Universitat de les Illes Balears

Facultat d'Economia i Empresa

Memòria del Treball de Fi de Grau

REFORMS AND THEIR COMPONENTS. DOES DEMOCRACY REALLY MATTER?

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Any acadèmic 2013-14

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Paraules clau del treball:
Democracia, Reformes, Institucions, Capital Humà, Democracy, Reforms, Institutions, Human Capital

ABSTRACT

Governments undertake economic policy decisions with important consequences for growth and welfare. In this paper the author studies the role of democracies, and other indicators to explain economic reforms. Using a cross-section of 129 countries, the author investigates which could be the variables that correlate with reformism of different governments. The results indicate that democracies do actually have a positive impact on reformism, while other components, such as GDP per capita, rule of law and human capital, indicate that more advanced countries undertake fewer reforms than developing countries.

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1. Introduction

Institutions are the most prominent explanation of economic development. Acemoglu and Robinson (2012) document hundreds of historical examples where countries and regions adopting better institutions succeed in promoting economic growth. Although economic and political institutions exert a powerful influence on economic growth and economic development there are not many studies documenting the interaction between both of them. Reforms are a key component of governments' actions and, as is commonly accepted, they are subject to policy constraints. In this paper I empirically analyze how the degree of democracy influences the government's reformism character.

Through this essay, I estimate through a sample of 129 countries, the effect that democracy has had over reformism during the last decade (2005-2014). Also, other variables that could be explaining reformism, such as GDP per capita, rule of law and education are evaluated.

The results show a positive, robust and significant interaction between democracies and reformism, which is contrasted through two different democracy indicators. So democracy does, in fact matter, but there other indicators play their role as well. From the results one can notice that greater amounts of GDP per capita, rule of law or education imply lesser reformism. But these effects do not have to be taken as indicators that lowering education, or eliminating equality among citizens or even making them poorer, countries will experiment a boost in reformism. It's exactly the other way around, countries showing higher levels of education, GDP per capita and Rule of Law are the countries that have done the proper reforms in the past and are now enjoying the profits of setting the right playground. So we have to encourage the developing countries to eliminate their incentives to manage countries in an evil, selfish way, and start promoting more egalitarian systems, with more participation of the people, investing in education to create greater thinkers, which will for sure generate some spill-over to the population, which is translated in higher rates of GDP per capita.

Amin and Djankov (2009) perform a similar study, however this paper and Amin and Djankov (2009) differ in several aspects. First, this paper includes a normalized measure of reforms that account not only for the absolute number of reforms undertaken in a given period, but also for the years for which countries appear in the dataset. Second, there is a separate analysis for good and bad reforms, while in Amin and Djankov (2009) only deal with good reforms. Last, I add the human capital jointly with the remaining variables to test for additional hypothesis.

The paper follows a classic structure, which will follow now with some Literature review, followed by the explanation of how the different variables were created

and finally exposing the results obtained. The different tables and figures can be found at the end of the paper, in the appendix.

2. Literature review

Leaders always defend their regimes through the changes they brought to their countries, and those parties which are not in the government always refer to the reforms they would undertake if they were the ones ruling. As Lipset (1960) states “a stable democracy requires the manifestation of conflict or cleavage so that there will be struggle over ruling positions, challenges to parties in power and shifts of parties in office.” So it seems that reforms are, in a certain way, the connection of governments and the people, and it seems interesting to have a look at under what circumstances governments feel greater needs to execute the power to reform they bear.

Since the end of the World War II, it seemed evident for the majority of the developed countries that there was a need of changing the institutions of the countries around the world, understanding institutions as, how North (1990) explained “the rules of the game in a society or, more formally, the humanly devised constraints that shape human interaction.” Through a change from autocratic to democratic systems and aim to the extinction of autocratic regimes, given the lack of rights and freedoms they imply. One would think that a system where everybody has the chance to say what they think or what they want would guarantee the existence of more and better ideas, turning it into a country where always the best is done. But looking back, one can find some examples of dictatorial governments that have achieved good economic outcomes. These are the cases of South Korea, Spain, China… And also, cases where democratic regimes have failed to function, given a great corruption from the ruling governments and the lack of incentives to look for the wealth of the whole country.

