Overview of the paper’s theoretical framework and main results

The paper seeks to answer two questions, to wit: whether convergence has been achieved in public utility regulation around a large sample of countries and, if not, why, given the fact that not all regulatory policy measures have seemed to work everywhere. Secondly, to what extent one should expect (even recommend) imitation of regulatory policies from advanced countries, in countries with different degrees of institutional development and balance between the powers of incumbent / entrant firms in any particular regulated sector. The authors try to answer these questions by studying the process of local loop unbundling (LLU) in the fixed telephony / broadband internet access market.

Bonardi, Urbiztondo and Quelin (BUQ hereafter) discuss the above issues and find concrete policy recommendations within the framework of two theoretical models, namely Grossman and Helpman’s (1994) protection for sale model that seeks to explain how government policies are influenced by lobbying activities from entrants (i.e. telecom multinationals in BUQ’s setting) and incumbents (i.e. ILECs), and the New Institutional Economics (NIE) model in which the degree of institutional development shown by any particular country (i.e. mechanisms for dispute resolution, transaction costs, contract enforcement, justice system, etc.) is key in predicting (explaining) the success (or failure) of any policy recommendation.

Within this theoretical framework and applied to the LLU policy discussion, BUQ arrive at the following policy predictions (recommendations) many of which are also tested empirically at the end of their paper: 1) Imitation occurs when entrants lobby harder than incumbents, 2) Imitation also occurs when local institutions favor competition over the status quo, 3) In most cases one should expect experimentation (i.e. middle of the road between imitation and status quo), 4) Convergence is stalled when entrants start lobbying too early and incumbents react by shifting public opinion against imitation, 5) In countries far from the leaders experimentation is better, 6) In countries close to the leaders, more imitation is likely, 7) Losers will be those countries with weak institutions and imitation and those countries with strong incumbents and no imitation.

Predictions 1), 2), 3), 5) and 7) are supported by (somehow weak) empirical evidence

Comments

I think the issues in the paper are very well presented and addressed, the theoretical model, the predictions and the results are well laid out and discussed and the recommendations are strong. However (and as any commentator would begin his / her comments!) I think there are some aspects that deserve further (deeper) analysis and also some predictions do not necessarily follow from the theoretical model (or the empirical
Regarding the lobbying and institutional fit model there are some issues that I found somewhat troubling, mainly that the negative utility function and its argument do not fit the standard properties of utility functions. This is, it is not (quasi) concave (i.e. first derivative with respect to the argument is not positive but negative) and the function’s argument is exogenous (i.e. policy x selected by the Government) and a real number (i.e. can take on negative values). Even if the true arguments are the supports s (that are endogenous to the firms, as one finally finds later in the General analysis for the game Section), the firms’ utility functions remain negatively related to their arguments.

Within the “General Analysis of the Game” section, the principals (firms) first solve their F.O.C’s with respect to their optimal S given their opponent’s support and the optimal x* given by the reaction function of the regulator with respect to x*. Given that the regulator is concerned with both the performance of the sector (i.e. how close x* is to world z) and with the firms’ supports, one can obtain closed solutions for x*, x_m (and S_m) and x_l (and S_l) (page 8 of BUQ’s paper). From these results one can predict that: lobbying is better than not lobbying (i.e. one can influence policy through supports), the final policy will depend on how much each firm lobbies, their preferences (alfas and z’s), and the state of the world (z), which is basically BUQ’s Prediction 1 (i.e. x* will shift depending on the relative weights of each variable).

However Prediction 2 does not follow directly from the model. BUQ argue that whenever z_m is closer to z (i.e. the entrant’s preferred point is closer to the state of the world z)….” then the expected policy choice is closer to imitation…” First, that the country’s institutional environment allows the enforcement of policies favoring competition does not mean that z_m is closer to z (or does it?). Nowhere in the model do institutions or their quality appear as variables, therefore we cannot make predictions as to the impact of institutions (or quality thereof) on the final policies. Second, even if z is closer to z_m, how do they reach the conclusion that x* will be tilted towards imitation? It is not clear.

Predictions 3 is actually a corollary of Prediction 1, namely that in most cases x* will be intermediate between the extremes which means some sort of experimentation or hybrid policy should be recommended.

