_2^S = -8.223 + 0.977^{***} \ln P_2^x - 1.124^{***} \ln P_2^d + 1.084^{***} \ln Y_2$

(-4.890) (5.838) (-4.862) (4.211)

Adjusted R-squared = 0.876 S.E. of regression = 0.167

Durbin-Watson stat = 1.663

X_2^S = export values of beverage and tobacco (real)

P_2^x = export price index of beverage and tobacco

P_2^d = domestic price index beverage and tobacco

Y_2 = value added of beverage and tobacco

(3) $\ln X_3^S = -20.165 + 0.953^{***} \ln P_3^x - 1.616^{***} \ln P_3^d + 2.341^{***} \ln Y_3$

(-9.418) (5.324) (-7.726) (10.904)

Adjusted R-squared = 0.904 S.E. of regression = 0.107

Durbin-Watson stat = 1.555

X_3^S = export values of crude materials (real)

P_3^x = export price index of crude materials

P_3^d = domestic price index of crude materials

Y_3 = value added of crude materials

(4) $\ln X_5^S = -7.813 + 0.311 \ln(RP_5^x) + 0.788 \ln Y_5$

(-1.084) (0.504) (1.148)

Adjusted R-squared = 0.465 S.E. of regression = 0.623

Durbin-Watson stat = 2.270

X_5^S = export values of animal and vegetable oils and fats (real)

RP_5^x = relative price of export price to domestic price index of animal and vegetable oils and fats

Y_5 = value added of animal and vegetable oils and fats

(5) $\ln X_6^S = -16.545 + 0.624 \ln P_6^x - 1.439^{**} \ln F_6^d + 2.600^{***} \ln Y_6$

(-10.215) (0.823) (-2.087) (7.901)

Adjusted R-squared = 0.989 S.E. of regression = 0.124

Durbin-Watson stat = 2.017

X_6^S = export values of chemicals (real)

P_6^x = export price index of chemicals

P_6^d = domestic price index of chemicals

Y_6 = value added of chemicals

$$(6)\ \ln X_7^S = -10.041 + 1.296^{***}\ \ln P_1^x - 1.667^{***}\ \ln P_7^d + 1.411^{***}\ \ln Y_7$$

(-12.717) (3.585) (-3.896) (12.856)

Adjusted R-squared = 0.984 S.E. of regression = 0.102

Durbin-Watson stat = 1.911

X_7^S = export values of manufactured goods (real)

P_7^x = export price index of manufactured goods

P_7^d = domestic price index of manufactured goods

Y_7 = value added of manufactured goods

$$(7)\ \ln X_8^S = -11.387 + 1.047^{*}\ \ln P_8^x - 0.314\ \ln P_8^d + 1.469^{***}\ \ln Y_8$$

(-3.210) (1.969) (-0.175) (4.423)

Adjusted R-squared = 0.982 S.E. of regression = 0.198

Durbin-Watson stat = 1.450

X_8^S = export values of machinery (real)

P_8^x = export price index of machinery

P_8^d = domestic price index of machinery

Y_8 = value added of machinery

$$(8)\ \ln X_9^S = -5.688 + 1.059^{***}\ \ln P_9^x - 0.665^{**}\ \ln P_9^d + 1.016^{***}\ \ln Y_9$$

(-7.152) (3.458) (-2.562) (7.577)

Adjusted R-squared = 0.996 S.E. of regression = 0.087

Durbin-Watson stat = 1.244

X_9^S = export values of miscellaneous manufactured goods (real)

P_9^x = export price index of miscellaneous manufactured goods

P_9^d = domestic price index of miscellaneous manufactured goods

Y_9 = value added of miscellaneous manufactured goods

$$(9) \ln P_1^X = -4.456 + 0.595^{***} \ln P_1^W + 1.476^{***} \ln Y_t^f - 0.334^{***} \ln X_1^D + 0.429^{***} \ln P_1^X(-1)$$

$$(-5.992)\ (5.122)\qquad (4.126)\qquad (-2.600)\qquad (4.449)$$

Adjusted R-squared = 0.961 S.E. of regression = 0.072

Durbin-Watson stat = 1.857

Breusch-Godfrey Serial Correlation LM Test: F-statistic = 0.115 [0.891]

