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Explaining Liberalization Commitments in Financial Services Trade

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Abstract

Harms, Mattoo, and Schuknecht examine the determinants of market access commitments in international financial services trade in the General Agreement on Trade in Services (GATS). Based on a theoretical model, they investigate empirically the role of domestic political economy forces, international bargaining considerations, and the state of complementary policy.

The empirical results confirm the relevance of the authors' model in explaining banking and (to a somewhat lesser degree) securities services liberalization commitments. The findings imply that those who seek greater access to developing country markets for financial services must do more to counter protectionism at home in areas of export interest for developing countries.

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Explaining Liberalization Commitments in Financial Services Trade

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Contents

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1. Introduction

Even though services have a large share in value-added and trade in most countries, the literature analysing services trade policies is quite limited. Existing studies focus mostly on certain theoretical issues (e.g., Markusen, 1989) and on measuring the costs of protection or identifying the consequences of trade liberalisation in specific services sectors (see Hoekman and Primo-Braga, 1997 for a survey). There has so far been no attempt to examine the determinants of services trade policy.

Since a major round of trade negotiations is underway at the WTO, one of the main objectives of which is to improve market access commitments in services, it seems worthwhile to ask: what influenced the level of commitments in the past? This paper attempts a first response to this question by focusing on the agreement on financial services that was concluded in the context of the General Agreement on Trade in Services (GATS).[1] While the agreement evoked wide participation from both developed and developing countries, there were significant differences between countries in their levels of market access commitments. We try to explain these differences by highlighting the role of three main factors.

First, we follow the considerable theoretical and empirical literature which argues that trade policy formation is determined by self-interested politicians granting protection or liberalisation to special interests (for surveys see Hillman, 1989, Magee, 1997, Gawande and Krishna, 2002). We present a simple model in which a distributional conflict between the domestic banking sector and the interest of workers determines the choice of trade policy. A government's propensity to commit to financial sector liberalisation thus depends on the stakes and the relative strengths of these interest groups in the domestic political process.[2]

[1] The agreement was concluded in December 1997 and its results came into effect on 1 March 1999.

[2] Since in our model wages are proportional to aggregate income, it actually allows two interpretations: trade policy is determined by the relative strengths of the interests of banks and workers, or by politicians' concerns over special interest support (from banks) relative to social welfare (as measured by aggregate income).

Secondly, we emphasise the importance of international strategic considerations and show that the possibility of exchanging market access concessions across sectors in the future may induce countries to withhold liberalisation today. The importance of this dimension in WTO negotiations has been discussed, for example, by Grossman and Helpman (1995a) and Hillman and Moser (1996), and it seems particularly relevant to the financial services sector: the GATS agreement was concluded in a separate single-sector negotiation which continued after the conclusion of the Uruguay Round, and participants must have had a reasonable expectation of future multi-sector negotiations. Moreover, the incentive to trade off current gains from unilateral liberalisation against even larger gains from reciprocal opening in the future would seem to be most important for countries that faced high protection in their areas of export interest *and* possessed, alone or as a group, sufficient negotiating leverage to extract liberalisation commitments from their trading partners.

There is, in fact, some evidence that developing country members of coalitions (explicit and implicit), like the Cairns group of agricultural exporters and the group of developing countries which faced quantitative restrictions on their textile exports under the former Multi-Fibre Agreement, were reluctant to open their financial markets in the WTO negotiations. The absence of an own export interest in financial services was frequently cited as a reason for these countries' grudging participation in the negotiations as well as for the fact that the GATS commitments sometimes turned out to be even more restrictive than past practice (Mattoo, 2000).[3] This reluctance to liberalise contrasts with the fairly liberal commitments made by more developed countries, which either had an export interest in financial services or already open domestic markets. It also contrasts with the commitments of several Eastern European countries which had already made deep market-opening commitments as part of their WTO accession

[3] For example, India issued 15 licenses every year for new foreign bank branches, but committed under the GATS to issue only 12 new licenses; the Philippines allowed up to 60 percent foreign ownership but promised only a maximum of 51 per cent. The major sticking point in the negotiations with several other countries, like Brazil, Indonesia, Malaysia, Pakistan and Thailand, was not the degree of liberalisation they would undertake, but whether they could be induced to commit to the *status quo*. Eventually, these countries promised to protect the rights of

negotiations, and with the policy of several small countries which were not part of any export coalition and presumably had little reason to delay liberalisation.[4] These observed differences suggest that, ceteris paribus, the persistence of financial services protection can be explained by membership of a coalition seeking improved access in heavily protected areas in other countries.

Finally, in an area like financial services, a government's decision to liberalise may be affected by the economic environment, particularly the degree of macroeconomic stability and the quality of prudential regulation. The relationship of liberalisation with these two variables is, however, not obvious. For example, the East Asian financial crisis, during which the financial services negotiations were concluded, revealed conflicting views. On the one hand, macroeconomic instability and regulatory inadequacies were seen as a legitimate cause for a government to hesitate to liberalise. It was argued that, at the very least, weaknesses in complementary policy create increased uncertainty about the consequences of greater openness, which in itself is likely to inhibit a risk-averse government.[5] On the other hand, it has been argued that liberalisation should be seen as part of the remedy for these problems and not be held hostage to their resolution, i.e. the presence of foreign banks could be a stabilising factor and help improve the regulatory environment (Claessens, 2002, Barth et al., 2000b and 2001).[6]

Our aim is to investigate whether the forces outlined in the preceding paragraphs had a significant impact on countries' willingness to commit to financial sector liberalisation in the GATS negotiations. To this end, we proceed as follows: the next section presents a simple model of endogenous trade policy with respect to financial services and formally derives hypotheses on the determinants of financial sector liberalisation. In the second part, we test the model's hypotheses, using indices on financial services protection that are based on countries' commitments in recent GATS negotiations. We find that banking services liberalisation and to a

foreign financial institutions already established in these markets – e.g. by not fully implementing the indigenisation program in Malaysia – but did not provide improved access for new firms.

[4] Note, however, that the distinction between country groups is not that clear-cut. Hence, countries like Australia, Canada, New Zealand, Poland, and Romania were also members of bargaining coalitions.

[5] The Malaysian response to the crisis, in terms of restrictions on capital mobility, may have reflected this view.

somewhat lesser extent securities related services liberalisation is explained well by our theoretical framework. Greater financial sector development and a high degree of unionisation of domestic workers are positively correlated with liberalisation commitments. The possibility for a country of exchanging concessions across sectors in future leads to a more protectionist regime today. In addition, the study confirms that a greater propensity to make liberalizing commitments is correlated with greater macroeconomic stability, better prudential regulation, and greater existing market penetration by foreign firms. The presentation of our empirical results is followed by the study's conclusions. Several appendices describe the construction of our financial sector liberalisation indices and provide the sources and properties of the data we used.

2. A model of endogenous protection in financial services

There is a large literature which argues that financial sector liberalisation improves the allocation of capital by enhancing competition among banks, reducing transaction costs for foreign trade, and reinforcing the dissemination of information and skills.[7] In this paper, we restrict our attention to the pro-competitive effects of reduced protection in the financial services industry. Even though this narrow focus excludes some important aspects of trade in financial services, our framework will enable us to present some key arguments simply and transparently.

