

## **The Role of the World Bank in the Transfer of Policy Knowledge on Trade Liberalisation**

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### **Abstract**

This paper uses theories of policy learning and of policy-making to examine how global institutions such as the World Bank can influence policy choices by developing countries in the area of trade liberalisation. In pure learning by doing, policy choices are based on information relating to the history of an active policy; there is no information on alternative policies. New information on priors provides an incentive to choose a different policy. In the case of social learning, policy-makers can observe the policies chosen by other actors, but the signals those other actors receive is unobserved. External agents (global institutions of knowledge transfer) can influence policy choice by altering priors, providing technical advice or providing information on the (unobserved) effects of the policy choices of others. The actions of external agents are likely to encourage policy herding, and this need not be on the optimal policy (from the perspective of individual countries). If so, the reputation of the World Bank as a ‘purveyor of global policy knowledge’ may be undermined.

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## 1 Introduction

Globalisation and economic liberalisation over the past two decades have contributed to expanding flows of trade, technology and capital between countries in both the developed and developing world. Trade liberalisation at various levels has been a policy issue in almost all countries. Unilateral trade liberalisation has been implemented, to varying degrees, by almost all developing countries. The perceived benefits of liberalisation are to enhance growth prospects via integration into the global economy and increased efficiency in resource allocation. However, the evidence that trade liberalisation *per se* promotes growth is weak when exposed to careful scrutiny (e.g. Rodrik, 1999) so why, in the 1980s and 1990s, did so many countries ‘catch the reform bug’ (Rodrik, 1996: 11)?

This is the question we seek to answer in part. We limit attention to the role of the World Bank in shaping and supporting policy reform on trade issues in developing countries. A companion paper examines the role of the World Trade Organisation (WTO) in promoting global competition through multilateral liberalisation (Morrissey and Nelson, 2001). We will also refer to the IMF, another global institution that has played a major role in promoting trade policy reform. We will argue that the World Bank is a purveyor of policy advice and has a number of instruments at its disposal, in particular the promise of aid, to encourage developing countries to adopt its advice. This, however, does not ensure that countries are equally able and willing to act on the advice (implement the policies proffered). Nor is it evident that the World Bank necessarily provides the optimal policy advice.

This paper attempts to provide a link between the largely theoretical economics literature on ‘policy learning’ and the somewhat more practical, albeit conceptual, political science literature on policy-making. While we believe such an exercise to be potentially fruitful, there are inherent difficulties. Given its theoretical foundation, the literature on policy learning tends to have strict assumptions and be formally restrictive (in terms of general applications). The policy-making literature, on the other hand, attempts to derive general concepts and principles from observed outcomes. To take a specific example, a policy learning theory will start with a strict

definition of and assumptions over the priors of policy makers. The policy-making literature will infer preferences (which are not the same as priors, about which there is usually no information) from observed behaviour. Consequently, there are few direct links between Sections 2 and 3, where we discuss the respective literatures. In the final section we illustrate how the two literatures can be linked and applied to the Bank's role in promoting trade liberalisation.

Essentially, our approach is to treat the Bank as a disseminator of 'institutional policy knowledge' that plays a direct role in encouraging, supporting and even coercing trade policy reform. In what ways does this influence policy choice in developing countries, the recipients of advice for our purposes, and, in particular, does this increase the likelihood of countries adopting optimal policies? The World Bank offers both policy advice and technical and financial assistance in implementing policy reform. Furthermore, it represents, and through its functioning promulgates, a particular position on what constitutes optimal trade policy. In simple terms this could be described as removing trade policy distortions.

Section 2 reviews various theories on the policy learning (by governments as the agents making choices) and the spread of policy knowledge. Section 3 then relates this to the political dimension of policy change and evolution within countries. Through what mechanisms do external actors such as the Bank influence policy choices, and does this lead to 'better' policies? Section 4 then illustrates our arguments in respect of trade liberalisation in developing countries. Section 5 concludes with an evaluation of the World Bank against the criterion of spreading good policy advice.

## **2 Three Models of Policy Learning and Knowledge Transfer<sup>1</sup>**

Given the obvious importance of learning to virtually all forms of human endeavour, it is probably not surprising that the literature on learning is immense. In an effort to keep this discussion manageable, we will frame our discussion in terms of rational

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<sup>1</sup> There are a number of good surveys of the economic literature on learning. For a convenient overview, see Sobel (2000).

learning in a Bayesian environment.<sup>2</sup> Specifically, we will sketch three models of policy learning: essentially asocial, decision-theoretic learning; social learning; and hierarchical social learning. In each case, after sketching the basic model, we will suggest the implied role for policy research and the transfer of results from policy research by institutions like the World Bank. We leave to the next section discussion of who is doing the learning, and the way that political considerations interact with institutional considerations to determine willingness and capacity to learn (in the specific meaning of learning being discussed here).

### **2.1 Decision-Theoretic Learning: Policy Experiments and Learning-by-Doing**

Consider the case of a small, less-developed economy facing two policy options: import-substitution (IS) and export-orientation (XO). For now we will assume that these options are meaningful and exclusive. We begin with the case of pure learning by doing. That is, there is no possibility to learn from the experience of others. We suppose that the adoption of a policy results in an outcome, which we take to be either “good” or “bad”. The outcome provides some information about the effectiveness of the adopted policy, but no information about the effectiveness of the other policy. However, the effectiveness of the policy is determined by factors not under the control of the policymaker, the external environment, and this fact must be taken into consideration in evaluating the policy.