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1 To build the model’s basic setup the authors draw upon a paper by Mukand and Rodrik (2005) however this model deals with national income that is a function that does not have to comply with first order conditions taken by an individual and many other properties that utility functions do have to comply with to be well behaved.

2 No matter what values x and z take on (whether negative or positive) u_i(x) will always be negative because (x – z) is squared.

3 Do the authors seem to suggest that a z being close to z_m is a proxy for highly developed institutions and vice versa? It is not clear.
Prediction 4 could also be a corollary of Prediction 1. It states that a strong lobby from entrants followed by a strong (counter) lobby from incumbents through the media can shift the resulting policy from imitation towards more status quo.

2. The question of performance of regulatory reforms

I find that predictions and recommendations in this part of the paper, even though reasonable and of common sense, do not follow directly from the theoretical model. Here the authors analyze regulatory reforms in light of the pressure exerted by lobbying groups (i.e. entrants and incumbents) and “...the institutional distance between the country looked at and the countries that have developed the most successful regulatory policies... (BUQ page 9)” However nowhere in the model is that institutional distance defined. The final policy recommendation x* arrived at by the regulator is endogenous to the entrants’ lobbying efforts and tastes, as well as to the state of the world z, but the country’s institutional quality or distance with the advanced ones is not defined.

More concretely, neither Prediction 5, nor Prediction 6 nor Prediction 7 follow from the theoretical model and therefore, although probably right and reasonable, are predictions that lack a concrete theoretical background.

3. Supporting evidence: Local Loop Unbundling (LLU)

Again, the success or failure of LLU is explained in the paper in light of the two theories laid out before, namely the theoretical model and the NIE (transaction costs, institutions, contract enforcement etc.), which is not included in the model and therefore lacks a proper formalization.

In page 12 and as a means of testing the model’s predictions empirically in LLU, the authors define as distance with the leader, the difference between the ratio of unbundled lines to total lines in country i, and the same ration for the leader (i.e the U.S) stating that “the lower this figure, the stronger the country’s move towards imitation and regulatory convergence. Conversely, the higher this figure, the more the country remains close to a local path”. Algebraically, the variable C or “convergence” would be something like this:

$$C = \frac{UL_i}{TL_i} - \frac{UL_{USA}}{TL_{USA}}$$

However a closer examination of this formula reveals that BUQ’s definition holds only for countries with ratios higher than that of the leader (i.e. C > 0 ). In all other cases, C will be negative because the first ratio of the right hand side of the formula (country i’s ratio) will be lower than the second (USA’s ratio), then country i will be converging towards the USA when that difference increases (i.e. becomes less negative) not decreasing. I strongly suspect that this should be the case in most countries as unbundling
in the USA was introduced in some states even before the passing of the Telecommunications Act of 1996.

Finally, the empirical evidence presented by BUQ is quite revealing but not directly linked to either the Predictions or the theoretical model. Figure 5 shows a positive correlation between distance with the leader in LLU and the incumbent’s share in the mobile market showing less imitation when the incumbent’s market share in the mobile market increases. Figure 6 shows less distance with the leader (i.e. more imitation) as the level of governance improves, again an expected result however not directly coming from the theoretical model.

Figure 7 on the other hand shows a negative correlation between distance with the leader and broadband penetration (shorter distance or more imitation more broadband access) however this correlation is very weak and not directly linked with the model presented in the paper. Also Figure 8 shows a negative correlation between DSL penetration and the product of the entrants’ market share in the mobile market and the deficit in the country’s governance index. The authors state that this figure gives support to their Prediction 7, which may well be the case but again, Prediction 7 does not follow directly from the theoretical model, then the empirical evidence becomes an experiment.

Finally, BUQ provide a series of regressions where the governance variable seems to be the only one explaining broadband / DSL penetration and a couple of countries in which a different mix of institutions / policy measures (i.e. ULL) gave different results.

4. Conclusions

In sum, I think this is a strong paper with strong policy recommendations. Although not all of them (however right and reasonable) can be traced back to the authors’ theoretical model. I think the weakest part of the paper is the link (or actually the lack thereof) between institutions or governance and the theoretical model in which both entrants and incumbents lobby for a policy tilted towards their interests. I think that this variable could be easily incorporated into the basic framework thus giving full punch to all predictions and policy recommendations.