2.1 The economic framework

2.1.1Firms

We consider a small open economy which is specialised in the production of a single traded good, but consumes a basket of goods and services whose world-market price is normalised to

[6] The Korean liberalisation during the crisis, ending the restrictions on foreign presence, as part of the adjustment program negotiated with the IMF, may have reflected this view.

one and used as the numeraire.[8] In every period, the representative domestic firm uses the Cobb-Douglas technology

$$Y_t = S_t^{\alpha} L_t^{1-\alpha} \ , \tag{1}$$

where S_t and L_t represent the amount of financial services and labour used in period t. We assume that labour supply is fixed and normalised to one and that the labour market is perfectly competitive.

The firm sells its good at an exogenous world market price γ_t, which is affected by the (implicit or explicit) trade barriers imposed by foreign countries. Without loss of generality we assume that, under free trade in goods, the price of the export good equals one, while it is smaller than one if domestic exporters face foreign protection.

Financial services are provided at a price p_t, and the firm's profit-maximising demand for such services is given by

$$S_t = (\alpha\gamma_t / p_t)^{\frac{1}{1-\alpha}}, \tag{2}$$

which implies that the elasticity of the demand for financial services is $1/(1-\alpha)$. The equilibrium wage rate is

$$w_t(\gamma_t, p_t) = (1-\alpha)(\gamma_t)^{1/(1-\alpha)}(\alpha / p_t)^{\alpha/(1-\alpha)}, \tag{3}$$

which is obviously increasing in γ_t and decreasing in p_t.

[7] For more detail, see Claessens et al. (2001), Claessens and Glaessner (1997), Finger and Schuknecht (2001), Francois and Schuknecht (1998), Kono and Schuknecht (2000), Buch (1997), and Levine (1997).

2.1.2 Profits and wages with a protected banking sector

We assume that there is one domestic provider of financial services (a "bank") who faces constant average costs $c < 1$.[9] If foreign banks are not allowed to compete on the domestic market the bank charges the profit-maximising price $p_t = c/\alpha$, which generates the profit

$$\Pi_t^M(\gamma_t) = (1-\alpha)(\alpha\gamma_t)^{1/(1-\alpha)}(\alpha/c)^{\alpha/(1-\alpha)}, \tag{4}$$

where the superscript "M" refers to the case that the bank has monopoly power. It follows from (3) that the wage rate associated with a monopolistic banking sector is

$$w_t^M(\gamma_t) = (1-\alpha)(\gamma_t)^{1/(1-\alpha)}\alpha^{\alpha/(1-\alpha)}(\alpha/c)^{\alpha/(1-\alpha)}. \tag{5}$$

2.1.3 Profits and wages with free trade in financial services

If the government allows foreign banks to enter the domestic market, the bank loses its monopoly position and has to adjust its pricing behaviour to the fact that it faces foreign competition. We assume that, due to better access to information, existing networks etc., the domestic bank has a cost advantage on the domestic market, and that foreign banks produce financial services at constant average costs $c^F = 1$. As a result, the maximum price the domestic bank can charge after liberalisation is $p = 1$, which yields the profit

$$\Pi_t^C(\gamma_t) = (1-c)(\alpha\gamma_t)^{1/(1-\alpha)}, \tag{6}$$

[8] We assume that this basket consists of a continuum of goods and services. Hence, small changes in the price of one good do not affect the value of the basket.

[9] Alternatively, we could assume that there are several domestic banks who coordinate their pricing behaviour.

where the superscript "C" refers to the fact that free trade results in competition among banks. We assume that $c > \alpha$, i.e. that the monopoly price is greater than one. Hence, the bank's profit decreases as a result of financial liberalisation. The wage with competition in the banking sector is

$$w_t^C(\gamma_t) = (1-\alpha)(\gamma_t)^{1/(1-\alpha)}\alpha^{\alpha/(1-\alpha)}. \tag{7}$$

Since $c > \alpha$ it holds that $w^C > w^M$ for a given value of γ_t: if there is competition in the banking sector, the price of financial services decreases, which raises the firm's demand for these services and thus the marginal product of labour and the wage rate. Hence, while the bank would like to prevent foreign competitors from entering the domestic market in order to maintain its monopoly power, domestic workers would benefit if firms had cheaper access to financial services.

2.2 Time structure and choice of trade policy

We assume that in period 0 the government participates in negotiations on financial sector liberalisation which are *not* associated with negotiations over trade policies in other sectors. The government seeks to maximise the "political support" it receives from domestic workers and from the domestic bank, and makes its liberalisation choice accordingly. For simplicity we do not explicitly model the international negotiating process but rather treat the domestic government's decision as a unilateral step. As justification for this simplification, we note that the domestic political support function describes the payoffs that ultimately determine the government's behaviour in negotiations.

Both workers and the bank have an infinite time horizon. While workers' support rises in the expected present value of wages, the bank's support increases in the expected present value of its profits. Specifically, we assume that the *political support* in period 0 is given by

$$V = \omega\left[\sum_{t=0}^{\infty} 0.5^t E_0(w_t)\right] + \left[\sum_{t=0}^{\infty} 0.5^t E_0(\Pi_t)\right], \tag{8}$$

where E_0 is the expectations operator. The exogenous weight ω reflects the relative political impact of workers, which depends on the two interest groups' willingness to spend resources on lobbying, on their ability to overcome problems of collective action etc.[10]

The concept of a "political support function" goes back to Peltzman (1976) and is used by Hillman and Moser (1996) and Grossman and Helpman (1994, 1995a, 1995b) in their analysis of trade policy. Grossman and Helpman (1994) present a sophisticated derivation of a reduced form similar to a static version of (8), which is based on the notion that incumbent governments maximize the sum of financial support they receive from special interest groups, but also take into account the effects of their policies on social welfare. In our framework, the maximisation of wages coincides with the maximisation of aggregate income. Hence, the first part of the political support function in (8) may also be interpreted as reflecting the government's concern for social welfare.

If the government commits to liberalise trade in financial services in period 0, foreign banks will immediately enter the domestic market and competition will drive the price of financial services down to one in the current and all future periods. On the other hand, if the government does not commit in period 0, it may enter another round of negotiations at some later date. Our crucial assumption is that future negotiations over financial services trade will possibly be linked to negotiations over trade in other goods and services. This implies that in the future the domestic government may exchange a commitment on financial sector liberalisation against foreign market liberalisation for domestic exporters, raising the world market price of the domestic good to one. Without modelling the details of future negotiations we assume that the

[10] The choice of a discount factor of 0.5 will later simplify the algebra, but is not crucial for our results.

probability of such a successful exchange of market access in any future period is q, the magnitude of which depends both on the domestic government's bargaining power and the political objectives of foreign governments.