A bit of formalism may help here. Denote the state of the world (i.e. the wide range of things that are not under the policymaker’s control but which affect the outcome of the policy experiments) by  $\theta \in \Theta$ . In each period,  $t$ , the policymaker chooses a policy  $x_t \in X$  (in our case  $X = \{\text{IS}, \text{XO}\}$ ). In a sense, this produces a state of the world in  $X \times \Theta$ , and results in a signal  $y_t(x_t; \theta) \in Y$  (in our case  $Y = \{\text{good}, \text{bad}\}$ ). We will suppose that policy  $x(i)_t$  produces good states with unknown probability  $p(i)$  and bad states with  $[1 - p(i)]$  and that the policymaker begins with prior belief about the likelihood of a good outcome under policy  $i$ ,  $\rho_{i0} \in [0,1]$ , which is commonly taken as deriving from a private signal of bounded accuracy that the policymaker receives in period  $t = 0$ . Knowing  $x_t$  and  $y_t$ , the policymaker can update his beliefs,  $\rho_{t-1}$ , using Bayes rule to get

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<sup>2</sup> This means that we exclude from consideration a wide body of literature relating to other dimensions and methodological approaches to knowledge, belief, learning and behaviour. Morrissey and Nelson

$\rho_t$ . We assume that only the element of  $\rho_t$  referring to the active policy in period  $t$  changes in the updating, since there is no information about the effectiveness of a policy that is inactive.<sup>3</sup> We suppose that the policymaker's objective is to maximize the expected number of good realizations.<sup>4</sup> Specifically, if we let  $y_t = \text{good} = 1$  and  $y_t = \text{bad} = 0$ , and assume that the policymaker applies geometric discounting with discount factor  $\delta \in [0,1)$ , we can write this objective as:

$$V(\sigma, \rho) = E_{\sigma} \left[ \sum_{t=0}^{\infty} \delta^t y_t(x_t; \theta) \right]. \quad (2.1)$$

In the theoretical statistics literature, this is called a *Bernoulli two-armed bandit* problem, with the arms given by the policies (see DeGroot, 1970, chapter 14; Berry and Fristedt, 1985). An intertemporally optimal policy takes into account both the one-period gain from a given policy and the gain from information that may be used in future plays of this game against nature.

In constructing an optimal strategy we need the notion of a *history at  $k$* , a description of the policy used in each period up to  $t = k$  and the signals observed:  $h^k = \{x_t, y_t\}_{t=1}^{k-1}$ . Let  $H^k$  be the set of all possible histories at  $k$ . A strategy,  $\sigma$ , for the policymaker specifies a policy choice to be made in any period as a function of initial beliefs and Bayesian updating on the history up to that point. Gittins and Jones (1974) proved a striking result for problems of this sort: to every policy (i.e. "arm" of a bandit) there is associated an index which depends only on the current prior on that arm,  $\rho_{ik}(\rho_{i0}, h^k)$ , and the optimal strategy at time  $k$  is to adopt the strategy ("play the arm") with the highest index. Furthermore, as Whittle (1982, chapter 14) makes clear, this index is essentially the value of a payment that would make the policymaker indifferent

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(2001) provide references to some of that literature.

<sup>3</sup> The assumption of independence is not entirely harmless, as it implies that import substitution could be less effective, more effective, or equally effective as export orientation. That is, policymakers may not assume that one policy is necessarily superior to the other. The case of dependent bandits is more complex, and we cannot convince ourselves that it is the more obviously applicable case. A useful overview of the dependent case can be found in Pressman and Sonin (1990).

<sup>4</sup> The literature on the political economy of macroeconomic policy provides considerable warrant for this assumption. Alternatively we could follow much of the literature and, in addition to the signal  $y(\bullet)$ , we could introduce a reward function  $r(x_t; \theta)$  incorporating any factors, e.g. income distribution, we

between stopping and continuing with strategy  $i$ . As a result, solving the policymaker's problem involves solving an optimal stopping problem for each of the policies in  $X$ .

One of the fundamental questions that has been addressed in this framework is whether, with sufficient time, the policymaker would necessarily learn the best policy, i.e. the policy such that  $p_i > p_j$  ( $i \neq j \in X$ ), if such a policy exists.<sup>5</sup> The usual answer to this class of question is that complete learning generically fails. Specifically, with strictly positive probability, the policymaker may eventually select and stay with the “wrong” policy—i.e. the policy  $j$  in the preceding inequality. Furthermore, in finite time, a policymaker might switch between policies many times.

In this paper we are less interested in the implications of these results for observable policy histories, or the normative conclusions that can be drawn from any given policy history, than in the implications of learning theory for institutionalised policy advice. In this context we isolate two obvious, but important, roles highlighted by the simple model sketched above: technical support and affecting the prior beliefs of the policymaker. While the model presented above is quite simple, it should be clear that a great deal of potential complexity is contained in  $\theta$  and that the process of actually carrying out the analysis generating  $\sigma$  could be technically demanding. A substantial number of people trained (at many levels) as economists perform precisely this task. In this context, one of the important roles played by international agencies for least developed countries is the provision of precisely this sort of expertise. For example, in addition to direct provision of expertise, the World Bank has produced a number of briefing books to support developing country participation in trade rounds (e.g. Finger and Olechowski, 1987).