It seems like during the past five years, some countries are starting to feel again a certain attraction to extreme right winged politic parties as a response to the lack of effectiveness of the policies applied until now, during the global crisis as we can hear the cases of Greece and the neo-Nazi movement, or the creation of new extreme-right parties from members of already right winged parties. An extremely right winged government would not necessarily mean the end of a democracy, but it would certainly mean some kind of loss of power to the people and a greater power for the government through deeper legislations. There could be two visions to defend one system or the other:

Democracies perform in a way that enhance people’s participation, by electing a president and a team of government which is thought to be the one that will defend best their interests. So this means a great confidence in the system, by trusting a certain political party which ensures that will perform certain policies and reforms. Another characteristic of democracies is the freedom that comes

associated with it. Usually, democratic countries show freedom of speech and many rights as equal opportunities, by ensuring a public education system, non-discrimination by race or gender and so on.

All these characteristics lead us to a thought that when a country has a democracy, governments have so many people to listen to (specialized groups or experienced people), and so many barriers to act in a selfish way (approval of the parliament and the legal power and even supra-national institutions in some cases) that it would be very difficult for a government to act in a selfish way and always the best outcomes would be achieved.

But democracies do not always work as they should, and one can easily find cases where governments are corrupted, abolishing all kinds of competition to ensure their party's victory, through propaganda, through the benefit of certain industries of their interest and many other problems, kind of turning themselves into a pseudo-autocratic regime.

And what about autocracies? Well, autocracies are usually related to selfish governments looking for their own benefit and of those surrounding them. In most of the cases, these are poor countries, and those ruling are not willing to change the situation. There is no freedom guaranteed and the governor puts himself as a powerful institution, with a certain ideology and people not following that ideology are pursued and unfairly treated. But, as we stated, this is not the case for every autocratic regime. Through history we have seen many autocratic governments, from the era of empires that have achieved outstanding economic results, and from there, people enjoy some kind of freedom of will, with the main difference with a regular democracy being just the fact of choosing the leader.

But here we are focusing on the reforms side. According to Kelsen (1955), the main difference between democracies and autocracies relies on the degree of participation of the population, so now the approach has to be different than the approach of how do governments work. If we think about a democracy, there are many steps to climb in order to make a certain reform, so governments may step back if they don't think the reform is totally necessary, given the costs it implies to make it work. Also, governments are less likely to take action if they think a certain measure could be unpopular and end up reducing the voting share in the next elections, but on the other hand, if a government is not reforming enough, the voters might think that government doesn't know what to do with its policies. At the side of the autocratic leader, we find the exact opposite situation, there is a unique leader who decides how everything works, so if the leader thinks something needs to be changed, it's just a matter of time that it's changed, so the decisions might not be the best given they are based on one person's opinion, not decided in a bigger group as in the case of democracies, but the decision taking is way faster since there is no organism

apart from the governor. But also, a governor who thinks everything is working fine will not be likely to introduce changes in the policy of the country, and usually these leaders are very conservative.

So if the nature of the government does not imply success by itself, and one system does not ensure the existence of more or less reformism, the following questions arise: Does democracy really matter in terms of reformism? Do countries perform better under a single person's regime or in a democratically organized system? Are there any other relevant factors that could determine the well-functioning of a political and economic system?

To answer these questions, following the studies of Amin and Djankov (2009) with some variations, I have created a database containing information about key components in a country, like the nature of the legal system, the levels of education of the population, the size of the country and its wealth in order to assess whether democracy is really that important as thought, and if there are other implicit values that might give a better explanation than the government itself.

3. Reforms

The sample consists of 129 countries, for which we have information on the Doing Business database. This database covers the period 2004-2014[1]. The reason we are using these 188 countries is because our dependent variable is created from this database, so countries without the dependent variable would be out of the analysis. The explanatory variables are taken from different databases as the Pennworld tables for GDP control, Barro and Lee for education levels, La Porta et al. (1998) for religion and legal origin issues and Polity IV to assess levels of democracy. All the data is taken in an annual basis.

