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Labour conflicts and governability in Latin American Health System

Executive Summary

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1. INTRODUCTION

The argument for political economy assumes that putting reforms into practice implies to move from one existent situation to another of which one has imperfect information. Starting from that, each actor identifies the main trends of the change and establishes, according to their expectations and experiences in similar situations, potential upsides and drawbacks for their sector before such change, implementing a response mechanism. The combination of those responses somehow defines the challenges of the transition. From this perspective, the policy decision maker must establish a strategy to carry out such a transition, and for achieving so she must identify the presence of some level of consent among the involved actors or, at least, must count on an approval force that offset the opinions against the proposed changes. Therefore, the relevant element the political economy perspective adds is the "feasibility" dimension for performing reforms. This is because although reforms might be technically sensible regarding their design, they can potentially be faced, in a context of conflicting interests, to certain limitations for their application, evidencing some institutional constraints inherent to their development. Therefore, the reform's implementation strategy must be associated to clear and at least minimally consent objectives, so that they provide for a proper "environment" for the implementation and minimize the existence of the institutional barriers previously mentioned.

In most of the developing world, out-of-pocket health expenditure is significant and increases as poverty levels grow (Maceira, 2001). The scarce financial and regulatory capacity of the States gives an opportunity for the private sector to develop, with negative effects over economic access equity (between income groups), geographic equity (rural and urban sectors) and cultural equity (discrimination against ethnical and religious minorities). In the Latin-American case, the non-ministerial social security institutions ("Cajas" in Bolivia, Social Health Insurance Institutes in Argentina, EPSs in Colombia, Mutuals in Uruguay, Social Security Institutes in most of the region) include leading actors with great bargaining power in the health sector. This, together with the public sector's decentralization in the process of decision making generates social glimpses with gremial and/or private perspectives that add actors in the "bargaining board" and reduce the public ministry ability to introduce a single strategy. Before scenarios in which the actors' bargaining power is somehow associated to their capacity of organization and manifestation of objectives, the group with the most incidence limitations is that of patients.

Trying to identify and attend the governance challenges, both actual and potential, of the region's health problems, Maceira (2007.b) performs an analysis of the relevant actors that intervene in the reforms' processes, establishing a scheme for identifying their interrelationships, influences and their participation in the process of design of changes in the health sector. The current work focuses on the analysis of the specific case of health workers and their unions and professional organizations. These institutions have a double role: they are reluctant to changes and they are the supporters of provisions, both of which are associated to their characteristic as pillar of health systems performance.

2. LITERATURE REVIEW

The closer the mechanisms of public policy priorities' definition to cost-effectiveness criteria, the more efficient the resource allocation process would be, increasing its marginal productivity and allowing the achievement of

more advanced sanitary goals. In any case, the financial and control activities are handled by the public authority, in charge of representing social interests in line with equity and access to health values as rights.

Technically correct proposals did not pass the political process filter, arising the awareness of both, policy makers and International Financial Institutions, for going deeper into the analysis of the political process behind each reform in order to reach its feasibility (González Rossetti, 2005, Maceira, 2007 a y 2007 b). particularly, the participation of some crucial groups in the design and implementation of reforms in social sectors shows certain aspects that can be analysed from political and economic theory (political interests alignment, market power, etc.) that allow the identification of further tools for the public policy design (Maceira y Murillo, 2001).

2.1. Interest Groups, Institutionalism and Teams- for-changes.

The analysis of interest groups according to the Pluralistic school of political thought, sustains that the result of every reform process is the product of the interrelations between different groups that are affected by the proposal. Differences on bargaining power between groups define the possibility of affecting its terms. A fundamental assumption inside the interest groups approach concerns the role of the State in the process, being a neutral actor in the bargaining arena.

In this way, and as a general characteristic, reforms' proposals are influenced by the characteristics of the different interest groups, being their results dependent on that process in which the State has a role merely as mediator. Nevertheless, the leading part of the State in the imposition of certain "conflictive" reforms drove us to consider the possibility of giving it a more relevant part in the reforms' process, being its decisive influence found on the design of public institutions and on its interrelation with the interest groups and society in general. In this way, the institutionalism approach considers the State as other group of interest (Evans et al., 1985) with particular preference functions that maximizes a social utility function and that occupies a position with regards to the desirable policy objectives (Steinmo and Watts, 1995; Hall, 1986).

In contrast to the institutionalism approach, a study about political regimes in Latin America demonstrates that there is no empirical correlation between the kind of regime and the State's ability to promote a reform policy. Therefore, given such scenario, the decision making groups arise to be in charge of formulating and promoting the reform policies, and usually have been referred to in literature as the "teams for changes" (Waterbury, 1992), through which the State is seen as a group of self-interested rational individuals that make policy decisions subject to their limitations and opportunities so that they have assured their success in their careers inside the institution. All in all, the State is conceived as a conjunction of groups of interest with different minds about what is it that must be done. In this way, the team-for-change must get consent or else neutralize the opposition trends inside government.