P_1^X = export price index of foods

P_1^W = world food price index

Y_t^f = world gross domestic products index

X_1^D = export value of foods (real)

$$(10) \ln IM_1 = -19.849 - 0.381 \ln RP_1^{im} + 1.758^{***} \ln Y_t$$

$$(-9.168)\ (-1.208)\qquad (11.436)$$

Adjusted R-squared = 0.978 S.E. of regression = 0.127

Durbin-Watson stat = 1.830

IM_1 = import values of foods (real)

RP_1^{im} = relative price of import price to domestic price index of foods

Y_t = gross domestic products (real)

$$(11) \ln IM_2 = -12.991 - 0.801^{**} \ln P_2^{im} + 0.059 \ln P_2^d + 1.388^{***} \ln Y_t$$

$$(-3.639)\ (-2.133)\qquad (0.112)\qquad (3.695)$$

Adjusted R-squared = 0.753 S.E. of regression = 0.221

Durbin-Watson stat = 1.945

IM_2 = import values of beverage and tobacco (real)

P_2^{im} = import price index of beverage and tobacco

P_2^d = domestic price index of beverage and tobacco

Y_t = gross domestic products (real)

$$(12)\ \ln IM_3 = -17.069 - 0.410^{***} \ln P_3^{im} + 1.732^{***} \ln Y_t$$

(-17.416) (-2.741) (15.816)

Adjusted R-squared = 0.977 S.E. of regression = 0.109

Durbin-Watson stat = 1.910

IM_3 = import values of crude materials (real)

P_3^{im} = import price index of crude materials

Y_t = gross domestic products (real)

$$(13)\ \ln IM_4 = -5.248 - 0.134^{*} \ln P_4^{im} + 0.846^{***} \ln Y_t$$

(-3.018) (-1.789) (6.714)

Adjusted R-squared = 0.949 S.E. of regression = 0.086

Durbin-Watson stat = 1.747

IM_4 = import values of mineral fuels and lubricant (real)

P_4^{im} = import price index of mineral fuels and lubricant

Y_t = gross domestic products (real)

$$(14)\ \ln IM_5 = -5.095 - 1.515^{**} \ln P_5^{im} + 2.721^{***} \ln P_5^{d} + 0.113 \ln Y_t$$

(-1.099) (-2.070) (3.917) (0.240)

Adjusted R-squared = 0.561 S.E. of regression = 0.520

Durbin-Watson stat = 1.004

IM_5 = import values of animal and vegetable oils and fats (real)

P_5^{im} = import price index of animal and vegetable oils and fats

P_5^{d} = domestic price index of animal and vegetable oils and fats

Y_t = gross domestic products (real)

$$(15)\ \ln IM_6 = -14.306 - 1.035^{***} \ln P_6^{im} + 1.102^{***} \ln P_6^{d} + 1.430^{***} \ln Y_t$$

(-16.240) (-3.803) (2.509) (24.820)

Adjusted R-squared = 0.987 S.E. of regression = 0.068

Durbin-Watson stat = 2.068

IM_6 = import values of chemicals (real)

P_6^{im} = import price index of chemicals

P_6^{d} = domestic price index of chemicals

Y_t = gross domestic products (real)

$$(16)\ \ln IM_7 = -19.073 - 0.610^{**} \ln P_7^{im} + 0.018 \ln P_7^{d} + 2.010^{***} \ln Y_t$$

(-9.634) (-2.311) (0.053) (10.218)

Adjusted R-squared = 0.975 S.E. of regression = 0.120

Durbin-Watson stat = 1.783

IM_7 = import values of manufactured goods (real)