Somewhat more subtly, it should be clear that one fundamental role of policy advice is to affect the beliefs of policymakers. In her presidential address to the American Economics Association, Krueger (1997: 18) argues that “good policy-relevant theory

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might deem important to the policymaker's problem. However, since our interest in this paper is on learning *per se*, we focus on the information process and abstract from the reward process.

provided blueprints for those windows of opportunity in which governments genuinely sought to improve economic performance ... [and] ... theory was invaluable when it showed why simple interpretations of received doctrine were in fact wrong". In the context of the model above, a key role is played by  $\rho_0$ , the policymaker's initial beliefs. There is a long tradition in Bayesian analysis of treating initial beliefs, like tastes, as primitive. However, there are a number of prominent examples of systematic argument affecting belief change. We mention two of the most prominent in the context of trade policy: the role of new developments in economic theory in Peel's decision to repeal the Corn Laws (Irwin, 1989); and the role of leading intellectuals such as S.C. Tsiang and T.C. Liu in Taiwan's transition to XO (Haggard, 1990). In both cases, change in beliefs of incumbent policymakers produced change in policy. These are striking examples, perhaps more commonly the beliefs of government change through a mix of changing incumbents and failure of old ideas in the face of policy crisis (Harberger, 1993).<sup>6</sup> International agencies are among the primary channels for transmitting current policy thinking to the policymaking community.<sup>7</sup> This is especially the case for least developed countries with modest connection to the international academic sources of policy thinking. As an example, the World Bank Institute was developed to carry out training on a variety of policy relevant topics, including the analysis and implementation of trade policy.

## 2.2 Social Learning: Learning from Others and Information Cascades

The discussion of the preceding section presumes that policymakers learn exclusively by doing. That is, a policy is adopted, an outcome occurs, and the policy is evaluated relative to the policymaker's beliefs about existing alternatives. It is surely the case that significant learning also occurs through observation of the policy experience of

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<sup>5</sup> The actual characterization of this class of question is complex, involving at least two related questions: whether  $\rho_i = p_i \forall i \in X$ ; and whether  $\rho_i > \rho_j$  if  $p_i > p_j$  ( $i \neq j \in X$ ). There is an extensive literature on this sort of question (Morrissey and Nelson, 2001, provides references).

<sup>6</sup> The only place for this sort of belief change to occur in Bayesian analysis is with respect to the prior beliefs. More recent research on non-monotonic logic and belief change permits a more compelling analysis in which beliefs are defeasible at any point in learning processes (e.g. Schlechta, 1997). Although it is beyond the scope of this paper, there is a rapidly growing literature in information economics that analyses the impact of, and optimal strategy toward, multiple and/or potentially biased experts. See, for example, Dewatripont and Tirole (1999) or Krishna and Morgan (2001).

<sup>7</sup> In recent years, political scientists have become increasingly interested in the role of collective ideas, beliefs and knowledge in supporting and/or transforming policy. Most of this work has focussed on identifying these effects rather than the media by which they are transmitted, but international agencies clearly play an important role (Murphy, 1994; Berman, 2001).

others. In this section we first offer a simple extension of the above framework and then consider the implications for policy transfer by international agencies.

We now suppose that there are a finite number of policymakers, in different countries, facing the problem sketched in the preceding section. In addition, we assume that these policymakers can observe the choices made by the other policymakers, but not the signals resulting from them. That is, denoting policymakers by superscript  $a \in A$ , everyone observes the vector  $\mathbf{x}_t$  of policy choices made at time  $t$ , but the  $y_t^a(x_t^a; \theta)$  are private information to each  $a$ . Furthermore, we assume that the  $y_t^a(x_t^a; \theta)$  depend only on the  $x_t^a$  and not on the full vector  $\mathbf{x}_t$  of policy choices made at time  $t$ .<sup>8</sup> Now we must redefine our notion of *history at  $k$*  to be  $h^{ka} = \{\mathbf{x}_t, y_t^a\}_{t=1}^{k-1}$ , where the vector of policy choices at each  $t$  is public and the history of signals/realizations is private.<sup>9</sup> Now each player updates not only with respect to the  $y_t^a(\bullet)$  but also taking into account the information of others revealed in their policy choices.

Aoyagi (1998) presents an analysis of essentially this model, showing that all players eventually converge to the same policy. As in the private learning context, social learning will not generally be complete (i.e. while  $\rho_i = p_i$  for some  $i \in X$ , this will only be true for the  $i$  finally selected, and  $\rho_j \neq p_j \forall j \neq i \in X$ ). It need not even be the case that  $p_i > p_j$  if  $i$  is actually selected. Thus, herding occurs with probability 1 and what are essentially information cascades occur. That is, because policymaker's herd, potentially useful collective information is lost. It is important to note that the possibility of cascading or herding on an inefficient policy does not imply that social learning is in any sense worse than private learning. As we have already seen, both of these have equivalents in the private learning context.<sup>10</sup> The social learning case embodies two distinctive elements relative to the private learning case. First, every policymaker observes more information at each  $t$ , at least until a herd occurs.