It is easy to show that the political support the government gets if it liberalises in period 0 at the prevailing world market price of γ_0 is given by

$$V^L(\gamma_0) = 2\left[\omega w^C(\gamma_0) + \Pi^C(\gamma_0)\right]. \tag{9}$$

On the other hand, the political payoff from not liberalising is

$$\begin{aligned} V^N(\gamma_0) = {} & \omega w^M(\gamma_0) + \Pi^M(\gamma_0) \\ & + 0.5\left\{q \cdot \max\left[V^L(1), V^N(\gamma_0)\right] + (1-q) \cdot \max\left[V^L(\gamma_0), V^N(\gamma_0)\right]\right\}. \end{aligned} \tag{10}$$

The term in curly brackets reflects agents' anticipation that a government that does not liberalise today may still choose to do so tomorrow, maybe on better terms. Comparing (9) and (10), we can derive a condition that is both necessary and sufficient for making the government prefer liberalisation at $t = 0$:

$$\omega\left\{w^C(\gamma_0) - w^M(\gamma_0) - q\left[w^C(1) - w^C(\gamma_0)\right]\right\} \geq \Pi^M(\gamma_0) - \Pi^C(\gamma_0) + q\left[\Pi^C(1) - \Pi^C(\gamma_0)\right]. \tag{11}$$

The LHS in (11) reflects the trade-off faced by domestic workers: while they benefit from immediate financial liberalisation, the combination of a competitive financial sector with less protection for domestic exporters would represent the best of all worlds for them, since both the higher output price and the lower price of financial services increase the real wage. The negative term on the LHS of (11) demonstrates that this reduces workers' interest in immediate

financial sector liberalisation. On the other hand, the prospect of linking financial liberalisation to a price increase of the export good reinforces the domestic banks' resistance against the immediate removal of entry barriers. This is shown by the second term on the RHS of (11), which is unambiguously positive.

Defining $\psi \equiv \left(1-\gamma_0^{1/(1-\alpha)}\right)/\gamma_0^{1/(1-\alpha)}$ and using (4) – (7), one can show that the condition in (11) is equivalent to

$$\omega \geq \alpha \frac{(\alpha/c)^{\alpha/(1-\alpha)} - (1-\psi q)(1-c)/(1-\alpha)}{1-\psi q - (\alpha/c)^{\alpha/(1-\alpha)}} \equiv \tilde{\omega}, \tag{12}$$

if $q < \bar{q}$, with $\bar{q} \equiv \frac{\left[1-(\alpha/c)^{\alpha/(1-\alpha)}\right]}{\psi}$.

If $q \geq \bar{q}$, workers weakly prefer ongoing protection because there is a high likelihood that a successful exchange of market access will raise wages in the future. As a result, the LHS in (11) is zero or negative, and, regardless of ω, the government refuses to commit to financial sector liberalisation in period 0. This demonstrates that even if the government's sole objective were to maximise workers' expected wages (or social welfare), it would nevertheless refrain from immediate financial sector liberalisation given that the payoff from keeping protection as a bargaining chip in future negotiations was high enough. On the other hand, if $q < \bar{q}$, the LHS of (11) is strictly positive and the government decides to commit to liberalisation in period 0 if the workers' weight in the political support function is not smaller than the threshold value $\tilde{\omega}$, as defined by (12).

2.3 Comparative static analysis

In this subsection, we will analyse how variations in the model's parameters affect the threshold

value $\tilde{\omega}$.

If there is no chance that domestic market access for foreign banks will be exchanged against foreign concessions for domestic exporters in the future (that is, $q = 0$), the condition for financial liberalisation in (12) reduces to

$$\omega \geq \frac{\alpha\left[(1-\alpha)(\alpha/c)^{\alpha/(1-\alpha)} - (1-c)\right]}{(1-\alpha)\left[1-(\alpha/c)^{\alpha/(1-\alpha)}\right]} \equiv \hat{\omega}. \tag{13}$$

The following proposition summarises how $\hat{\omega}$ as defined in (13) reacts to changes in the domestic bank's marginal costs *c*.

Proposition 1: With $c > \alpha$ and $q = 0$, the minimum relative weight of workers that is necessary to induce the domestic government to commit to financial sector liberalisation in period 0 ($\hat{\omega}$) increases in *c*.

Proof: Taking the derivative of $\hat{\omega}$ with respect to *c*, one can show that $\hat{\omega}$ increases in *c* if $(\alpha/c)^{1/(1-\alpha)}\left[(\alpha^2 - c)/(\alpha - \alpha^2)\right] + 1 > 0$. Defining $\phi \equiv c/\alpha$, we can reformulate this condition as $G(\alpha,\phi) = (1/\phi)^{1/(1-\alpha)}\left[(\alpha^2 - \alpha\phi)/(\alpha - \alpha^2)\right] + 1 > 0$. It can easily be seen that $G(\alpha,1) = 0$. To prove that $G(\alpha,\phi) > 0$ for $\phi > 1$, we take the first derivative of *G* with respect to ϕ, which turns out to be strictly positive.

Proposition 1 states that the less efficient the domestic banking sector – that is, the higher its average costs relative to foreign competitors – the higher the political weight of workers that is necessary to induce the government to commit to financial sector liberalisation. The intuition for this result runs as follows: a high value of *c* reinforces the reduction of the domestic bank's profit that comes along with financial sector liberalisation. Raising *c* also increases the stake of domestic workers, but the first effect apparently dominates. While the influence of *c* on $\hat{\omega}$ is

unambiguous, it is not possible to determine the effect of variations in α. Lowering the markup $(1/\alpha)$ by raising α eases the distortion that characterises the closed economy and reduces the desirability of financial services liberalisation for workers. However, it also reduces the stake of the domestic bank since, ceteris paribus, monopoly profits decrease in α. Which effect dominates depends on the levels of both c and α.

The preceding paragraphs considered the effects of varying c and α for $q = 0$, that is for the special case that the policy regime determined in $t = 0$ prevails with certainty in the future. Proposition 2 considers the case of $q > 0$ and summarises how the threshold weight of workers reacts to changes in γ_0 and c :

Proposition 2: For $0 < q < \bar{q}$, the minimum relative weight of workers in the domestic government's objective function that is necessary to induce the government to commit to financial sector liberalisation in period 0 ($\tilde{\omega}$)

i) increases in the likelihood of an exchange of market access in the next period (q),

ii) decreases in the initial price of the exported good (γ_0),

iii) increases in the costs of the domestic banking sector (c) if $0 < q < \underline{q}$, with $\underline{q} \equiv \dfrac{1-(\alpha/c)^{1/(1-\alpha)}(c-\alpha^2)/(\alpha-\alpha^2)}{\psi}$. On the other hand, $\tilde{\omega}$ decreases in c if $\underline{q} < q < \bar{q}$.

Proof of i): The numerator of (12) obviously increases in q while the denominator decreases in q. ii): ψ decreases in γ_0. While the numerator of (12) increases in ψ the denominator decreases in ψ. Hence, $\tilde{\omega}$ unambiguously decreases in γ_0. Proof of iii): The partial derivative of $\tilde{\omega}$ with respect to c is strictly positive if $0 < q < \underline{q}$ and strictly negative if $\underline{q} < q$. Since q has to be smaller than $\bar{q}$ for $\tilde{\omega}$ to be positive, the range of q-values that induce a negative influence of c on $\tilde{\omega}$ is limited to the interval $(\underline{q}, \bar{q})$.