The dependent variable is created from transformations on the Doing Business database. This database offers information about regulations in some institutional areas. The main advantage of this dataset, compared to others is that rather than giving you qualitative data, based on others' opinions. It gives the actual values of the matters of interest, allowing you to transform objective data. For this study, the variable of reference is Good Reforms, which shows how countries have done reforms in their economic environment to enforce entrepreneurship, but it is also interesting to see the other side, the side of the bad reforms.

These two indicators of reforms are created from the set of fourteen indicators found in Doing Business which cover some aspects of the business environment. These aspects cover issues as easiness to starting a business, dealing with construction permits, getting electricity, registering property, getting

[1] Indicators for 2014 are made on predictions from the legislations of 2013

credit, protecting investors, paying taxes, trading across borders, enforcing contracts, resolving insolvency, difficulty of hiring, rigidity of hours, redundancy rules and redundancy costs. Information is provided in matters of quantity of paperwork; time needed to get through and costs for the entrepreneur. The data can be differentiated in two groups, being the first one composed by the first ten variables, which refer on the easiness of opening/keeping a business itself, and the second group treating issues on the workers contracts, conditions and costs.

In the case of the first group, we find the information an entrepreneur would need to know in order to set the physical position of the business, and the costs this setting would come with. Also, information on costs in case to export-import was needed (documents, costs per container…) and the difficulties this person would find if a credit was needed.

The second group is oriented to the employees section. It shows information on rights, obligations and costs. There is information about rules and costs of redundancy, information on legal issues as the nature of contracts, existence of fixed-term contracts and the conditions applied to them, hour rigidities and restrictions to night-work.

The database is a plain measure of time and costs, but for the analysis we needed reforms, so transformations on the database have been made to find these reforms, and then some research has been undertaken to assess whether a change from one year to the following one in each variable is positive or negative.

The transformations consist on, first of all, identifying whether there has been or not a change from one year to another in terms of time, costs or papers to be filled. Once a change has been identified, I had to assess whether this change is positive or negative from an economic point of view. Once I identified if the change was positive or negative, the information was transferred to a dummy variable for each indicator of reform, which took the value 1 if the reform was, let's say good, and 0 if otherwise (no reform or bad reform) and to differentiate this no-reform/bad reform, another dummy variable was created, indicating 1 if there was a bad reform and 0 if there was no reform or the reform was good. In this way, we can find the case where we have a 0 in both indicators (good and bad) which indicate there is no reform, or a 1 in one of the two variables, which indicates the nature of the reform. Once the dummies were created, it was easy to add the data to finally achieve the total number of good and bad reforms done by each country during the period of our study.

As an example, if the variable assessing the easiness to start a business shown for Afghanistan a value of 28 procedures needed to be fulfilled in 2005, but in 2006 this value went down to 4, this would mean there has been a reform in the legislation. In this case, a decrease means there is a good reform, since now

entrepreneurs will find fewer barriers to enter the market. So this will show as a one in the variable of good reforms and a 0 in the variable of bad reforms.

In Table 1, the reader can find information about both indicators, combined with Figure 1, which shows the histogram for both. From the information on the table, one can see that on average, countries undertake more good reforms than bad reforms for the whole period, but in both cases, the median is quite far from the maximum, so the intuition here is that the majority of the countries in our sample have done quite few reforms given a time lapse of eleven years, fact confirmed when the Figure 1 is checked. But these results are, in a certain way, tricky, since an important effect has not been captured. There is not full information for all the countries, some might not have been observed for the whole period, some might not have data on the whole set of variables. This effect is corrigible by creating a new indicator, which is set as the ratio of the reforms done each year compared to the whole range of variables of which there is information available, meaning that these variables could have changed. The summary of these two new indicators, the ones I will be using from now on, can be found at Table 2. This new indicator moves on a continuous space, limited by [0, 1]. Now this table shows that, on average, every country has done 8% of the reforms it could have done, doing more good reforms than bad reforms as the previous table showed. Now the problem of the lack of information is not there anymore, but the results don't seem to change much since there is still a quite low level of reforms per country among the whole period. If we check at the histograms of these two new indicators, found in Figure 2, one can see a high concentration on the lowest levels in both indicators, as the quartiles on the table indicated. But as an overall, it seems like the world is moving towards more freedom to the entrepreneur than the other way around.