P_7^{im} = import price index of manufactured goods

P_7^{d} = domestic price index of manufactured goods

Y_t = gross domestic products (real)

$$(17)\ \ln IM_8 = -24.754 - 1.285^{***} \ln P_8^{im} + 0.398 \ln P_8^{d} + 2.544^{***} \ln Y_t$$

(-5.463) (-2.553) (0.791) (5.662)

Adjusted R-squared = 0.963 S.E. of regression = 0.140

Durbin-Watson stat = 1.901

IM_8 = import values of machinery (real)

P_8^{im} = import price index of machinery

P_8^{d} = domestic price index of machinery

Y_t = gross domestic products (real)

(18) $\ln IM_9 = -11.324 - 0.589^{***} \ln(RP_9^{im}) + 1.165^{***} \ln Y_t$

(-5.629) (-3.673) (8.150)

Adjusted R-squared = 0.937 S.E. of regression = 0.135

Durbin-Watson stat = 1.958

IM_9 = import values of miscellaneous manufactured goods (real)

RP_9^{im} = relative price of import price to domestic price index of miscellaneous manufactured goods

Y_t = gross domestic products (real)

Real Block :

(19) $C_t^P = 31192.25 + 0.530^{***} C_{t-1}^P + 0.365^{***} Y$

(1.929) (3.382) (3.885)

Adjusted R-squared = 0.999 S.E. of regression = 13571.98

Durbin-Watson stat = 1.734

C_t^P = private consumption expenditures

Y_t = gross domestic products

(20) $I_t^P = -40781.38 + 0.744^{***} I_t^P(-1) + 0.138^{***} Y_t - 1646.379$ MLR

(-1.347) (4.826) (2.604) (0.521)

-91077.85^{***} D90

(0.0005)

Adjusted R-squared = 0.982 S.E. of regression = 255292.5

Durbin-Watson stat = 1.259

I_t^p = private capital formation expenditure (real)

Y_t = gross domestic products (real)

MLR = Minmum lending rate

D90 = Dummy variables (1990 = 1, Ohterwise = 0)

(21) $TAX_t = -42370.258^{**} + 0.862^{***} TAX_t(-1) + 0.075^{***} Y_t$

(-2.498) (7.735) (2.641)

Adjusted R-squared = 0.995 S.E. of regression = 13234.93

Durbin-Watson stat = 1.208

TAX_t = goevernment tax revenue

Y_t = gross domestic products (real)

Price Block :

(22) $P_t^d = -18.464 + 0.368^{***} P_t^{im} + 27.029^{***} (Y_t/Y^*_t) + 0.595^{***} P_t^d(-2)$

(-2.234) (6.381) (3.882) (7.657)

Adjusted R-squared = 0.990 S.E. of regression = 0.037

Durbin-Watson stat = 1.327

P_t^d = GDP deflator

P_t^{im} = aggregate import price index

Y_t/Y^*_t = excess capacity output (real)

(23) $\ln P_1^d = 0.097 + 0.976^{***} \ln P_t^d$

(0.634) (28.386)

Adjusted R-squared = 0.995 S.E. of regression = 0.026

Durbin-Watson stat = 2.177

P_1^d = domestic price index of foods

P_t^d = GDP deflator

(24) $\ln P_2^d = -0.041 + 0.252^{**} \ln P_t^d + 0.759^{***} \ln P_2^d(-1)$

(-0.316) (2.309) (7.940)

Adjusted R-squared = 0.987 S.E. of regression = 0.052

Durbin-Watson stat = 1.663

Breusch-Godfrey Serial Correlation LM Test: F-statistic = 0.654 [0.531]

P_2^d = domestic price index of beverage and tobacco

P_t^d = GDP deflator

(25) $\ln P_3^d = 0.203 + 0.351^{**} \ln P_t^d + 0.607^{***} \ln P_3^d(-1)$

(1.152) (2.309) (4.469)

Adjusted R-squared = 0.968 S.E. of regression = 0.076

Breusch-Godfrey Serial Correlation LM Test: F-statistic = 1.842 [0.185]