The first result stated in Proposition 2 follows from the fact that a greater likelihood of exchanging financial sector liberalisation against access to foreign export markets reduces workers' stake while reinforcing the bank's interest in ongoing protection. It therefore raises the critical weight of workers that is necessary to bring about immediate liberalisation. The second result is closely related: a lower value of γ_0 – the current price of the domestic export good which is inversely related to foreign protection – implies that both for workers and the bank it is more attractive to keep financial sector protection as a bargaining chip. To explain the result in part iii) we start by noting that, if $\gamma_0 = 1$, that is, if domestic firms already have free access to their export markets, it holds that $\tilde{\omega} = \hat{\omega}$. Hence, in this case the result of Proposition 1 is still valid for $q > 0$, and $\tilde{\omega}$ monotonically increases in c. However, if $\gamma_0 < 1$ the effect of c on $\tilde{\omega}$ may be reversed. This is due to the fact that the bank, while preferring protection, also benefits from a liberalisation of foreign markets for domestic exporters. This, in turn, weakens the effect of a rise in c on the bank's stake. If γ_0 is low enough, the denominator of (12) reacts more sharply to an increase of c than the numerator, and $\tilde{\omega}$ may actually decrease as marginal costs rise. Formally, this is reflected by the fact that the interval $(\underline{q}, \overline{q})$ widens as γ_0 decreases. Hence, on a theoretical basis, we cannot exclude that $\tilde{\omega}$ *decreases* in c. However, if the likelihood of a successful exchange of market access in the future is not too high the cost parameter c has a positive effect on $\tilde{\omega}$.

2.4 Hypotheses

The theoretical model of the preceding subsections has suggested a number of variables that determine the weight of workers' interests (or social welfare) that is necessary to induce a government to commit to financial sector liberalisation in current negotiations. To account for other (unobserved) factors that influence a government's willingness to liberalise, we add a random variable ε with distribution function F, such that the condition for liberalisation in (12)

can be rephrased as

$$\omega \geq \tilde{\omega}(c, \alpha, q, \gamma_0) - \varepsilon \tag{14}$$

The likelihood that a government commits to liberalise is thus given by $1 - F(\tilde{\omega} - \omega)$, and since F is monotonically increasing, we can use the comparative static results derived above to determine the effects of different variables on a government's propensity to liberalise. These effects are summarised in Table 1.

Table 1: Potential determinants of financial sector liberalisation

Variable	Interpretation	Effect
ω	Relative weight of workers in political support function	+
c	Average costs / inefficiency of domestic financial sector	- /+
α	Inverse of financial sector markup	+/-
q	Probability of a successful exchange of market access in any future period	-
γ_0	Initial price of domestic export good (inversely related to protection abroad)	+

3. An empirical study of financial services trade commitments

In this section, we will examine countries' commitments to financial services trade liberalisation in the light of the model presented above. We will first introduce the index of financial sector liberalisation that we use as the dependent variable. In the following subsection we will describe the independent variables that we use as proxies for the determinants of trade policies suggested by our model.

3.1 Dependent variables: Sectoral liberalisation indices

The main difficulty in measuring countries' trade policies with respect to services stems from the absence of a direct measure of protection (such as a tariff rate). To approximate financial services trade protection we have therefore computed indices that are based on WTO Member countries' liberalisation commitments scheduled under the GATS. These indicators proxy liberalisation commitments in the two most important sub-sectors, i.e. banking services (composed primarily of lending and depositing) and securities services (including primarily trading and issuance). Even though much greater knowledge of national regimes than is available would be required to make a definitive judgement, it would seem that most governments' commitments under the GATS are very similar to actual policies.[11]

It should be noted that the GATS Schedules of commitments are complex documents, containing for each Member, market access and national treatment limitations on up to sixteen sub-sectors of financial services, with respect to each of four "modes" (cross-border supply, consumption abroad, commercial presence, and presence of natural persons. A detailed exposition is given in Annex 1). In order to capture the essential elements of these commitments without complicating the analysis unduly, this paper focuses on market-access commitments across the first three modes of supply to determine the indicators for banking and securities services trade.[12]

In examining the level of commitments, three distinctions are made. These are between full bindings, designated as a "none" entry against a particular mode of supply in the schedule and denoting the absence of any limitations; no bindings, which are designated "unbound" against the relevant mode; and the intermediate case of "limited" bindings, which refer to

[11] For affirmative evidence regarding this claim, see, for instance, Claessens and Glaessner (1997).

[12] The fourth mode, the presence of natural persons, is less important in this sector, than in others, such as professional services. The commitments of countries on the fourth mode are, in any case, almost uniformly limited to the intra-corporate transfer of managers, executives and specialists.

those entries which are conditioned in some way by a limitation. The limitation may be on coverage (sectoral, geographical, or by modes), or in the form of a restrictive measure (which can be one or more of the six types of restrictions listed in GATS Article XVI).

Evaluating the liberalising content of the market access commitments of Members requires a number of value judgements.[13] Annex 2 describes how these issues have been approached in this paper to construct liberalisation indices for the banking and securities services sectors.

3.2 Independent variables

We have chosen the following variables as proxies for the likely determinants of financial services trade commitments:[14]

(i) The relative weight of workers in the political support function is measured by the degree of unionisation in an economy, that is by the share of union members among workers in the non-agricultural sector. We conjecture that a higher degree of unionisation improves workers' ability to coordinate and to exert pressure on the government. Hence, this variable should have a positive effect on countries' propensity to commit to financial sector liberalisation.

We need to make two clarifications: first, using the unionisation variable may seem to conflict with the assumption of a competitive labour market underlying our model. However, since the price of financial services determines the position of the labour demand curve, we expect workers to be interested in a low price, regardless of the exact structure of the labour market. Hence, rather than referring to the precise way in which unions affect wage setting, the unionisation measure is meant to reflect the general impact of workers on government policy. Secondly, it may seem odd to picture unions as important fighters for financial sector

[13] For instance, it is not obvious whether Nigeria's commitments on banking (unbound on the first two modes, no significant restrictions on the third) are more or less liberal than Gambia's (no restriction on the first two modes, unbound on the third). Or whether Mexico' commitments on commercial presence in banking (foreign equity limitations) are more or less liberal than Chile's (economic needs test for new entry).

[14] A list of all independent variables as well as their definitions and sources are given in Annex 3.

liberalisation. However, unions' support for protectionism may be overemphasized. While it is true that sectoral unions and representatives (e.g. in steel) have often advocated trade barriers to protect their own sectors from foreign competition, this does not imply that they oppose trade liberalisation across the board. In fact, it is questionable that the common market in the EU and WTO-based liberalisation could have been implemented against the resistance of unions.

As discussed above, in our framework the maximisation of wages coincides with the maximisation of total output, which can be interpreted as a measure of social welfare. Given this interpretation, an alternative way of measuring ω would be a variable that reflects the political regime. Assuming that more democratic regimes are less willing to sacrifice social welfare for the benefit of vested interests we use the Freedom House composite measure of political and civil liberties as an alternative proxy for ω.

(ii) The efficiency of the financial sector is measured by the volume of domestic credit in percent of GDP.[15] Although the model does not yield a clear-cut prediction, we expect this measure of financial sector development to be positively correlated with liberalisation commitments.

(iii) The mark-up charged by the domestic banking sector is proxied by the spread between lending and deposit rates. Table 1 shows that we have no hypothesis on the sign of this coefficient.