According to what the theory of groups of interest sustains, the State is neutral and compact, since it acts as a single actor that looks for, counting on its bargaining ability, to implement policies capable of aligning the interests of the groups involved. That assumes that there are no divergences in the objective, priorities and even strategies schemes between actors of groups of actors involved in the government. This perspective is particularly important in the case of health reforms where the possibilities of change normally are faced to

social groups in conflict and representatives of such groups in the Congress, provinces and municipalities or even being part of the Executive Cabinet.

2.2. Bargaining Theory

A reform process could be seen as a complex bargaining problem between the different parts involved that pursue the aim of reaching consent on the objectives (cooperation for mutual benefits, conflict of interests, and inexistence of an external mediator). As a particular case quoted in the literature referred to exchange, Zeuthen (1930) and mainly Hicks (1930) applied the theory benchmark to the labour conflicts arena, the former introducing the idea of sequential consents and the latter stressing the occurrence of strikes. In spite of this, these works have been faced to the impossibility of arriving analytically to a certain solution. The analytical modern approach, which solved such failure (by using game theory concepts), was developed by Von Neumann and Morgenstern (1941) and Nash (1950). This theoretical body distinguishes between two approaches: the axiomatic approach (Nash) and the strategic approach. The former considers that the players agree or disagree with each other according to a preference order that is represented by an utility function over the events space, while the latter, arrives at a solution derived from an equilibrium situation corresponding to an explicit model of the bargaining process.

Later, Ashenfelter and Jonson (1969) and Farber (1978) analyze the conditions under which it is feasible to have labour disputes and construct a model in which strikes duration is in relation to the salary that the employees stop earning, the minimum acceptable raise in wages and the discount rate.

In the light of the analysis of different approaches, it is clear that bargaining theory allows incorporating the process of discussion on salaries in both, static and dynamic terms, in which the strike is one of the may instrument in the options menu of unions[1].

2.3. Political Economy Approach

Political Economy roots can be found in the Positive Analysis of Economic Policy, Public Choice, introduced by Buchanan and Tullock (1062) and Olson (1965). This school focused on the agency problem between the government and citizens, emphasising the importance of the constitution and the limitations that it imposes to social behaviour. Nonetheless, formal analysis in political science recalls the work of Ricker (1962) and is referred as “Rational Choice”.

This way, political economy arises because of the interest on abandoning the misconception of institutions as black boxes and because of the willingness to analysing how they originate, adapt and influence the decision making process. In this sense, political economy conforms a view that sees Economy not as a mechanism that supports itself, but, on the contrary, that feeds from the wider social environment of which is part, establishing

[1] An additional relevant factor affecting the performance of bargaining strategies by the sanitary sector actors is the necessity to considering that the “good or service” supplied in the health sector is clearly different from other sectors’. For our case, the service involved, usually referred to as “population health care and maintenance”, has the status of right or social good, which allows for the redefinition of the participant groups’ structures of benefits and utilities. Furthermore, and also differentiating the model introduced by the bargaining theory from that considered for the health sector, involved actors are social entities (the State and workers’ unions or trades), with utility functions that exceed the private benchmark.

the inevitable influence of the complex interactions between the multiple actors with interests, information and particular beliefs, in the context of determined institutional benchmarks.

Clearly, nevertheless, basing on existent literature, there is no consensus about the definition of the concept of "institution". North (1981) emphasises their role as "responsible for reducing uncertainty by means of establishing stable structures (not necessarily efficient) for human interaction", Kreps define "institutions" as "the rules of the game", and Acemoglu (2007) classifies them into economic and politic, depending on the role they have.

Furthermore, the ability of the New Political Economy of analysing the implications of institutions on the economic system and on its feedback with the context, arise from the hypothesis of the Contracts Theory, that identifies the necessity, before uncertain scenarios, of establishing mechanisms able to align the agents' interests in order to minimize the losses associated to informational asymmetries. Also, this approach recognizes as its origin Coase's ideas about the limits of firms and their necessity for establishing norms prone to reduce integration activities with clear connotations of social externalities. Williamson's literature review in his Transaction Costs Theory (1985), introduces the discussion about different types of contracts, their enforcement capacity, and the interaction between their terms, the specificity of their requirements and the governability costs.

From this scheme, and taking some aspects reviewed in the literature discussed, next section develops an analytical model that provides for the theoretical benchmark for the analysis of Scavino's (2004, 2005) information about strikes.