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<sup>8</sup> This seems, in many ways, a doubtful assumption. However, it is the assumption underlying virtually all econometric research on the link between trade policy and economic performance.

<sup>9</sup> An alternative, closely related, structure would follow the important paper on information cascades by Bikchandani, Hirshleifer, and Welch (1992), in which each country chooses its policy in a fixed order and all countries observe a private signal and the policy choice of all previous movers. The result is not essentially different and the structure above seems somewhat more natural.

<sup>10</sup> Aoyagi shows that, if each policymaker observes only a subset of  $A$ , then convergence need not occur. The important paper by Smith and Sørensen (2000), while dealing with the standard cascade model, provides useful ideas about directions of generalization for the model discussed above.

However, and this is the second point, where the private learner internalises the trade-off between expected current reward and accumulation of information (that is what the Gittins index does), in the social learning context only private learning is internalised in this fashion. That is, there is an information externality.<sup>11</sup>

### 2.3 Hierarchical Social Learning

In the previous two subsections international agencies have played a supportive, even subordinate, and essentially passive role in the determination of policy. With the exception of the possibility that experts might systematically mislead policymakers, their role has been completely positive to this point. We now consider the possibility of a less obviously positive effect of such concentrated expertise. As a result, it will now be important that the expertise is associated with the potential for sanction in a way that we will make clear.

With reference to the literature on information cascades, Gul and Lundholm (1995) make a useful distinction between *statistical cascades* and *reputational cascades*. The framework of the previous subsection permits what are essentially statistical cascades—potentially useful information is lost as a result of herding which results strictly from the rational behaviour of individual agents. By contrast, a reputational cascade is driven by an agency relationship embedded in the sequential decision problem (the central reference here is Scharfstein and Stein, 1990). This creates an incentive for herding, even if there is no convergence in beliefs.

In the policy context, we now sketch a model (a hybrid of the previous two models) into which we introduce an international agency that can provide insurance against bad state realizations, as well as possessing information gathering and analysis capacity. The World Bank and IMF are such institutions, even if in practice they have not provided finance as insurance. In  $t_0$  nature selects  $\theta (\in \Theta)$ , the policymakers have initial beliefs  $\rho_{0a} (\forall a \in A)$  and the international agency announces its initial beliefs and the terms of insurance against a bad realization. The model then proceeds as

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<sup>11</sup> Smith and Sørensen (2001), in their welfare analysis of informational herding in a cascade model, develop the notion of a team equilibrium in which agents collectively incorporate this externality. This paper also draws attention to the close relationship between social learning models and private learning models of the sort discussed in the previous sub-section.

above: policymakers choose a policy ( $x_{ta} \in X$ ); receive a signal ( $y_{ta}(x_{ta};\theta) \in Y$ ); if the realization is bad, and they followed the preferred policy of the agency, they get a transfer; and update their prior to  $\rho_{ta}$ . It should be clear that this environment would induce herding, and an information cascade, without inducing convergence of beliefs. In fact, if the insurance were large enough it would induce a herd in  $t_1$ , so there could be no social learning. Unless we are quite sure that the international agency's prior beliefs are accurate, then this sort of institutional environment is clearly harmful.

What is left out of the above model is any role for policy research: the international agency is simply endowed with a fixed initial belief. Thus, we extend this model to incorporate policy research of the sort suggested in Krueger (1997). Suppose that, in addition to the international agency and the policymakers, there is now a finite set of economists. Now suppose that it is the economists, not the policymakers, who observe the vector of policies selected by the policymakers. Note that policymakers and economists observe different things: each of the former observes a country-specific signal, while each of the latter observes the full set of policies adopted in each period. In this extended version of the above model, the international agency forms its prior beliefs exclusively by aggregating the expressed conclusions of the economists.

If there were no international agency, neither the economists nor the policymakers would herd. If the international agency played a purely informational role, publicly reporting an aggregate prior based on the reports of the economists' work, both groups would herd in essentially the same fashion as the policymakers alone herd in the second subsection. However, now suppose that international agency offers to (partially) insure countries against bad realizations if an orthodox policy was pursued in the previous period. An orthodox policy will be a policy such that: 1) it is consistent with the international agency's current belief about the best policy; and 2) a majority of other policymakers are pursuing that policy. This again creates a strong reputational incentive to herd, and an incentive to herd on the agency's preferred policy, with a concomitant loss of socially valuable information.

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If, as a result of elective affinity, common training, or some other factors, economists are more prone to herding than policymakers, the existence of an agency that enforces the beliefs of economists will have two effects. To the extent that, because they are aggregating information from a number of countries, their conclusions are more accurate, this should raise welfare by encouraging the adoption of better policies (think of this as the Krueger effect). Because this institutional arrangement encourages rapid herding, information will be lost, increasing the likelihood of a herd on an inferior policy (think of this as an anti-Gittins effect, reflecting that the institution tilts decision making toward current welfare and away from learning).