(iv) To test our hypotheses on the role of strategic considerations we need variables that capture both the extent of foreign trade barriers and countries' bargaining power. With respect to the first criterion, there are two sectors that face particularly high levels of protection: agriculture and textiles/clothing. Our model suggests that countries whose exports strongly rely

[15] Note that this is consistent with our model, which implies that in autarky $S_t / \gamma_t Y_t = \alpha^2 / c$. Hence, the ratio of financial services over the value of domestic output is decreasing in the domestic bank's average costs, that is, increasing in the banking sector's efficiency.

on these sectors should have a strong interest in a future exchange of market access.[16] Of course, the existence of protectionist barriers abroad would not in itself be a sufficient argument for a small country to hold on to its own protection as a bargaining chip for future negotiations. But if small countries can successfully form coalitions, then this can be an effective way both to circumvent free-rider problems and to increase negotiating leverage in the WTO (Hoekman and Kostecki, 2001). Again, two examples stand out in the WTO context. First of all, there is the Cairns group of agricultural exporting nations.[17] This group negotiated effectively during the Uruguay Round to ensure that agriculture was fully subject to WTO rules - initially blocking progress at the 1990 Brussels ministerial meeting because they were dissatisfied with the proposed outcome in agriculture (Hoekman and Kostecki, 2001). Then there are the more than 30 countries which have their textile exports constrained by quantitative restrictions imposed under the former Multi-Fibre Agreement (MFA). This group, while not an explicit coalition, was united by a strong common negotiating interest, and negotiated successfully for the eventual phasing out (by 2005) of all quantitative restrictions on textiles.[18] These two groups are also important trading partners for the rest of the world. They together comprise roughly 30% of world trade, which underpins their bargaining power when acting jointly. However, notwithstanding their successes in the Uruguay Round in ensuring the full integration of agriculture and textiles into the WTO, neither group managed to negotiate immediate reductions in the levels of protection they faced. The task of liberalisation was consigned to a future round of negotiations. The anticipation of these future negotiations arguably dampened the enthusiasm of many coalition member countries for the financial services negotiations.

[16] After the Uruguay Round of negotiations, the average applied tariff rates for all WTO members on agricultural products were 14 per cent and on textiles and clothing were 10 per cent (not including the tariff-equivalents of the quotas), compared to just 4 per cent for all other manufactures (Finger and Schuknecht, 2001).

[17] The Group first came together in the mid-1980s with 14 members. Today it has 18 members, including both developed countries like Australia, Canada and New Zealand, and developing countries like Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Fiji, Guatemala, Indonesia, Malaysia, Paraguay, Philippines, South Africa, Thailand., Paraguay, and Uruguay.

[18] The group included countries like Brazil, Egypt, India, Indonesia, Korea, Malaysia, Pakistan, Philippines, and Turkey, as well as several Eastern European countries like Hungary and Poland. Other countries that faced quotas either in one or more major importing country are Bahrain, Bulgaria, Colombia, Costa Rica, Czech Republic,

With this in mind, we created dummy variables reflecting a country's membership in a "bargaining coalition": countries that are members of the Cairns group of major agricultural exporters were assigned a value of 1 for the first dummy while all other countries were assigned a value of 0. A second dummy variable was generated for countries that had their textile exports quota-constrained under the former Multi-Fibre Agreement. Finally, we generated one composite variable, reflecting membership in one of the two bargaining coalitions. As shown in Table 1, we expect these dummies to have a negative effect on financial sector commitments.[19]

We also tested whether the commitments of countries with significant export shares of agriculture and textiles/clothing were negatively correlated with their financial services commitments, regardless of whether they were members of one of the country groups. The respective variables represent the ratio of exports of these products over total exports. However, the prospects of achieving a reduction of foreign protection in exchange for domestic financial sector liberalisation are probably more dependent on the size of the domestic market (and hence for small countries on membership in a bargaining coalition) than on the importance of certain export products for the home economy. We therefore expect these trade shares to be less relevant in explaining commitments than the bargaining coalition dummies.

(v) We also include variables which broadly capture the state of complementary policy. First, we control for the volatility of the macroeconomic environment using the standard deviation of inflation over the 1986-95 period. Secondly, we include a measure of the state of prudential regulation, drawing upon on Barth et al. (2000a). These variables are widely used in the empirical literature on financial developments (see, e.g., Levine, 1997). However, the model does not deliver a hypothesis on the effect of these variables and our introductory discussion suggests that the effect can go either way – depending on whether one sees financial

Dominican Republic, El Salvador, Haiti, Hong Kong, Jamaica, Kenya, Kuwait, Macao, Mauritius, Mexico, Romania, Singapore, Slovak Republic, Sri Lanka and Uruguay.

[19] We do not have data on the average trade barriers countries face for their exports. However, Finger, Ingco and Reincke (1996) have found that agriculture and textiles/clothing are amongst the most protected sectors.

liberalisation as an antidote to or aggravating the effect of other policy problems.[20]

(vi) Moreover, we control for the presence of foreigners in the domestic banking sector. If a country has already opened its financial sector before entering the GATS negotiations, a commitment to liberalisation could be just a costless confirmation of the status quo. The number of foreign banks as a proportion of total banks should therefore be positively correlated with liberalisation commitments.

(vii) Finally, we include a measure of trade openness (exports plus imports as a share of GDP) to account for the possibility that trade oriented countries in general are more interested in financial services liberalisation. One reason why this might be the case is that without liberalisation in the sector, more open countries are put at a competitive disadvantage in global markets.

4. Results

For each of the above-mentioned sectors we tested the following regression on a sample of 31 countries:[21]

$$L_i = \alpha + \beta' x_i + \varepsilon_i \tag{15}$$

where L_i stands for country i's GATS commitments in the sector, and x_i represents the vector of independent variables described above. Since our index L_i is limited to the interval [0, 2], we used the tobit model to estimate equation (15).[22]

The estimation results are presented in Tables 2 and 3 (t-statistics are given in

[20] For a detailed discussion on the interaction between macroeconomic instability, prudential regulation, the presence of foreign banks and financial services liberalisation see, for example, Kono and Schuknecht, 2000.

[21] The sample size was determined by data availability. Moreover, we wanted to ease comparability between specifications by using a common sample. We checked the robustness of our results by using a larger sample whenever possible.

[22] Readers may recall that our theoretical model suggested a binary choice between complete liberalisation and no commitment at all. Replacing the continuous liberalisation index by a dummy that is one whenever the index is above the median and zero otherwise and estimating the model by probit yielded very similar results.

parentheses). Table 2 represents estimations using the unionisation and inflation variability measures whereas Table 3 includes the Freedom House index and the quality of prudential regulation variable instead.[23] We also checked whether our results are robust with respect to the construction of the liberalisation indices or the estimation technique, and whether they are driven by a few influential observations. It turned out that the results were robust to different weights of modes,[24] that the magnitude and significance of coefficients also remained virtually unchanged when OLS rather than tobit was applied, and that there is little sensitivity of the results to individual observations (with a few exceptions discussed below).

The results in both Tables 2 and 3 confirm the relevance of our model to explaining financial services commitments in banking and (to a somewhat lesser degree) in securities services trade. As to our hypothesis on the role of workers and unionisation, we find that countries that are characterised by a high degree of unionisation had a greater propensity to commit to financial sector liberalisation (Table 2, columns (1) through (5)). On the other hand, the alternative proxy of "democracy" represented by the Freedom House index did not prove significant (Table 3).