3. BEHAVIOURAL MODEL

The model proposed in this section combines elements of political economy applied to a bargaining process between the Government and a Union representation of the health system personnel, being the latter a professional who calls for the strike (doctors or nurses) or a non-professional (nurses assistants or other health workers). The Union's utility function is a representative one that results from the sum of workers' utility function. It is defined as U^i , and is composed by a monetary benefit term $\pi^{\$}$, reflecting individual profit and a non-monetary term U^S, referring to a social utility function. Both terms are pondered, respectively, by α , and (1- α), as it is showed in equation (1)

$$U^i = \alpha\pi^{\$} + (1-\alpha)U^s \qquad (1)$$

The higher α is, the more significant it is for the i-th individual the weight of her monetary income with respect to social welfare. May the extreme value α = 1 occur, the case of a health professional not interested on the community would be illustrated, while the case for α = 0 would exemplify a health professional totally concerned of humanitarian tasks, regardless of her monetary revenues.

Inside the monetary revenue function, equation (2) defines it as the sum of public and private incomes, π^{PU} and π^{PR}, respectively.

$$\pi^{\$} = \pi^{Pu} + \pi^{\Pr} \quad (2)$$

Public sector's net income is defined by fixed wages received – w- minus the unitary cost of the provision of services multiplied by the number of patients assisted by the public sector, q^{PU}

$$\pi^{Pu} = E(\overline{w}) - eq^{Pu}, \quad (3)$$

where e is inversely associated to the number of strike days and reflects the level of effort required in each service provision, $e = 1/H$ (4)

At the same time, the private profit (equation 5) identifies with a model of competition by quantities (Cournot) with homogeneous individuals charging price p (per each consultation) and unitary cost level e, which inverse demand function is defined by equation 6:

$$\pi^{\Pr} = (p^{\Pr} - e)q^{\Pr}, \text{ y} \quad (5)$$

$$p = 1 - Q^{\Pr} \quad (6)$$

where is the sum of private provisions, such that $Q^{\Pr} = nq^{\Pr}$ (7)

The second term in the individual utility function corresponds to the relative weight each health service provider assigns to social welfare, which is defined as $U^{s} = Ien$ (8)

It is noticeable that it weights total health investment (I) by each supplier's level of effort e which may be considered an approximation to total expenditure weighted by quality of services. The fact that health services "production costs" levels are negatively associated to monetary revenues and, at the same time, positively related to social welfare exposes the trade-off to which any health worker is faced to.

Finally, the potential impact of the strike is gathered by an expected wage, in the first period net of the level of effort, w/H , plus the retribution in the second period where the strike takes place.

$$E\overline{w} = \overline{w}/H + \beta(\overline{w} + \Delta w - eq^{Pu}) + (1-\beta)(\overline{w} - eq^{Pu}) \quad (9) \qquad \text{with} \qquad \Delta w = \gamma H \quad (10)$$

In equation (9) the probability of success of the strike is given by β . Should β equal one, success is total and the workers' retribution is the previously presented wage plus Δw , associated to the strike's intensity. On the other hand, should the strike be completely ineffective, β reaches zero and wages are maintained.

Replacing in equation (1) each subsequent equation and maximizing utility, first order condition indicates that the optimal number of strike days is:

$$H^{*} = \left(\frac{\alpha\overline{w} - \alpha\beta q^{Pu} - \alpha q^{Pu} + \alpha\beta q^{Pu} - \alpha q^{Pu} - \alpha q^{\Pr} - nI \ - n\alpha I}{\alpha\beta\gamma} \right)^{1/2} \quad (11)$$

Where the following qualitative results hold:

$$\frac{\partial H}{\partial q^{pu}} < 0 = \rho \quad \frac{\partial H}{\partial q^{pr}} > 0 = (1-\rho) \quad \frac{\partial H}{\partial n} < 0 \quad \frac{\partial H}{\partial \alpha} > 0 \quad \frac{\partial H}{\partial \beta\gamma} > 0$$

4. STATISTICAL ANALYSIS

The current section aims at presenting some results from the descriptive and analytical statistics that take account of the participation of health workers organizations in the health sector, utilizing the Scavino (2004, 2005) database on strikes on Latin America for 2003, 2004 and 2005[2] years. The ultimate objective is to identify the reactions of a significant actor in the design and implementation of health policies, according to their reactions to the system's organization and, to some extent, to the reforms initiatives during the period.

According to the introduced theoretical benchmark, unions, trades and professional associations define an strategy which aim is to reach a collective objective function –that of institutions and represented ones-. Also, although strikes are part of the menu of tools available for health workers organizations, they are not the only actions unions can resource to in order to performing their plan of action. Unions rely on strikes as part of a wider and less simple menu that includes bargaining mechanisms, participation on the debate on work conditions enhancement and on the design and the putting into practice of organizational changes. This way, this document focuses on the study of the relation between number of strike days and the type of the institution that calls for the action, its nationality, the nature of the protest and further relevant information.