### **3. The Political Context of Policy-making**

The aim of this section is to add ‘political flesh’ to the concepts outlined in the previous section. Who are the policy-makers and what is the nature of the domestic policy environment that influences their priors and choices? For convenience we distinguish ‘government’, the group of policy-makers (senior politicians, senior Civil Servants and advisors), from ‘administration’ (the bureaucrats that implement policy, some of whom may actually be policy-makers). As the focus is on policy choice, and particularly with policy change (reform), we do not discuss implementation (notwithstanding its evident importance). The policy choices actually made will depend on the way government functions, the power and influence of various interest groups, and the quality of technocrats involved in the process (as it is they who must identify the elements of a strategy to implement the policy chosen by leaders). The discussion will address factors influencing preferences for, and capacity to, change.

In the pure learning by doing model differences in policy choices are due to differences in information. If the signal from a policy choice is associated with a low Gittins index, priors on that policy will be revised downwards and in subsequent periods a different policy may be chosen. In practice, a new government may emerge with new priors or the domestic political environment may change, for example a new influential interest group emerges (e.g. civil society). While we want to discuss these practical factors as being politically relevant to policy choice, note that the models of the previous section assumed that the objective function for policy-makers is fixed and the same for all, and the external environment ( $\theta$ ) is also fixed.

In terms of the model of the previous section, information affects priors and thus affects policy choice, whereas in practice it may be agents with different priors who effect policy change. We will want to interpret the latter (for purposes of linking politics to the learning model) as information that alters priors. Thus, we can think of a set of political actors with policy preferences that provide information to influence the priors of policy-makers (conveniently, the World Bank can be treated as one such actor, thereby introducing social learning). Formally, one could model this using bargaining games and negotiating strategies, but that is not necessary for our purposes. We first consider preference formation (of which priors are a component) and then political capacity (which can be interpreted as the manner and extent of influence of political actors on information and priors), finally summarising this in what we will term the policy environment.

The notion of preferences, as used in the policy-making literature, has no unique correspondence with the concepts of Section 2; the objective function is a form of preference, and preferred policies are derived from priors. If, however, we confine attention to preferences for a particular policy reform, then we can relate it to priors about the effect of the policy. If information leads to an updating of priors so that the optimal strategy is to choose a new policy, we can say that there is a derived preference for policy reform. To some extent the updating of priors will depend on the nature of the political regime. At one extreme, ideological regimes will tend to have tight (nearly degenerate) priors, i.e. any updating will tend to occur very slowly if at all. These can change over time (e.g. China liberalised its trade regime in the 1990s without altering the predominant ideological perspective; the same may be true of Vietnam). At the other extreme, liberal technocratic regimes will be inclined to search for the most appropriate policy; they are the most likely to be willing and able to update priors. Most governments are somewhere in between: they have priors, but these can be altered or refined in the face of a changing internal or external environment. Recognising this political reality, we will nevertheless assume that all policy-makers have the same fixed objective function (e.g. maximising the probability of being re-elected) and face the same fixed external environment ( $\theta$ ). Only information can elicit changes in policy choice, by influencing priors.

In a technocratic regime the influence of vested interests (i.e. the emphasis attached to information they provide) tends to be offset by a desire to maximise the performance of the economy (the objective function), and the latter is guided by technical arguments emphasising management and economic efficiency. Technocratic regimes will embrace liberalisation (policy change) if they are convinced by the arguments (information) that liberal policies will improve economic performance (so priors are updated). Examples include countries as varied South Korea, Thailand, Mauritius and Costa Rica. In these cases, preferences were conducive to reform and the capacity existed to ensure commitment and implementation. Even a government with a preference for reform will be slow to adopt politically risky policies (formally, this relates to rewards and to the ‘insurance’ function of global institutions discussed in Section 2.3). The willingness to attempt reform will be constrained by political capacity, the ability to push through reforms in the face of opposition (from vested interests that may be within or associated with government rather than only political opposition).

Governments may be more willing to engage in the ‘trial’ of social learning if they do not expect to be blamed for an ‘error’. Global institutions that offer insurance against a bad realization can thereby encourage trial by reducing the cost of error. In such a situation the global institution is ‘putting its money where its mouth is’, by offering to pay up only if the adopting the advice transpires to have a ‘bad’ effect. In fact, one could argue that a failure of the Bank’s approach to policy advice (conditionality) is precisely that it does not offer such insurance; we develop this point in the conclusion.

The ‘age’ of the regime can be quite important. Established regimes tend to have vested interests they will want to protect; this combined with hysteresis renders them less willing to update priors and adopt new policies (i.e. they are less receptive to new information). Many African countries, at least prior to the 1990s, fall into this category – the implementation of policy reforms was very gradual and frequently reversed (e.g. Kenya under Moi). This tendency would also apply to many Asian countries where (certain) policy preferences change only slowly (e.g. India liberalised gradually in the 1990s). One way of depicting this is that governments will stick with  $x_t$  as long as

$y_t(x_t; \theta)$  is 'satisfactory'. While not modelled in our framework, it seems reasonable to suggest (in the context of, say, a model of bounded rationality) that if performance falls below some trigger level, the government will seek additional information. That is, governments may switch between learning by doing and social learning according to some rule.