As to our second hypothesis, the financial sector development variable is significant in all estimations. Lending-deposit spreads which are used as a proxy for the financial sector's mark-up have a positive sign for some specifications, suggesting that the effect of bank monopoly power on workers' pressure for liberalisation dominates incumbents' resistance. However, if we look at securities services, this result no longer holds (Table 2, column (4)), and if we replace the standard deviation of inflation by the prudential regulation variable (Table 3, column (3)), the markup has a significantly negative effect on financial sector liberalisation. The latter result is most likely due to the fact that the lending spread is highly correlated with

[23] Due to limited data availability, the number of observations falls to 25 in the second set of estimations. Countries included and their sectoral liberalisation indices are reported in Annex 4.
[24] See Annex 2 for the alternative weights applied.

inflation variability (65 per cent). Hence, if we omit the inflation variable, the markup proxy picks up its negative effect on financial sector liberalisation.

The potential for exchanging market access commitments in future negotiations, especially for countries whose exports face high barriers abroad, was apparently a motive to withhold market access commitments in banking services. The Cairns group members and the textile/clothing exporters constrained by quotas under the former Multi Fibre Agreement have indeed committed to less liberalisation than otherwise expected (Table 2, column (1) and Table 3, column (1) and (2)). However, robustness tests show that the significance of the outcome for the Cairns groups variable (8 observations in total) depends somewhat on one observation (Chile). By contrast, the estimation with the variable reflecting membership in either of the two groups is not sensitive to the inclusion of any particular observation.

As an alternative test of the hypothesis that countries withheld commitments in the hope of a future exchange of market access, we used the export share of the textiles/clothes and agricultural sector, respectively. However, neither variable showed a significant influence on any estimation outcome (hence only represented in Table 2, column (2)). Note also the difference in the overall model fit between the estimation which includes the bargaining coalition dummies and the one which includes the export share variables. This confirms our claim that countries' interest in future market access must be augmented by enough bargaining power to make financial sector liberalisation a valuable bargaining chip.

Regarding securities services, the effect of the coalition dummies is much weaker. A closer look at the data reveals that this is likely to be driven by two factors: first, by the exceptionally high commitment of Egypt with respect to securities services. Second, by the loss in degrees of freedom when both coalition dummies are used separately. If we remove Egypt from the sample and replace the individual coalition dummies by a composite dummy reflecting

membership in either the Cairns group or in the textile exporters' group, the model's fit can be substantially improved (Table 2, column (5)).[25]

As to other control variables, the negative sign of inflation indicates that countries with an unstable macroeconomic environment were reluctant to commit to financial sector liberalisation. However, we need to point out that this result is driven by the hyperinflation countries Bolivia and Nicaragua. If we remove these countries from the sample, the coefficient turns positive and insignificant. On the other hand, both banking and securities services trade liberalisation seem positively correlated with the quality of prudential regulation although the significance level is somewhat marginal (Table 3, columns (2) and (3)).

The presence of foreigners in the banking sector proves highly correlated for the degree of banking services commitments, while the trade openness variable is not significant in any estimation and therefore only included for illustrative purposes in columns (1) and (4) of Table 2. Finally, column (3) of Table 2 demonstrates that a more parsimonious specification neither substantially alters the coefficients of the remaining regressors nor reduces the fit of the regression.

5. Summary and conclusions

In this study, we have made a first attempt to analyse theoretically and empirically the determinants of trade policies in financial services. We have developed a political economy model of financial services protection which explicitly takes into account the future possibility to trade market access concessions across countries. To test the model we have derived trade policy indicators in financial services by analysing GATS market access commitments in the core banking and securities services.

[25] Although Panama with its extremely high level of securities liberalisation is influential, the composite coalition dummy remained significant when we removed Panama from the sample.

The empirical test of our model-based hypotheses supports the relevance of our model for explaining financial services liberalisation, particularly in banking. The results suggest that members of international trade coalitions, such as the Cairns group and the group of textile and clothing exporters, held back on commitments, possibly to retain bargaining chips for future negotiations. Furthermore, unionisation of workers, financial market development, domestic markups, macroeconomic volatility, the quality of prudential regulation and the presence of foreign service providers were largely significant in explaining liberalisation commitments and, thereby, confirmed our model hypotheses.

Our results suggest that services trade, just like trade in goods, seems to be strongly influenced by distributional considerations. Moreover, the findings strengthen the case for multisectoral negotiations, in which countries can exchange concessions across sectors. One implication of our results is that those who seek greater access to developing country markets for financial services must do more to counter protectionism at home in agriculture and textiles and other areas of export interest for developing countries.

Table 2 - Determinants of Commitments in Financial Services:

	Banking services	Banking services	Banking services	Securities services	Securities services
	(1)	(2)	(3)	(4)	(5)
Constant	0.2 (0.62)	-0.29 (-0.84)	0.27 (1.23)	0.17 (0.38)	0.26 (0.87)
Unionisation	0.01* (2.17)	0.02*** (3.58)	0.01** (2.36)	0.02** (2.50)	0.01** (2.07)
Financial development	0.006*** (3.1)	0.006** (2.49)	0.005*** (2.82)	0.006** (2.20)	0.007*** (2.94)
Mark-up (interest spread)	0.02* (1.64)	0.04* (1.90)		-0.02 (-0.65)	-0.02 (-0.93)
Cairns group	-0.35* (-2.09)			-0.20 (-0.94)	
Textile/clothes exporter	-0.34* (-1.71)			-0.01 (-0.39)	
Agro exports ratio		0.25 (0.63)			
Text/cloth exports ratio		-0.35 (-0.17)			
Cairns group or text./clothes exp			-0.50*** (-3.49)		-0.35** (-2.16)
Macroeconomic volatility	-0.0001* (-1.80)	-0.0002* (-1.62)		-0.0006 (-1.06)	-0.0005 (-1.23)
Foreign presence	1.2*** (2.8)	1.17*** (2.46)	1.48*** (3.62)	0.9* (1.64)	1.14*** (2.65)
Trade/GDP	-0.0004 (-0.22)			0.001 (0.40)	
R2 adj:	0.46	0.29	0.45	0.36	0.51
No of obs	31	27	31	31	30
Technique	Tobit	Tobit	Tobit	Tobit	Tobit

* ,**, *** Significance of coefficient at 10, 5, 1 per cent level Column (5) Egypt excluded

Table 3 - Determinants of Commitments in Financial Services:

	Banking services	Banking services	Securities services
	(1)	(2)	(3)
Constant	0.04 (0.06)	-0.23 (-0.94)	-0.91 (-1.03)
Democracy	0.02 (0.27)		0.1 (1.32)
Financial development	0.006*** (2.77)	0.005*** (2.66)	0.007** (2.33)
Mark-up (interest spread)	0.001 (0.8)	-0.003 (0.27)	-0.06** (-2.56)
Cairns group	-0.47*** (-2.66)		
Textile/clothes exporter	-0.47*** (-2.76)		
Cairns group or text./clothes exp.		-0.73*** (-4.83)	-0.39* (-1.71)
Prudential regulation	0.53 (1.57)	1.14* (1.94)	1.96** (2.02)
Foreign presence	1.51*** (3.61)	1.75*** (4.60)	0.75 (1.28)
R2 adj:	0.51	0.56	0.24
No of obs	25	25	25
Technique	Tobit	Tobit	Tobit

*, **, ***: Significance of coefficient at 10, 5, 1 per cent level.

Annex 1 Financial Service Liberalisation in the GATS Framework

Multilateral liberalisation commitments regarding services trade are made in the context of the General Agreement of Trade in Services (GATS).[26] The WTO-framework offers a highly credible instrument for making international, legally binding policy commitments. In general, when countries exchange reciprocal "concessions", the WTO provides them with a means of locking these in and hence provides a guarantee to trading partners against their erosion.