P_3^d = domestic price index of crude materials

P_t^d = GDP deflator

$$\ln P_4^d = -129.507 + 2.652^{***} \ln P_t^d \tag{26}$$

(-0.017) (4.989)

Adjusted R-squared = 0.966 S.E. of regression = 0.115

Durbin-Watson stat = 1.918

P_4^d = domestic price index of mineral fuels and lubricant

P_t^d = GDP deflator

$$\ln P_5^d = 0.359 + 0.255 \ln P_t^d + 0.664^{***} \ln P_5^d(-1) \tag{27}$$

(1.951) (1.738) (4.803)

Adjusted R-squared = 0.957 S.E. of regression = 0.083

Breusch-Godfrey Serial Correlation LM Test: F-statistic = 2.166 [0.142]

P_5^d = domestic price index of animal and vegetable oils and fats

P_t^d = GDP deflator

$$\ln P_6^d = 1.448 + 0.671^{***} \ln P_t^d \tag{28}$$

(3.292) (6.860)

Adjusted R-squared = 0.970 S.E. of regression = 0.054

Durbin-Watson stat = 1.495

P_6^d = domestic price index of chemicals

P_t^d = GDP deflator

(29) $\ln P_7^d = 0.043 + 0.476^{***} \ln P_t^d + 0.826^{***} \ln P_7^d(-1) - 0.310^{**} \ln P_7^d(-2)$

(0.252) (3.318) (4.297) (-2.018)

Adjusted R-squared = 0.979 S.E. of regression = 0.058

Breusch-Godfrey Serial Correlation LM Test: F-statistic = 0.565[0.578]

P_7^d = domestic price index of manufactured goods

P_t^d = GDP deflator

(30) $\ln P_8^d = 0.809 + 0.808^{***} \ln P_t^d$

(1.911) (8.915)

Adjusted R-squared = 0.995 S.E. of regression = 0.024

Durbin-Watson stat = 1.683

P_8^d = domestic price index of machinery

P_t^d = GDP deflator

(31) $\ln P_9^d = 0.426 + 0.392^{***} \ln P_t^d + 0.519^{***} \ln P_9^d(-1)$

(2.851) (3.098) (3.781)

Adjusted R-squared = 0.970 S.E. of regression = 0.062

Breusch-Godfrey Serial Correlation LM Test: F-statistic = 0.735[0.492]

P_9^d = domestic price index of miscellaneous manufactured goods

P_t^d = GDP deflator

(32) $\ln CF_t = -8.705 + 0.294\ \Delta\ln(r^d - r^f) - 7.992^{*}\Delta\ln e_t - 3.655\ \ln(P_t^d/P_t^f) + 2.477\ \ln Y_t^f$

(-1.756) (0.481) (-1.818) (-1.174) (1.627)

$+ 0.741^{**}\ \ln CF(-1)$

(2.522)

Adjusted R-squared = 0.850 S.E. of regression = 0.539

Breusch-Godfrey Serial Correlation LM Test: F-statistic = 0.403 [0.674]

CF_t = net capital inflows

$r^d - r^f$ = interest rate differentials (MLR/LIBOR)

e_t = bilateral exchange rate (BAHT/U.S.dollar)

$P_t^d\ P_t^f$ = relative price of domestic and foreign price index (GDP deflator/WPIUS)

Y_t^f = world gross domestic product index

Notes : * indicates significance at 90% confidence interval

** indicates significance at 95% confidence interval

*** indicates significance at 99 % confidence interval

The figures in round parentheses below the estimated coefficients are student t- statistics

Bibliography

Brandao, A.A.P. and Martin, W. 1993. "Implications of Agricultural Trade Liberalization for the Developing Countries". *Agricultural Economics*. 8 : 313-43.

Duncan, Ron ; Robertson, David and Yang, Young Zheng. 1995. "Analysis of the Benefits and Challenges Facing Asia-Pacific Agricultural Exporting Countries in the Post-Uruguay round Period". *Benefits and Challenges Facing Asia-Pacific Agricultural Trading Countries in the Post-Uruguay Round Period*. ESCAP.