It is also interesting to see if there have been years where reforms have been more intense. The period comprised in the database starts in a period of global economic stability and growth, but right at the middle of the period the global crisis started, leading us to the idea that more reforms are to be found at years when the crisis was identified and countries learned changes needed to be made. Table 3 shows that the year where there is greater intensity is during 2011. This coincides with the idea previous to the analysis, but a closer look leads to a worrying fact, 2011 is also the year showing more bad reforms, so one might think not all countries are on the right path.

4. Estimation and data

4.1 Estimation

The model considers democracy as the variable of interest, and it includes some other control variables that are likely to affect reformism. This means the model looks like shown in Equation 1:

Equation 1: $Reforms_i=\alpha+\beta_1*Democracy_i+\Sigma[\beta_{ij}*control_{ij}]+e_i$

When estimated by OLS with robust standard error to correct for heteroskedasticity, democracy shows robustness in two different ways. First, when our main indicator of Democracy is used, its effect on reformism remains stable and significant when adding different control variables. In a second way, when checking the importance of democracy by using another indicator, the results remain similar to the first estimator.

So the path followed consists on a first estimation (1) including only democracy, then a second (2) estimation which also includes GDP per capita (in logs), then a third regression (3) which includes the effects of the Rule of Law, and finally two more estimates (4) and (5) which include education levels, as an aggregate measure in the first case, and disaggregated by levels of education in the second one.

4.2 Description of explanatory variables

Democracy is the main characteristic checked during the whole paperwork. To assess the levels of democracy in the countries of the sample, I have used the index from Polity IV as our main indicator, and the one from Freedom House database for robustness. Both show qualitative measures, as there is no other way to assess levels of democracy, which is the reason why two databases were taken, to check robustness of the results. In the case of Polity IV, we can find some indicators assessing levels of democracy and autocracy, by ranking them from -10 to 10, being the closer to 10 the more democratic. The indicator shows little variation through the time period, so the inclusion of different years would be irrelevant, for so, I have taken the levels of democracy in 2005 given it's the first year at which a reform could be found in our sample.

The Freedom House database indicates levels of Political Rights and Civil Liberties. Both indicators rank from 1 to 7. In this case a value close to 1 shows higher levels of freedom and rights, and 7 the opposite, so we find two indicators that should be showing similar results, and in fact democracy shows 90% correlation with the political rights indicator and 85% correlation with the civil liberty one. As the Table 2 shows, it seems like there are many countries showing democratic regimes, in the case of the Democracy indicator, the fact that the median is located at 6 indicates that 50% of the countries show a democracy level higher than 6, while the rest of 50% are located in the range [-

10,6] also, the variables Political Rights and Civil Liberties show median equal to 3, meaning that 50% show levels in the interval [1,3] which is good news, since as stated before, low levels mean higher degrees of rights and freedom.

The other control variables are Human Capital, GDP per capita and Rule of law levels.