New regimes may have weak priors, i.e. they have limited information, or history, on which to judge the value of  $p(i)$ . In Uganda, Museveni encouraged dialogue within the government and became convinced of the merits of liberalisation (Harvey and Robinson, 1995). This was under pressure from donors and in sight of a reward in the form of aid. The process of democratisation in Africa has given rise to intermediate cases. New governments emerge that, while they may not be very different from the previous regime, are more willing to experiment with policy reform (see Sandbrook, 1996). The transition of power in Tanzania after Nyerere retired was peaceful but only slowly did anything that could be termed a new regime emerge. Nevertheless, the Tanzanian government of the late 1990s was more reformist and market-oriented than that of the mid-80s. The shift to social learning and updating of priors is likely to be a gradual process: governments may be willing to engage in trial but will be reluctant to risk error. This highlights the importance of political capacity.

It is difficult to define political capacity, but the concept encompasses the presence of political actors with varying preferences and different degrees of influence on the choice made (hence an influence on  $x_t$ ). That is, capacity is less when there are more influential actors with conflicting preferences (this is not incorporated in the models sketched in Section 2). In this sense political capacity represents the ability of the political system to institute policy evolution and policy change, or to incorporate new sources of information and update priors (being the mechanism, within our model, by which change is effected). This will depend on the nature of decision-making within the government itself and the relative strength of constituencies that support or oppose the direction of policy (the 'political economy' of policy). Preferences of policy-makers (interpreted as priors that favour a specific policy) and capacity give rise to commitment to reform, but the ability to implement successfully will then depend on administrative capacity and institutional structures.

Commitment can be seen as comprising two elements – preferences and political capacity. Preferences for reform are a sufficient condition to ensure an attempt at implementation, but are not sufficient to guarantee successful implementation, nor to guarantee that the government will make its intentions public. Preferences and capacity give rise to commitment to reform, but the ability to implement successfully will then depend on administrative capability and institutional structures. In this sense, we can define commitment as revealed preference. If a government favours a particular reform and believes it has the political capacity to advocate and try to implement the reform, it is willing to declare the commitment. If a government has a preference for reform but capacity is weak, it may choose not to declare its commitment. If there is no preference for the reform, there is no commitment by this definition (irrespective of what the government may declare).

Thus, we are concerned with commitment and its components – preference with adequate political capacity is the basic requirement for adopting policies. Relating back to Section 2, the learning models provide an explanation for which policy should be chosen. This is an input to preferences in our (real) political environment. In this real world, policy-makers may be constrained in their ability to reveal preferences and adopt their optimal policy choice; capacity represents the nature of this constraint. Commitment is especially important for policy change (reform) as it ensures that the ‘new’ policy will be advocated and attempted. It is now possible to consider the role of external influences and information. We introduce one further simplification: the set of policy options  $X$  includes the detail of policy design. For example, if  $x_i = XO$  is chosen, there are many different ways of achieving this and one of these must also be chosen. We will, for convenience (as a more complex social learning model would be required to incorporate policy design as a sub-set of policies), treat policy choice as referring to the specific details of the chosen policy.

#### TABLE 1 ABOUT HERE

The discussion above is summarised in Table 1, which also indicates the various ‘dimensions’ that external actors can influence (the first three dimensions relate to

preferences). If policy-making within government is relatively open and based on dialogue there is scope for developing new policies and the government may be receptive to external influences. In such cases, it is ‘easier’ to influence priors as policy-makers are more receptive to information. It is also easier to influence choices as policy-makers are more willing to accept technical assistance. At one extreme, external agencies can be ‘blamed’ for requiring governments to adopt unpopular policies (this is shown as helping strengthen capacity). More generally, the government may have priors in favour of the policy, but may have limited capacity to design an appropriate policy and mobilise support for it. External agencies can help with policy advice and technical assistance. General assistance ‘roles’ are listed in Table 1 (D-F), but we concentrate on influences on preferences (A-C).

External influences are often most important in shaping preferences; in our model, they do this by influencing priors. External actors can influence priors in a number of ways. Most obviously, they can provide information that can alter the belief set ( $\rho_t$ ), including new information on  $\theta$  that affects how governments interpret history. In other words, external agents may influence how the signal  $y_t(x_t; \theta)$  is interpreted and hence the index value attached to  $\rho_{ik}(\rho_{i0}, h^k)$ , and can provide information on the strategies of others ( $\sigma_t$ ) to facilitate the correct choice. They can also influence the importance attached to particular issues in the policy agenda. This is related to providing new information on policy options, expanding the policy set ( $X$ ) that governments consider. In this sense, external agents encourage social learning by facilitating the transfer of policy knowledge.

In our discussion of social learning we noted the usual assumption that policy-makers can observe the actions of others but not the signals received. This is where external agents, especially if they have access to a research base and policy analysis, can play a very important role. They can provide information on the experiences of others and on what appears to have worked. In other words, they can provide an interpretation of the unobserved signals ( $y_t$ ). This need not always be a ‘good thing’ as if global institutions exhibit herd behaviour they may simply compound information cascades and encourage governments to converge on sub-optimal policies. In this sense, global institutions that disseminate policy knowledge have a responsibility to ensure that they

promote the ‘right’ policy option. Aggressive critics of institutions such as the World Bank, such as the ‘anti-globalisation movement’, are effectively arguing that the policies are wrong and global institutions are engaged in herd behaviour. The discussion of social learning in sections 2.3 and 2.3 demonstrated that they at least have a point. Herding is the probable outcome and there cannot be a presumption of convergence on the optimal policy (although the likelihood of converging on a policy increases in its probability of yielding a good outcome).