4.1. Methodology for the construction of the database

The database was constructed by Scavino based on public information gathered from the net of networks, websites of organizations belonging to United Nations System, regional and governmental organisms, international and national professional and workers associations, the media (press and radio), research centres and universities. Looking for being as rigorous as possible, the author interviewed organization leaders and other sources of the region. Information in the database includes: (i) country in which the conflict takes place, (ii) name of calling institution, (iii) type of organization, (iv) demands characterization, (v) date of start and end of strikes. Agents calling for the strike are gathered in five groups: i) OPM: Physicians Professional Organizations (associations, doctors' or mix unions); ii) OPE: organizations of professionals nurses that include graduated nurses and birth assistants, whether they are associations, trades or unions); iii) OAE: nursing assistant organizations (generally unions, differentiated from university organizations); iv) OTS: classic unions of public and private health workers; and v) OOP: other professionals' organizations, which includes emergency health workers, laboratory workers, anaesthetist, etc.

Basing on information gathered by Scavino, the following subsection presents a descriptive statistics analysis that studies, by year, by type of calling agent and by kind of demand, the number of strikes performed on the

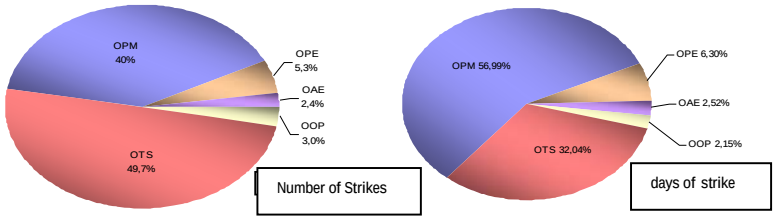
[2] From a methodological perspective, moreover, the ongoing work restrains its analysis to the survey of strike actions, given that such demonstrations have been documented by the region's papers. Although this does not underestimate the data recompilation task, it does not necessarily reflect the phenomenon completely, because it finds itself influenced by another relevant actor in the health sector: the media.

region, as well as the duration of such demonstrations, for the period 2003 to 2005. With an Ordinary Least Squares model, the determinants of the total days of strike in the Latin American health sector are analyzed.

4.2. Descriptive analysis

Figure 1 shows, by the type of agent calling for actions for 2004, the percentage of the wage each one of these institutions have, basing on two indicators of health organization mobilisation: number of strikes and number of total days of strike, by nation. It can be seen that Medicine Professional Organizations (OPM) called for the 40% of strikes on the region, although their average duration was the highest, corresponding to the 56,99% of the demonstrations days. The other three groups of organizations together represent the remaining 10% of the strikes, and were the leaders for the 11% of the strike days.

Figure 1
Number of strikes and of total days of strike, by calling agent, as % of the total



Source: Own based on Scavino 2005.

The distribution of days by calling agent (table 1) for the region, for the complete database, shows that Health Workers' Organizations (non-professionals) have been responsible for more than the 50% of regional strikes on eight out of seventeen countries (Argentina, Bolivia, Brazil, Chile, Colombia, Guatemala, Mexico and Paraguay). Except from Paraguay, those countries are the ones with the higher population in the region.

Table 1
Days of strike by calling agent, by country and as % of the total

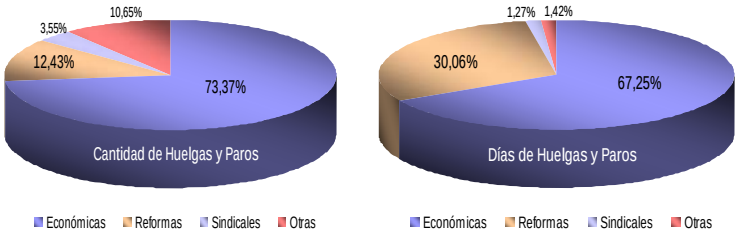
Country	OPM	OPE	OAE	OOP	OTS	Total
Argentina	40.00%	0.00%	0.00%	0.00%	60.00%	100%
Bolivia	30.59%	0.00%	0.00%	0.00%	69.41%	100%
Brasil	28.57%	0.00%	0.00%	0.00%	71.43%	100%
Chile	18.18%	0.00%	0.00%	0.00%	81.82%	100%
Colombia	0.00%	0.00%	0.00%	0.00%	100.00%	100%
Ecuador	69.29%	7.14%	0.00%	0.00%	23.57%	100%
El Salvador	99.63%	0.00%	0.00%	0.00%	0.37%	100%
Guatemala	0.00%	0.00%	0.00%	0.00%	100.00%	100%
Honduras	39.44%	4.23%	47.89%	0.00%	8.45%	100%
México	0.00%	0.00%	0.00%	0.00%	100.00%	100%
Nicaragua	65.43%	0.00%	0.00%	0.00%	34.57%	100%
Panamá	71.43%	0.00%	0.00%	0.00%	28.57%	100%
Paraguay	0.00%	0.00%	0.00%	0.00%	100.00%	100%
Perú	36.40%	31.58%	0.00%	10.96%	21.05%	100%
Puerto Rico	100.00%	0.00%	0.00%	0.00%	0.00%	100%
R. Dominicana	93.22%	0.00%	0.00%	6.78%	0.00%	100%
Uruguay	52.66%	0.00%	0.00%	0.00%	47.34%	100%

Fuente: Elaboración propia en base a Scavino 2005.