The inclusion of human capital explains itself by the fact that many economists, historians and philosophers have inferred in the fact that the link between political and economic institutions is, in fact, education. Lipset (1960) and afterwards Lucas (1988) emphasized on the fact that high levels of human capital end up with better and more efficient institutions. In the case of Lipset, through a process of good education system which leads to more intelligent and well-mannered people, we will find people able to change the way the political environment of a country works turning authority and violence into more electoral systems and enforcing society to fight in a peaceful way for what they want. We could translate this message as the crucial step from authoritarian governments to democratically elected ones, or from extractive political institutions, following the nomenclature of Acemoglu (2012) into inclusive ones. If, on the other side, we follow the work of Lucas, then we'll see how better trained (educated) workers generate some spill-over effect (or economic returns) to population, making better educated societies richer. So, looking at these two assumptions, we could think of human capital as a key factor to explain the influence of political institutions in the economic environment and vice versa, since richer countries (generally countries with inclusive economic institutions) have better education, which would lead to better political institutions, but also countries with better political institutions could implement better education systems that would lead to a higher spill-over from educated people to end up making the country richer, which would generate the creation of better (more inclusive) economic institutions. To get the indicators I used the Barro & Lee database which provides information on education differentiated by levels (primary, secondary tertiary). The data is given in a 5-year basis, and the indicators show the logarithms of the average years spent at every stage of education.

GDP per capita is a very important factor. It captures many omitted, potentially relevant variables that could be hard to find. Before testing how the effect of GDP per capita can have over reforms, since it captures so many magnitudes, it is important to state what the meaning of a positive or negative impact could mean:

- If the effect of GDP per capita over reforms is negative, this will mean the richest the country, the lesser reformism will be undertaken, meaning that mature countries find themselves in a controlled stage and don't

need reforms as much as developing countries which are still looking for some stabilization.

•If the effect of the GDP per capita over reforms is positive, then one could think of richest countries looking to keep being competitive and keep growing, while countries with lower values are indeed poorer since they don't seem to realize they are not applying the correct policies for the interest of the country.

The information about this indicator has been taken from the Pennworld tables, and has been transformed to logarithms.

The rule of law is a concept understood as the primacy of the law over any other governmental power. This brings together, according to the United Nations'[2] definition, the assumption of the "principles of supremacy of the law, equality before the law, accountability to the law, separation of powers, participation in decision-making, legal certainty, avoidance of arbitrariness and procedural and legal transparency." So when including Rule of Law we are testing the freedom governments have to do and un-do policies and promote equality among the inhabitants of the country. The information about the levels of Rule of Law was extracted from the World Bank. The variable moves in a [-2.5, 2.5] interval where higher values mean higher levels of rule of law.

5. Results

This section shows the results for both good and bad reforms indicators in a separated way. All the results are extracted from the Determinant of Reforms tables, available at the annexes section.

5.1. Good reforms analysis

The results from the estimations are displayed in Table 6 and show that democracy has a positive impact on reformism, meaning that countries with higher levels of democracy do actually undertake more good reforms. One can notice that through the whole set of estimations, the β of Democracy remains constant at 0.002, even when other indicators are included, excepting the last two cases where we introduce the interactions, which cause interferences since now Democracy has its direct effect, but also the indirect effect from the interaction.

If we take a look at the GDP, we can check how the values of β range from [-0.006,0] for the first 5 regressions, so we find ourselves in the case where GDP per capita implies less reforms from the richest countries, fact explained by the needs of reformism given the state of the country. Importantly, the

[2] United nation's webpage on Rule of law: http://www.un.org/en/ruleoflaw/

democracy coefficient remains unchanged, and neither does it change in the size nor in the signification.

When the Rule of Law is added, we again find negative effects, meaning that a higher power of the law over other organisms brings negative effects for reformism. This means that a government with a stronger legal system will have it more difficult to undertake reforms, since it will have to face more barriers to change some laws. We could think of a constitution, for example, establishing some boundaries and limits.

The study of the education requires a different approach, since education is usually highly related with the politic system; there might have been results of the estimation of the education affecting the values of the impact of democracy on reforms, so I created some interactions defined by Equation 2

Equation 2: $Ii=Dem_i \times Schooling$

to be able to find if any of these effects existed. I did this for both cases (with aggregate education and disaggregate), and the results of these estimations are found in the columns 6 and 7 of the Tables 6 and 7. So for the aggregate case, now our model would look like the Equation 3:

Equation 3: $$Ref_i = \alpha+\beta1*Dem_i+\beta2GDP_i+\beta3RuleLaw_i+\beta4Schooling_i+\beta5I_i+e_i$$

And the impacts of the interaction show that, for this first scenario with the aggregate years of education, the greater the years of education are, the lesser reforms will be seen, as the estimates in the estimation 4 determined.