The GATS covers all measures taken by Members affecting trade in services and all service sectors.[27] The Agreement is unusual in taking a wide view of what constitutes trade, and defines trade in services as the supply of a service through any of four "modes". Mode 1 deals with the cross-border supply of a service, which is analogous to international trade in goods, in that a product (service) crosses a national frontier. Mode 2 involves consumption abroad, including the movement of consumers to the territory of suppliers.[28] Mode 3 is of crucial significance, and entails the commercial presence of a supplier of one Member in the jurisdiction of another Member. An example of this mode is a situation in which a foreign bank or other financial institution establishes a branch or subsidiary in the territory of a country and supplies financial services. By defining trade to include sales through commercial presence, the Agreement includes in its domain foreign direct investment, which accounts for a large share of all services transactions, particularly in financial services. Mode 4 covers the supply of services through the presence of natural persons of a Member in the territory of another Member.

[26] No attempt is made here to provide a comprehensive picture of the GATS and how it works. Rather, brief mention is made of those features of the Agreement that are relevant to the discussion that follows. For more comprehensive treatments of GATS, see Hoekman (1995), Low (1995) and Mattoo (1997).

[27] The only explicit sectoral exclusion from GATS is certain "hard" rights in the aviation sector.

[28] The Explanatory Note on Scheduling Commitments (GATT Document GNS/MTN/W/164) gives examples of Mode 2 which do not necessarily involve the physical movement of the consumer to the location of the supplier - for instance, when a consumer's property alone moves abroad, as in the case of ships being repaired abroad. This creates some fuzziness in the distinction between Modes 1 and 2.

The liberalising content of the GATS depends on the extent and nature of sector-specific commitments assumed by individual Members. The core provisions of the GATS in this context relate to *market access* (Article XVI) and *national treatment* (Article XVII). The *market access* provision prohibits six types of limitations, unless they have been inscribed by a Member in its schedule. These are: (a) limitations on the number of suppliers; (b) limitations on the total value of service transactions or assets; (c) limitations on the total number of service operations or on the total quantity of service output; (d) limitations on the total number of natural persons that may be employed; (e) measures which restrict or require specific types of legal entity or joint venture; and (f) limitations on the participation of foreign capital. The existence of any of these limitation has to be indicated with respect to each of the four modes of supply, described above. *National treatment* is defined under Article XVII in the traditional GATT manner, as treatment no less favourable than that accorded to domestic homologues, in this case services or service suppliers. However, Members may inscribe limitations on national treatment in their schedules - with respect to each of the four modes of supply, as in the case of the market access provision.

Financial services under the GATS consist of insurance services and banking and other financial services. Banking and other financial services are defined under GATS to include acceptance of deposits, lending, financial leasing, payment and money transmission services, guarantees and commitments, trading (in money market instruments, foreign exchange, derivative products, exchange rate and interest rate instruments, transferable securities, and other negotiable instruments and financial assets), participation in issues of securities, money broking, asset management, settlement and clearing services, provision and transfer of financial information (including data processing), and advisory and intermediation services.

It is worth emphasising that GATS commitments are guarantees, and the absence of such guarantees need not mean that access to a particular market is denied. In fact there are

several markets where conditions of access are more liberal than those bound under the GATS. Many countries have bound actual policies, i.e. the status quo. In some instances, governments chose to make commitments that represent less than the *status quo* in policy terms.[29] A very limited number of governments also used the GATS as a means to precommit to future liberalisation.[30]

[29] The Philippines, for example, did so with respect to foreign equity participation in commercial banks: binding at 51% when domestic law allows 60%. Korea also stopped short of reflecting in its GATS offer all the present and future liberalisation commitments made at the OECD.

[30] For instance, Egypt committed to allowing majority foreign ownership in life insurance in the year 2000 and in non-life insurance in the year 2003. India committed to issuing 12 bank licenses per year, subject to a 15% maximum share of foreign assets in the total assets of the banking system.

Annex 2 Quantification of Financial Services Trade Commitment Indicators

This Annex explains the quantification of commitments in financial services as used in this paper. The quantification builds on the approach of Hoekman (1995). Two key issues need to be addressed: the first concerns the relative importance of the modes of supply in specific sectors, and the second the relative restrictiveness of different measures.

Weights of trade modes in the calculation of the protection index

Available statistics do not enable a precise identification of even revealed patterns of trade by different modes, let alone of patterns in the absence of policy restrictions, which is what we are really interested in. The only country which reports statistics on establishment trade on a regular basis is the United States. These data are presented in the following table, along with data from balance-of-payments statistics which approximate cross-border trade. In banking and securities services, establishment trade is three-and a half times greater than cross-border trade for imports and more than twice as large for exports.

Table A.1 - United States Financial Services Trade by Modes of Supply[1], 1994 (US$ billion)

	Mode 1: Cross-border Trade		Mode 3: Commercial Presence	
	Exports	Imports	Exports	Imports
Banking and Securities[2] Services	6.10	1.70	14.00	5.90

Source: United States Department of Commerce (1996), USITC (1997) .

[1]These statistics only provide an approximation to trade through the different modes of supply defined in the GATS (for more detail see Chang et al., 1999).

[2] Banking and securities services cover financial intermediary and auxiliary services (except those of insurance enterprises and pension funds). Included are intermediary service fees, such as those associated with letters of credit, bankers' acceptances, lines of credit, financial leasing, and foreign exchange transactions. Also included are commissions and fees related to transactions in securities - brokerage, placements of issues, underwriting, redemptions, and arrangements of swaps, options, and other hedging instruments; commissions of commodity futures traders and services related to asset management, financial market operational and regulatory services, security custody services, etc.

While these statistics confirm that commercial presence is currently the most important mode of supplying financial services, its relative importance is likely to differ between sub-sectors. We also need to consider the relative importance of cross-border supply and consumption abroad. A key difference between the two modes is that under the GATS, commitments to allow cross-border supply of a service oblige a Member to allow the necessary capital movements, while those to allow consumption abroad do not. Therefore, the former commitments can be argued to have much greater value than the latter.

On the basis of this available information on financial services trade by mode and the great importance that the nature of services trade and the design of GATS suggests for liberalising mode 3 trade (commercial presence) in most sub-sectors, the weights of each mode presented below were used for the calculation of the protection index. It is recognised, of course, that these weights provide only the roughest idea of the relative importance of modes.

Table A.2 - Weights for Mode 1 to 3 Trade in Calculation of Liberalisation Index

	Cross-border supply	Consumption abroad	Commercial presence
Banking:			
Deposits	0.12	0.03	0.85
Lending	0.20	0.05	0.75
Securities:			
Trading	0.40	0.10	0.50
Issuing	0.20	0.05	0.75

To test the robustness of our results, we have used the alternative weighting (0.2/0.05/0.75), (0.275/0.075/0.65), (0.5/0.1/0.4) and (0.3/0.08/0.62).

Quantifying the restrictiveness of measures

Again we adopt the simplest approach which enables us to capture the essence of the commitments. With respect to each mode, a numerical value of 0 was attached to entries of "unbound" (reflecting no commitments) and a value of 1 to entries of "none" (reflecting unrestricted commitments). The interesting question pertains to how the presence of specific restrictions is to be evaluated. In the case of the first two modes, restrictions often take the form of excluding certain sub-sectors from the scope of the commitment. It is difficult to judge the economic significance of these exclusions. Therefore, a distinction was not made and a value of 0.5 was attached in all cases of restricted commitments on the first two modes.