Farooq, Navaid, 1996. Customs Valuation, Pre-Shipment Inspection and Technical Barriers to Trade.

GATT Secretariat. 1993. *Modalities for the Establishment of Specific Binding Commitment under the Reform Programme*. 20 December 1993.

GATT. 1994. Results of the Uruguay Round of Multilateral Trade Negotiations : Market Access for Goods and Service. Geneva.

Goldin, Ian and Mensbrugghe, Dominique van der. 1995. "The Uruguay Round : An Assessment of Economywide and Agricultural Reforms". *Draft paper prepared for the World Bank Conference on the Uruguay Round*. 26-27 January 1995. The World Bank.

Hathaway, Dale E. and Ingcon, Merlinda D. 1995. "Agricultural Liberalization and the Uruguay Round". *paper for presentation to the World Bank Conference on" The Uruguay Round and the Developing Economies"*. 26-27 January 1995. The World Bank.

Ingco, M. 1995. "Agricultural Trade Liberalization in the Uruguay Round : One Step Forward, One Step Back". *Background Paper for the World Bank Conference on the Uruguay Round and the Developing Economies*. Washington, D.C., 26-27 January 1995.

Nidhipraha, Bhanupong ; Wrasai, Phong thorn ; Lim, Aunkung and Kennedy, Jennifer. 1996. Evaluating the Uruguay Round Impact on the Thai Economy. Bangkok : Thailand Development Research Institute.

Poapongsakorn, Nipon. 1996. *The Uruguay Round and Thailand's Agricultural Sector* Bangkok : Thailand Development Research Institute.

Pupphavesa, Wisan ; Nidhipradha Bhanupong ; Phuengphinij, Chada and Kennedy, Jennifer. 1996. *The Effects of the Uruguay Round on Thailand's Exports.* Bangkok : Thailand Devèlopment Research Institute.

Rikshasuta, Tashmai and Farooq, Navaid. 1996. The Rules of WTO Multilateral Agreement and Internaational Trade Policy Recommondations. Bangkok : Thailand Development Research Institute.

Schoenbaum, Thomas J. An Assessment of the Antidumping Laws After the Uruguay Round Reforms.

Siamwalla, Ammar. 1995. "World Agricultural Trade after the Uruguay Round : Disarray Forever?". *Paper prepared for Asian Development Bank Project on "The Impact of the Uruguay Round on Asia : Agriculture Agreement."*

Suphachalasai, Suphat. 1996. The Effect of the GATT's Agreement under the Uruguay Round to Thai Textile Industry. Bangkok : Thailand Development Research Institute.

Thongpakde, Nattapong and Farooq, Navaid. 1996. Thailand's Telecommunication Sector and the General Agreement on Trade in Services. Bangkok : Thailand Development Research Institute.

Ungpakorn, Peter Mytri. 1996. Political Economy of Thai Negotinating Policy. Bangkok : Thailand Development Resarch Institute.

United Stales Department cf Agriculturaes. 1994. Effects of the Uruguay Round Agreement on U.S. Agricultural Commodities.

Vanzetti, David ; Andrews, Neil ; Hester, Susan and Fisher, Brian S. 1994. "U.S.-E.C. Agricultural Trade Relations and the Uruguay Round : A Cairns Group Perspective". Chapter 13 of Anania, G. ; Cater, C.A. ; McCalla, Alex F. (eds.). *Agricutural Trade Conflicts and GATT : New Dimensions in North-American-European Agricultural Trade Relations* : Westview, Boulder, CO.

Vichayanond Pakorn ; Boanyaprapgtsara, Nattachai and Farooq, Navaid. 1996. The Impact of the Uruguay Round on the Assuramee and Insurromce Markets in Thailand. Bangkok : Thailand Development Resarch Institute.

WTO. 1995. Trade policy Review of Thailand 1995.