On the contrary, Ecuador, El Salvador, Nicaragua, Panama, Puerto Rico and Uruguay, show that more than 50% of they strike days have been lead by Medicine Professional Organizations (OPM). Honduras is the only Latin American nation where nursing assistants' unions have a significant weight when leading demonstrations linked to strikes: 47,89%

The demands that motivated strikes in the region all along the analysed period have been grouped by Scavino in four sets: (i) economical: referred to those demands that asked for increments in the demonstrators' financial resources (wage stand ups, new job alternatives, etc.); (ii) political: referred to those demands for better job conditions (associated to reject to reforms, to privatizations, strikes against social security reforms, etc.); unions' demands: referred to subjects associated to preserving historic fights of trades or to the recognition of organizational legitimacy (recognition of leaders, of the organization, anti-unions fires, etc.) and (iv) others: where strikes inspired by political general demands, not exclusively destined to the sector, are included (opposition to the Free Trade Agreement, to certain governmental actions, etc.) and that only motivate strikes in the health sector.

Figure 2
Number of strikes and of total days of strike , by kind of demand, as % of the total



Source: Own based on Scavino 2005.

From the opening by number of strikes and of days of strike for all the nations in the database, it is observed that economical reforms constitute the majority of the motives for demonstrations, explaining the 17,37% of the cases and the 67,25% of the days of strike for this type of demonstration. On second place, with 12,43% of the strikes and 30% of the days on strike, the motivations associated to reforms are found. Finally, political and union causes gather 14% of the strikes and less than 3% of total days on strike.

Regarding the causes of days on strike by nation (Table 2), Chile, Colombia, El Salvador, México and Panama are the nations where the political motivation (sectorial reform) constitutes the main cause for union's demonstration. This not necessarily coincides with the intensity of reforms in such countries. With less than 50% of incidence Brazil, Bolivia and Argentina are found with 22,22%, 19,75% y 11,11%, respectively.

Table 2
Days of strike by kind demand, by country as % of the total

Country	Economics	Reforms	Unions	Others	Total
Argentina	44,44%	11,11%	0,00%	44,44%	100,00%
Bolivia	59,26%	19,75%	9,88%	11,11%	100,00%
Brasil	77,78%	22,22%	0,00%	0,00%	100,00%
Chile	27,27%	72,73%	0,00%	0,00%	100,00%
Colombia	0,00%	100,00%	0,00%	0,00%	100,00%
Ecuador	99,29%	0,00%	0,00%	0,71%	100,00%
El Salvador	0,37%	99,63%	0,00%	0,00%	100,00%
Guatemala	100,00%	0,00%	0,00%	0,00%	100,00%
Honduras	86,96%	0,00%	10,14%	2,90%	100,00%
México	0,00%	100,00%	0,00%	0,00%	100,00%
Nicaragua	98,77%	0,00%	0,00%	1,23%	100,00%
Panamá	0,00%	100,00%	0,00%	0,00%	100,00%
Paraguay	100,00%	0,00%	0,00%	0,00%	100,00%
Perú	98,25%	0,88%	0,88%	0,00%	100,00%
Puerto Rico	50,00%	0,00%	0,00%	50,00%	100,00%
R. Dominicana	100,00%	0,00%	0,00%	0,00%	100,00%
Uruguay	95,15%	3,64%	0,00%	1,21%	100,00%

Source: Own based on Scavino 2005.

Bolivia and Honduras are the two nations where unions' aspects foster the highest number of demonstrations in the region, with approximately 10% of incidence in their respective total days on strike. In terms of political adherence through health sector demonstrations, Puerto Rico with 50% of its days on strike and Argentina with 44,44% are the leaders of the group, followed by Bolivia (11,11%) and Honduras (2,9%). The last two nations mentioned are the most "diversified" in their reasons for protests, although they are not the ones that most demonstrate.

Furthermore, observing the days on strike (by kind of demand and calling organizations), it is clear that OPM are the organizations with the greatest power on demonstrations in every type of strikes, while unions' causes based strikes are in the third position, followed by the causes associated to the rejection to macroeconomic policies.

As it can be seen, these results put the health sector political economy debate closer to bargaining theory than to the theory of agents proposing reforms and to that of political economy. This is not explained by the relevance of reforms initiatives or by the role played by unions as actors in the health sector, but by the demanding characteristic of unions, which is utilized by them as a tool for carrying out demonstrations looking for the solution of monetary conflicts. Nevertheless, the opening of motives of strikes by calling agent shows that it is medicine professionals the ones for who sanitary policies foster the greatest incentives to demonstrations, explaining the 40% of the region's days on strike.