With respect to commercial presence, a slightly more sophisticated approach was adopted. This was based on first identifying the "most restrictive measure" specified, and then applying a value based on an assessment of its restrictiveness. Thus, the presence of any of the following limitations led to the indicated value being attached (regardless of whether other less restrictive measures were also applied):

No new entry or unbound for new entry	0.10	
Discretionary licensing for new entry		0.25
Ceiling on foreign equity at less than 50%	0.50	
Ceiling on foreign equity at more than 50%	0.75	
Restrictions on the legal form of commercial presence	0.75	
Other minor restrictions	0.75	

Putting the indices together

Giving a higher value to the presence of restrictions than to an entry of "unbound" reflects the judgement that a binding in itself has liberalising value. In each sector, the liberalisation index,

L, for each country i, is defined as $L_i = \sum_{j=1}^{3} w^j r_i^j$, where w^j is the weight of mode j and r_i^j is the numerical value of the most restrictive measure applied by country i to mode j. The liberalisation index is thus the average of the value of the most restrictive measure applied by a country to each mode in the sector weighted by the importance of the respective mode.

This procedure results in upper and lower bounds for the four sub-sectors of 0 & 1. Adding the two banking and securities trade related sub-indices (deposits and lending for banking, trading and issuing for securities) yields the banking and securities services indicators with values of between 0 and 2.

Annex 3 Variables for Data Analysis; Definitions and Sources

Variables	Definition	Source
Dependent variables		
1. Banking services a. Bank lending b. Bank depositing	Sum of 1a and 1b Index of liberalising commitments across modes; 0=unbound, >0 and <1=intermediate, 1= free trade (see also Annex 2)	GATS schedules
2. Securities services a. Trading b. issuance	Analogous to 1	GATS schedules
Independent variables		
1. Unionisation	Union membership as percentage of non-agricultural labour force in 1995	ILO (1997)
2. Democracy	Gastil composite measure of political and economic liberties in 1997 (1: maximal liberty. 7: maximal repression)	Freedom House (2000)
3. Financial sector development	Credit to private sector in percent of GDP; average 1986-95	IMF, IFS
4. Financial sector mark-up	Interest rate spread, lending-depositing; average 1986-95	IMF, IFS
5. Bargaining coalitions	a. Member of Cairns Group (agricultural exporters) b. Country experiencing QRS under ATC	
6. Macro volatility:	Standard deviation of inflation; average 1986-95	IMF IFS
7.Quality of prudential regulation	Indicator between 0 (poorest) and 1 (best)	Barth et al. (2000a)
8. Foreign market penetration	No. of foreign-owned banks/total no. of banks; average 1988-95	Claessens et.al., 1997
9. Trade/GDP	(Exports+Imports of goods and services)/GDP, late 1990s	World Bank, WDI
10. Agro exports ratio; text/cloth exports ratio	Ratio of agricultural or textile/clothing exports to total exports, 1997	United Nations Comtrade Statistics

Annex 4 Countries included & respective sub-sectoral liberalisation indices

		Bank lending	Bank depositing	Securities trading	Securities issuance
+ *	Australia	0.8	0.6675	0.6	0.8
+	Bolivia	0.5625	0.6375	0	0
+	Canada	0.6125	0.6675	0.475	0.6125
+	Chile	0.1875	0.2125	0.125	0.1875
+/-	Colombia	0.1875	0.2125	0.125	0.1875
+/-	Costa Rica	0.5625	0.6375	0	0
+	EC	0.6125	0.6675	0.6	0.8
+/-	Ecuador	0.325	0.235	0.625	0.4375
+	Egypt, Arab Rep.	0.1875	0.2125	0.875	0.8125
+/-	El Salvador	0.1875	0.2125	0.125	0.1875
+	Honduras	0.1875	0.2125	0	0
+	Indonesia	0.325	0.235	0.475	0.6125
+	Israel	0.875	0.85	0.5	0.75
-/+	Jamaica	0.75	0.85	0	0
+	Japan	0.8	0.88	0.6	0.8
+	Korea, Rep.	0.1875	0.2125	0.25	0.375
+	Malaysia	0.2	0.115	0.55	0.5
+	Malta	0.625	0.575	0.75	0.625
+	Morocco	0.2875	0.85	0.45	0.375
+	New Zealand	0.8	0.88	0.6	0.8
+/-	Nicaragua	0.1875	0.2125	0	0
+	Nigeria	0.5625	0.6375	0.375	0
+/-	Norway	0.8	0.88	0.6	0.8
+	Panama	1	1	1	1
+/-	Paraguay	0.75	0.85	0.5	0.75
+	Philippines	0.2375	0.2425	0.225	0.2375
+	Singapore	0.6125	0.115	0.8	0.3375
+	South Africa	0.75	0.85	0.5	0.75
-/+	Sri Lanka	0.1875	0.2125	0.125	0.1875
+	Thailand	0.075	0.085	0.125	0.1875
+/-	Tunisia	0.4375	0.3625	0.25	0.375
+	United States	0.6125	0.6675	0.6	0.8
+	Venezuela	0.1875	0.2125	0.125	0.1875

+: included in estimations that lead to results in Tables 2 and 3; +/-: included only in Table 2 regressions, due to missing observations; -/+: included only in Table 3 regressions.

Annex 5: summary statistics on dependent and independent variables

	Bkg. Serv	Sec. serv.	Union	Gastil	Priv. cred.	Spread	Textile	Cairns	Text./Cairns	For. pres.	STD infla.	Prud. reg.	
Mean	0.97	0.87	16.53	2.81	58.37	6.17	0.32	0.29	0.45	0.27	223.60	0 70	
Std. deviation	0.55	0.57	13.16	1.72	37.61	5.42	0.48	0.46	0.51	0.18	826.11	0.12	
Banking services	1.00	0.60	0.39	-0.44	0.32	0.03	-0.59	-0.26	-0.44	0.20	-0.07	0.32	**Banking services**
Sec. Services		1.00	0.39	-0.17	0.47	-0.41	-0.22	-0.06	-0.12	0.06	-0.41	0.27	**Sec. Services**
Unionisation			1.00	-0.29	0.18	-0.02	-0.32	-0.20	-0.28	-0.26	0.07	0.37	**Unionisation**
Gastil index				1.00	-0.44	-0.06	0.48	-0.08	0.16	-0.15	-0.04	-0.51	**Gastil index**
Private credit					1.00	-0.38	-0.11	0.05	-0.04	-0.25	-0.16	0.20	**Private credit**
Spread						1.00	-0.11	-0.14	-0.19	0.02	0.65	0.13	**Spread**
Textile							1.00	0.32	0.76	-0.17	-0.18	-0.14	**Textile**
Cairns								1.00	0.70	0.38	-0.17	-0.13	**Cairns**
Textile or Cairns									1.00	0.24	-0.24	0.04	**Textile or Cairns**
For. Presence										1.00	-0.06	0.04	**For. Presence**
STD infla.											1.00	0.02	**STD infla.**
Prud. reg.												1.00	**Prud. reg.**

(See Annex 3 for definitions and sources of variables)

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