### **3.1 Policy Environment for Reform**

Equipped with the concepts above we can describe the ‘policy environment’ for reform on two dimensions (following Morrissey, 1999). Political commitment can be either low, where the desire and capacity to change policy is weak, or high, where preferences and capacity are strong. Similarly, administrative capability can be weak, such that only a few fairly simple reforms are feasible, or strong, such that the reform programme can be more ambitious. In our context, this capability can be interpreted in respect of the simplicity or complexity of the policy design. A merit of this approach is that the policies of concern, on our case trade liberalisation, can be classified according to whether they are more demanding of political commitment or of administrative capability, or both. This approach is illustrated in Morrissey (1995, 1999) but is not developed here as our concern is specifically with policy advice rather than implementation.

## **4 Trade Liberalisation as a Policy Agenda**

The aim of this section is to illustrate how the proposed framework can be applied to aspects of trade policy choice. These correspond to the first three dimensions in Table 1. As our focus is on how external agents’ influence preferences, we are not specifically concerned with evaluating the empirical evidence on policy outcomes ( $y_t$ ). Rather, we are concerned with the role of the World Bank in determining the priors of policy-makers. During the 1980s and 1990s almost all developing countries attempted some trade liberalisation (for a review see Greenaway and Morrissey, 1994). In our earlier notation, given the policy choice  $X = \{IS, XO\}$ , from about the mid-80s countries increasingly choose XO rather than IS. The World Bank, through structural adjustment programmes, played an important role in promoting this process

(Greenaway and Morrissey, 1996). Experiences have been decidedly mixed<sup>12</sup>, i.e. the signal  $y_t(x_i; \theta)$  has often yielded a lower than expected index value  $\rho_{ik}(\rho_{i0}, h^k)$ .

Two of the possible explanations for this are of interest here. First, it is quite possible that the policy was not fully implemented, i.e.  $x_t(XO)$  was not effectively chosen. This would imply that external agents did not actually alter policy choice. Second,  $x_t(XO)$  may have been chosen but this policy did not properly account for the economic environment faced by the country or adverse states of nature intervened, i.e. the poor outcome was due to  $\theta$ . This could be interpreted (or presented) by governments as that they were given the ‘wrong’ advice.

Evidence in support of each explanation can be found, usually by contrasting the experiences of different countries (and sometimes by considering the same country during separate reform episodes). Space only permits us to discuss, rather than chronicle or document, the evidence. Morrissey (1999) discusses cases where governments, for one reason or another, do not actually implement the policy advice of the World Bank, and we begin with this first explanation. An important feature of the role of the World Bank is that developing country governments do not make a binding commitment, i.e. policies are reversible. Typically, the World Bank requires implementation of policy  $x(WB)$  as a condition of an aid agreement. We will not digress into the literature on conditionality (White and Morrissey, 1997, provide a succinct exposition of why conditionality of this form is ineffective). Suffice it to say that a government can subsequently choose  $x(\text{not WB})$  either because the agreement is completed (it has received all aid), or it believes it can receive the aid even if does not comply with the policy. In this sense, the World Bank is most relevant to influencing priors (treated below, in the context of the second explanation) rather than determining actual policy choices.

One observation is particularly pertinent. We noted in Section 2 that if global institutions provide insurance against a bad realization this encourages policy herding. Such insurance implies that countries that follow the advice are rewarded *if* there is a

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<sup>12</sup> We do not have space to review empirical evidence here. Interested readers are referred to Dean *et al* (1994), Rodrik (1999) or Morrissey (2001).

bad realization (by implication, if the realization is good they do not need a reward). This is not how the World Bank operates. Rather, it encourages countries to follow its advice, and thereby induces herding, by making the receipt of aid conditional on adopting the policy advice given. If governments need aid, or more generally need to maintain relations with the World Bank, then they will have to make an effort to adopt the policy advice. They are rewarded, however, only for making sufficient effort (as determined by the World Bank). The reward is not conditional on the realization and, in practice, countries suffer if the realization is bad. In fact, if a bad realization undermines a country's ability to meet conditions to a sufficient degree, aid may be withdrawn and they are doubly punished. Our interpretation of insurance in social learning suggests that the World Bank adopts precisely the wrong approach. Aid should be available as a form of insurance.

To address the second explanation, let us assume both that the right policy was chosen and that it was implemented (the majority of economists accept trade liberalisation in principle and many countries have implemented it in practice). This allows us to focus attention on  $\theta$  and, in a related manner, on the role of global institutions in facilitating social learning. If global institutions are to act responsibly, the expectation is that they have assimilated the evidence to recommend the optimal  $x_i$ . One could certainly argue that they present themselves as having such policy knowledge. It follows that if the signal  $y_i(x_i; \theta)$  is less than expected (and it has been for many countries that have adopted trade liberalisation policies), some of the blame accrues to the institutions that made the recommendation. If this is perceived as the general outcome, one should question the advice. This is another argument for using aid as a form of insurance against bad realizations.

Global institutions want to be perceived as repositories and promulgators of optimal policy advice. Almost by definition, their resources in this respect exceed those of individual countries. But they will be evaluated by results, and these are not unambiguously encouraging, quite the reverse. Thus, we can observe policy herding on XO and can identify the influential role played by the World Bank, among others, in generating this outcome. Global institutions have promulgated social learning, and

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theory suggests this will lead to policy herding (by institutions and governments). The jury is still out on whether this has led to the adoption of optimal policies (even if it has led to the adoption of better policies).