For the case with disaggregate years of education, we find different results:

- Primary Education: the effect of the interaction is positive, meaning that populations where the average citizen has more years of primary schooling will show democracies with a higher relation with Good reforms, this means, more educated people imply more reformist countries through greater levels of democracy.

- Secondary Education: the effect is similar to the effect of the primary schooling, only differing in the intensity of the effect.

- Tertiary Education: Here the results are a bit more controversial, since the interaction gives a positive effect, but it's very close to 0 (0.0002). The explanation for this result is that tertiary education does not really have an effect on the level of democracy. In our sample tertiary years of education on average for the population of the country range from 0.01 to 1.49 while the primary and secondary years of education go up to quite greater values (8.83 years on average for primary school and 7.48 for secondary). So we cannot expect such an invariant variable, and not so relevant (for the whole dataset, the average population with tertiary

education is 11.87% while the average for primary school is 71.98%) to be key to the determination of democracies and hence, of reforms.

Summarizing, while democracy has a direct positive impact, GDP per capita and Rule of law show negative effects, this is not bad news, since here we are not testing the well-functioning of the countries but their reformist intensity, so the fact that richer countries, or those which have better institutions gives credibility to the fact that countries that are already working fine will need less adjustments in their micro-economic policies.

5.2 Bad reforms analysis

The results can be found in table 8. The estimations are structured exactly as the estimations for Good Reforms to check how differently they perform when faced with the same indicators. Since the results are quite similar compared to the results of the Good Results, we can only infer in the strength of those impacts (Good and Bad Reforms share a correlation of 30%). So the intuition is that whenever governments undertake reforms, they perform good and bad reforms at the same time, but luckily the good reforms are greater than the bad ones. Why could this happen? Well, if we think of countries improving their legal systems through reforms, as well as they are improving, they will need to, on one hand, enhance the entrepreneurism but also ensure some certain level of control over the companies, so while we see, for example, an easiness to get electricity through having to wait lesser days to get electrical power in the business, we might find a counterpart of fulfilling more paperwork in order to get this electricity, since the country might want to know more information about the business itself and the using of the electricity.

When checking for democracy, we find again that higher levels of democracy imply lower needs to reform, in this case, bad reforms. Same happens with the GDP per capita control, but the effect reverts in the case of the Rule of Law. Now, we find that higher levels of Rule of Law imply more bad reforms. This fact finds an explanation on the definition of the Rule of Law itself. Countries with higher levels of Rule of Law are countries where the legislation plays a key role, even greater than the governments themselves, so if countries have great levels of Rule of Law, in order to keep the law working, more controls will be done on the population, resulting that in an increase of the time/paperwork to undertake for an entrepreneur, which translates, for our case, in an increase of Bad Reforms.

When controlling for education, again, we perform an interactive analysis as done for the good reforms. When the education is aggregated we can see that education has no effect on the levels of democracy, so the analysis without the interactions is preferred. Using this estimation (4) we can find a positive effect between years of schooling and Bad reformism. If disaggregated:

•Primary Education: The interaction is again, null, so we can only say that higher levels of primary education imply higher chances of getting more bad reforms.

•Secondary Education: The interaction has a negative value, this means higher levels of secondary education will lower the impact of democracies over reforms. The intuition is, again, better prepared people will have better ideas, no matter the level of participation in the decision taking. If governments are formed by just ten or, on the contrary, thousands of people, what matters is the degree of education of those who rule.

•Tertiary Education: This now shows a positive effect over the importance of democracy. This refers to the level of maturity of the countries, as explained in the case of the good reforms, so again, developed countries, which are the ones with higher years of tertiary education will have a deeper legal system, which will need of more paperwork from the inhabitants.

As a summary, one can conclude that as good reforms increase, bad reforms do as well, but again, the results that could seem contradictory as those for Rule of Law, have an explanation to be as they are, in this case, meaning that countries with higher levels of rule of law will probably be countries where governments demand more information about their entrepreneurs, and hence, the loads of paperwork are greater, which is indicated as a bad measure in our indicators.