Table 3, besides, gathers all the countries considered and the number of medicine professional associations proper of every nation, taking into account health workers. Ecuador and Chile, with 5 and 3 heath workers associations, respectively, show an average of 8,5 strikes being the average number of days on strike 33 and 9, respectively. Moreover, with the highest number of days on strike (25,78), Dominican Republic counts on a single health workers group, while Panama has no association.

Table 3
Number of Health Workers Groups and number of strikes, by country

Country	Health workers groups	Strikes lead by OTS	Average	Standard Deviation	Days	Average	Standard Deviation
Ecuador	5	11	8,5	3,5	33	21	17,0
Chile	3	6			9		
Honduras	3	3	9	9,6	6	31,4	24,3
Perú	3	5			48		
Uruguay	3	6			38		
Argentina	2	5			6		
Bolivia	2	26			59		
Brasil	2	5	2,33	2,9	180	25,78	58,5
Colombia	2	1			3		
El Salvador	2	1			1		
Guatemala	2	1			1		
Paraguay	2	2			6		
México	1	1			1		
Nicaragua	1	9			28		
Dominican Republic	1	0			0		
Panamá	0	1			12		

Source: Own based on Scavino 2005.

Econometric Implementation

Based on the model introduced in the previous section and on the available information analysed, it is possible to identify a mechanism for the econometric implementation that enable us to question about the determinants of the number of days on strike as one of the available strategies for doctors' and health workers' trades and unions to engage in a bargaining process. Nonetheless, strikes should not be considered as the only strategic demonstration of health workers' actions and their representatives', but just as one of the available tools to meet their objectives as a group of interest.

In this way, and referencing to Maceira and Murillo (2001), this study proposes the estimation of the behaviour model previously discussed, taking the number of days on strike by union and country as the dependent variable for each of the 168 strikes lead by health unions or workers' trades during the period 2003 to 2005. the estimation by Ordinary Least Squares establishes that the intensity of the strike is explained by some vectors that gather indicators of context, health market structure and of the type of calling organization.

The weighting factor associated to the trade-off between the individual monetary benefit and social welfare (α), has not been included as an explicative variable since it corresponds to the field of individual an unions' preferences, which is difficult to measure. Anyway, it is included through the national health investment variable (I), instrumented by per capita total health expenditure for the country. As it is derived from the theoretical analysis on the strikes' determinants, a negative and significant relation between days on strike and health investment would be associated to a relatively higher weight for the social component over the private one in the health worker's individual utility function. On the contrary, a positive and significant coefficient would indicate a higher weight to the private component. Nevertheless, this interpretation may be understood differently, that is, from the union's view: a higher social health investment requires, from every participant actor, a more active demand for keeping the sectorial share over the resource distribution, producing higher levels of strike.

The proposed mechanism for the private financial weight on the doctor's monetary income instrumentation on the individual function, was the participation of the private sector on the financing of each country health sector. That is why ρ takes the form of a parameter referring to the public sector's behaviour, originated in the each country's national accounts and published in the *World Development Report*.

The variable associated to the competition level in the health workers market (*n*) is instrumented by two variables constructed basing on information provided by international organisms (OPS, WB): number of doctors every a thousand inhabitants, and number of nurses every a thousand inhabitants. According to results reached, it is expected that higher competition potentially reduces the number of days on strike, reducing agreement inside an atomized group.

The proposed estimation considers three dimensions to represent the weight of health workers and their representatives. The first of them is a measure of the "density" of the health professionals groups (number of doctors and nurses), while the second variable proposes the difference between each calling agent's relative "combativeness" (intensity) level (potentially identified as γ in the formal model). A third element corresponds to the number of union and trade institutions by activity branch: it is argued that the higher the dispersion, the higher the probability of every group to perform demonstrations as a mechanism to capture members (competitiveness). This relationship is introduced in Maceira and Murillo (2001) as one of the potential triggers to strikes, from a political incentive perspective.

With the aim of estimating the model, differential intensity levels of every calling agent is instrumented by a dummy variable that takes value 1 whenever the calling agent is a union of medicine professional, to differentiate it from other groups (specially from health workers that, together with doctors constitute the most active groups). Furthermore, with the aim of testing the hypothesis of competitiveness between unions, the variable *"numsind*" was created to capture the number of groups, by type of group, that represent those workers that organize the strikes. Should the hypothesis be confirmed, a higher number of groups would increase each calling agent's incentives to get to the strike instance.

The model tries to capture, moreover, the levels of intensity of the days on strike as a function of the kind of demand originating such demonstration, introducing a dummy variable associated to those callings that demonstrate against health reforms (contrary to those originated by economical, union's or political demands). Finally, dummies capturing years and quarters are included, in order to identify the possibility of temporal specificities (annual or seasonal).

The results of this exercise are presented in Table 3, showing in the first two different columns the specifications of the model for total strikes. In the last two columns similar estimations are reproduced, focusing only in the economical strikes (wages demands).