The role of experts in general, and internationally organized experts in particular, is not qualitatively different between the private and social learning cases. With respect to initial beliefs, since these must be adopted before social learning occurs, the role is identical. In a world with, say, 160 developing countries, the business of carrying out the updating implied by the above model is substantially more complex than that in the one country case. As a result, the need for expertise is that much greater. Krueger (1997) lays particular emphasis on the role of comparative research, especially large-scale projects such as those run by the OECD, NBER, and World Bank, in helping change prior beliefs on the relationship between trade policy and macroeconomic performance. In addition to assisting in the task of evaluating the evidence generated by the multi-country world, the international agencies play at least two additional roles: data collection and evaluation of private research.

With respect to the first, the World Bank, the IMF, the WTO and UNCTAD, individually and in various joint projects, collect an enormous amount of information, in a relatively standard format, on the trade and industrial policies of the world's countries. These data are used by government researchers as well as private researchers to produce a truly massive quantity of output, much of which is at least potentially relevant to policymakers in industrial and developing countries. One of the tasks performed by the international agencies is the evaluation of this research. In publications like the World Bank's *World Development Report*, as well as occasional papers on specific topics, the results of this research are presented and evaluated. For industrial countries and even large developed countries, given the extensive economic bureaucracies with a particular focus on trade issues, the latter may not be particularly important. However, given the essentially public nature of data collection, the former is likely to be important even to the richest industrial countries.

It seems worth noting that economists do appear quite prone to herding. The case discussed in detail in Krueger (1997) starts from a very tight collective prior on the

benefits of first-stage IS. By some time in the 1980s there was an equally tight collective prior on the benefits of XO. What is striking is how little compelling empirical evidence was developed in the interim. As of the time that we are writing this paper, there seems to be a substantial reaction to precisely this fact (e.g. Rodríguez, and Rodrik, 2001). At this point, we do not have a particularly good story to explain how economists shift among quite tight collective priors on such apparently different policy conclusions, but the fact suggests the importance of taking into account the potential social costs implied by the models expounded here.

## **5 Conclusions**

In pure learning by doing, policy choices are based on information relating to the history of an active policy; there is no information on alternative policies. Only if the policy fails or there is new information to alter priors will there be an incentive to choose a different policy. In the case of social learning, policy-makers can observe the policies chosen by other actors, but the signals those other actors receive is unobserved. External agents (global institutions of knowledge transfer) can influence policy choice by altering priors, providing technical advice or providing information on the (unobserved) effects of the policy choices of others. We have shown that this theoretical basis can be developed to illustrate how institutions such as the World Bank influence policies of developing countries. We suggest that the way they have done this explains why so many countries adopted trade liberalisation policies since the mid 1980s.

However, social learning theory also predicts that there will tend to be policy herding. There is no presumption that the agents will not converge on the optimal policy, but they may not converge with a strictly positive probability. That is, there is no presumption that they will converge on the optimal policy. It is, however, the case that the likelihood that they will converge on a policy is increasing in its probability of yielding good outcomes. The issue then is how far from the optimum countries are likely to be, and what can be done to minimise the costs of such errors.

The obvious criterion that could be used to evaluate the ‘optimality’ of the World Bank policy,  $x(XO)$ , is the outcome in terms of economic growth. There is no more

than limited evidence that the policy, as implemented, has been optimal. More importantly, the manner in which the World Bank has operated has been to reward countries (provide aid) conditional on adopting policies. Rewards have not been linked to outcomes and, more precisely, have not compensated those who have adopted advice for bad outcomes that may result.

Policy advisors and international agencies, that tend to be the major proponents of liberalisation policies in developing countries, should show greater awareness of the prevailing policy environment. Persuasive economic arguments supported by relevant research can alter priors, shape preferences and build commitment to reform. If the aim is to promote trade liberalisation, institutions should be confident that the advice offered will deliver the beneficial outcome. If countries adopt the advice yet do not experience the anticipated benefits, the global institution should question its own advice, especially if it does not provide insurance against bad realizations. It may not necessarily be the case that the advice was wrong, but institutions such as the World Bank should not be inclined, as they are, to presume that any unfavourable outcomes are due to failures by the country in question rather than due to deficiencies in the advice offered.

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**Table 1 External Influences on Policy Choice**

| POLICY DIMENSION  | EXTERNAL INFLUENCES   |
|-------------------|---|
| A. Priors         | Can influence $\rho_t$ and provide evidence on $\theta$ to alter $H^k$<br>Placing specific concerns high on the agenda                                      |
| B. Options        | Provide and interpret information on options in $x_t$ and $y_t$<br>Policy advice and knowledge transfer   |
| C. Design         | Technical assistance on elements of $x_i$<br>Disseminate knowledge on policy design   |
| D. Capacity       | Support for policy choice strategies, $\sigma$<br>Taking responsibility for unpopular policies<br>Providing evidence to build support or counter opposition |
| E. Commitment     | Financial support for adopting policies<br>Building policy-making capability  |
| F. Administration | Technical support and assistance  |

*Notes:* Discussion in text. The aim is to identify the ‘entry routes’ of external influences on policy choice.