Results ratify some of the original hypothesis and reject other arguments considered in the model. The number of doctors operates negatively to the number of days on strike, associated to the dispersion on the capacity of bargaining, though the density of nurses is not statistically significant. Furthermore, the dummy variable associated to the calling power of medical unions increases the probability of strikes lasting more, and the inverse is reflected in those calling lead by health workers. Results also show the importance of the participation of the private sector to increase the probability for higher days on strike, while total health investment, for the case of total strikes do not find significant correlation with the number of days of demonstrations in the health sector. Complementarily, those strikes associated to the rejection to strikes initiatives would be more intense in days of demonstration, according to what suggest the variable *Dreforma*.

Table 10 last two columns analyse the same econometric application but considering only the 124 polls associated to wage stand ups. Results are consistent with the ones discussed previously, with three differences to mention: firstly, the higher weight assigned to health workers with respect to doctors, which reflects that professional identify more actively with strikes linked to reforms. Secondly, although private sector participation is still significant and positive, its intensity is weaker, fact that is probably related to the higher public presence of unions' demonstrations. Thirdly, contrary to the previous case, the indicator of total health investment is significant (5%) and positive.

As predicted by the theoretical model, the incidence of this variable was dependent on the relative importance the health worker assigned to social and private components in her utility function and, complementarily, to the interpretation the union made of it. The sign found referred to a unions' movement towards increasing their members' participation in a higher expenditure of a sector with greater availability of resources. However, the estimation's adjustment in both estimation groups is low, which means how limited the predictive power of the utilized specifications is, although this does not invalidates the exercises.

Table 4
Implementación Econométrica

	Dependent Variable:Days on strike		Dependent Variable:Days on strike By economical reasons	
GastoTSaludcap	0.0113503	.0141219	.02182 **	0.0249544 ***
	(0.35)	*(0.248)*	*(0.012)*	*(0.004)*
Share privado	0.4441211 **	.4477688 **	.2533709 *	0.2529682 *
	(0.034)	*(0.031)*	*(0.073)*	*(0.069)*
Médicos x 1000	-9.20432 **	-9.701332 **	-7.846652 ***	-8.692531 ***
	(0.017)	*(0.011)*	*(0.002)*	*(0.001)*
Enfermeros x 1000	1.523863	2.399202	1.577229	1.952362
	(0.464)	*(0.251)*	*(0.232)*	*(0.132)*
Numsindic	7.09239 *	-	-.0304803	1.048723
	(0.09)	-	*(0.979)*	*(0.425)*
DMedConvoc	-	-9.937192 **	2.825505	-
	-	*(0.031)*	*(0.300)*	-
DTrabConvoc	15.56912 **	16.8276 ***	-	-5.992867 ***
	(0.011)	*(0.006)*	-	*(0.051)*
DTri2	3.586791	3.347215	3.816457	4.05322
	(0.523)	*(0.547)*	*(0.272)*	*(0.232)*
DTri3	4.45721	5.023372	1.923091	2.376963
	(0.386)	*(0.326)*	*(0.545)*	*(0.451)*
DTri4	-.998766	.1130193	.4543821	1.132502
	(0.863)	*(0.984)*	*(0.899)*	*(0.751)*
a2003	-6.272987	-6.738403	.6625884	0.5288506
	(0.194)	*(0.160)*	*(0.838)*	*(0.868)*
a2004	-7.993967 *	-8.387218 *	-1.914045	-2.270794
	(0.064)	*(0.051)*	*(0.477)*	*(0.393)*
Constante	-11.10466	-8.007871	-6.975059	-5.699783
	(0.402)	*(0.540)*	*(0.423)*	*(0.504)*
Obs	168	168	124	124
R^2 Ajustado	0.12	0.13	0.11	0.13

* 10% ** 5% *** 1%

4.4. Reforms and Incentives

The final section of this chapter introduces a summary of the twenty one strikes originated on motives related to reforms carried out by unions during the period 2003-2005. They show that doctors have called for six strikes with average duration of thirty six days. However, separating Salvador's strike lasting 270 days, the average lowers to six days by demonstration. This is comparable to 15 strikes carried out by health workers, with an average of 6,4 each.

Beyond Salvador's case, Brazil appears as the nation with the highest demonstration intensity when it comes to reforms, with 56 strike days in three years, followed by Panama (42 days), Bolivia (17) and Chile (8).

Reforms gathered into the decentralization rubric fostered three strikes, with thirteen demonstration days, while social security reform motivated eight strikes, with a total of ninety seven active days. The inclusion of public-private cooperation mechanisms regarding services provision, usually acknowledged as movements towards health privatization, provoked four strikes, totalling 14 days, not to mention the Salvadorian case reaching 270 days. In spite of this classification, the analysis on the rationale for strikes due to reforms shows that there is not a unique element that determines demands.

In general, reforms associated to changes in social security should be beneficial to health workers and their unions, as long as they increase the system's efficiency in the allocation of resources –bringing about potential improvements in remunerations- and also social welfare. Nevertheless, such initiatives in the region complement with movements towards decentralization, changes in the mechanisms of payment and with more participation of the private sector, all of them related by the sector's human resources characterized by an atomic trades' power and with risks for wages losses or unemployment.

5. CONCLUSIONS

Health systems in Latin America are experiencing reform processes ever since the beginning of the nineties. The discussion about which are the reform models that imply certain threshold of "fair practice", along with the recognition of the existence of a gap between a reform's design and the effective management of it, have generated a great deal of debate that involves politicians, researchers and private actors, and social sectors. Such a debate focuses on the fundamentals that enable a model for change in the health systems in developing nations to turn into an effective tool to reduce the lack of access equity. Nevertheless, meeting such a general objective it is necessary to identify the keys that make such initiatives turn into tools that are effectively prone to be implemented, arising concepts such as political sustainability, governability, interests alignment mechanisms inside a scheme of distributive conflicts.

The ongoing work approaches on a research line related to political economy of the health systems and reforms in the region, in which there have been some advances over the last few years, as well as remote bibliographic records that fundament and enriches the debate. In this particular work, health governability concept is seen from a specific perspective: that of health workers' trades and professional associations.

Inside such benchmark, the document proposes a synthesis of three bibliographic approaches associated to the decision making process. The first of them analyses the advances of some theories over the ways of influencing the *policy making process*. The Institutionalism approach, that of interest groups and that of teams for changes, propose alternative views for the study of the models of origin, legitimacy and policy implementation where the State is seen as a relevant actor, although not always central. Therefore, this approach proposes a view of unions as actors in the system of sectorial decision making in which agents experience bargaining processes according to the occasional objectives under conflict. The general topics of the bargaining theory are introduced in the literature review, latter advancing on the political economy arguments, based on game theory.

From there on, a simple model of health workers' utility maximization is developed, where the trade off between individual monetary benefit and her interest on contributing to higher social benefit through the exercise of her profession is exposed. By deriving such model, some working hypotheses arise to be tested by both, descriptive statistics and by the econometric implementation of an ordinary least squares model.

The database for the statistical analysis originated in the work of Scavino about strikes on the health sector for the period 2003-2005, for the region. Such tool constitutes an invaluable contribution to the comprehension of the governability of the health sector from a union's perspective, introducing results for one of the various instruments on which these groups rely on: the strikes.
Linking the indicator "gremial strategy" to the number and intensity of strikes, the work proposes to analyse their determinants, yet it does not expect, owing to that, to reduce the scope of action of these institutions, recognizing that other strategies (debate boards, campaigns, direct political participation, etc) are also influential instruments.

Results show that variables associated to the organization of the sector (professionals' density, levels of expenditure, private sector's role, etc.) influence the definition of strikes in the health sector. In spite of this, lack of relevant information impedes to advance towards some aspects that impulse the call for sectorial

demands, such as absolute and relative wages levels, political alignment, etc. Nevertheless, the work accomplishes the task of supporting some arguments that allow reaching a greater comprehension of the strategic actions of the Latin American health sector.

Anyway, both, trade demonstrations associated to wage demands and those related to perceived risks before shifts in the rules of the game (sectorial reforms), are originated in the structural situation of the health provisions sector in Latin America: segmentation and limited regulations requiring higher attention and debate.

Regarding the first aspect, segmentation, it is originated on the dual character of the sanitary system, which is product of the unequal income distribution, evidenced by norms and institutions overlapped over the time. As long as public health sector proposes a universal coverage and offers effective attention to poor people counting on a very constrained budget, health workers acting in it perceive their fragility and suffer from lack of resources. As elapses, the actors of the system both, sanitary authorities and patients, as well as workers and their representatives, witness the fall of the public capacity for providing services, and also the necessity of an altruistic effort to maintain the minimal coverage levels.

As long as the problem is deeper and expands over time, private sector grows at the expense of the absence of public response and it makes worse the failures of the health system when it comes to achieving more social cohesion. The region's segmented systems are a sample of dual models with great opportunities of adverse selection and financial and sanitary risk transfers. The gap between the rich and the poor do no reduce, and workers find themselves under a renewed tension. From there on, their unions reposition and, before potentially risky initiatives, react stressing even more the distributive conflicts.

Before such dynamics, the risks for opportunistic behaviour by the actors of the sector that have more information become more probable. Failures in the regulation and control mechanisms in the health systems of the region, furthermore, impede to identify such potential practices, affecting negatively not only efficiency and quality indicators, but also the signals for the actors of the sector, who perceive the structural limitations of the public authority.

In a sense, both arguments, segmentation and lack of regulatory enforcement are complementary. The lack of resolution of the former requires of failures in the latter so as to offer discretion to the system's actors for them to adjust their behaviour to a model socially unsustainable. Inside such a context, health workers groups react strategically and not necessarily can abstain from acting, in spite of their and professional social interests on a more equitable and efficient.

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