5.3 Robustness

Tables 7 and 9 show the alternative estimations with the political rights indicator from the Freedom House instead of the democracy from Polity IV. This second indicator was included to ensure the robustness of our main explanatory variable, and the coherence, strength and significance of the results show that, in fact, the choice of democracy in a first stage was correct. As we can observe, all the main results are maintained, keeping the correct signs and significance levels.[3]

6. Conclusions

Through this essay I tried to assess the importance democracy, as well as other variables, have in terms of reformism. The data shows coherent results, stating that democracy does affect positively reformism, while other measures such as GDP per capita, rule of law and human capital show negative effects, probably

[3] Note that the democracy index from the Freedom House has lower values for more democratic regimes. This explain why the sign of the variable of interest has oposite values tan in the baseline results.

explaining effects of the levels of maturity of the countries. While the empirical results do not show high explanatory power (through the R^2) the reader should keep in mind this is just an undergraduate's work, so further research and analysis is left for future investigations. Having low R^2 values imply there are many other explanatory variables includable to the model, and this is the further work that can be done from this point ahead. But again, the main aim of this paper was to show the importance of democracy, and the inclusion of an indicator which is not so often included, the human capital.

Finally, I would like to thank Dr. José Luis Groizard Cardosa, for the help, orientation and comments he has provided during the process of creating this work, even though he did not have any interest nor designated role in the project other than helping a student. And also, thanks to Dr. Juan Carlos Rosselló Villalonga, who let me change the original subject of study and gave me the chance to do my paper in a field which got my interest.

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8. Appendix

Table 1. Summary of raw data on good and bad reforms.

		Quartiles				
Variable	Average	Min	1st	Median	3rd	Max
Good Reforms	17.98	0	4	15.5	29.5	76
Bad Reforms	11.25	0	3	11	17	32

Table 2. Summary of statistics

Variable	Mean	S.D.	Min	1st Quart.	Median	3rd Quart.	Max	Sample
Good Reforms	0.06	0.03	0	0.03	0.05	0.08	0.19	129
Bad Reforms	0.04	0.02	0.01	0.02	0.03	0.05	0.13	129
Democracy	4.54	6.2	-10	-1	8	10	10	129
Political Rights	3.2	2.09	1	1	3	5	7	129
GDP pc	8.71	1.36	5.78	7.64	8.82	9.9	11.2	129
Rule of Law	-0.01	0.99	-1.77	-0.81	-0.16	0.74	1.95	128
Schooling	1.97	0.45	0.22	1.75	2.09	2.228	2.56	129
Primary	1.48	0.37	0.07	1.33	1.59	1.73	2.18	129
Secondary	0.8	0.72	-1.83	0.42	0.95	1.35	2.01	129
Tertiary	-1.46	1.15	-4.61	-2.3	-1.2	-0.63	0.4	129

Table 3. Intensity of reformism

Year	Good Reforms	Bad Reforms
2005	0.09	0.03
2006	0.10	0.03
2007	0.05	0.02
2008	0.05	0.03
2009	0.06	0.06
2010	0.06	0.02
2011	0.08	0.07
2012	0.05	0.03
2013	0.05	0.03
2014	0.05	0.04

Table 4. Variables description

Good reforms	Ratio indicating the good reforms done per reforms possible
Bad reforms	Ratio indicating the bad reforms done per reforms possible
Democracy	Polity2 score in 2005. Source: Polity IV.
Political rights	Political Rights for the year 2005. Source: Freedom House.
GDP per capita	Log of GDP per capita in 2005. Source: Penn World Tables.
Rule of law	Values of Rule of Law index in 2005. Source: World Bank. www.worldbank.org/wbi/governance/data
Schooling	Log of average years of study. Source: Barro & Lee
Primary	Log of the average years society spends in primary education. Source: Barro & Lee
Secondary	Log of the average years society spends on secondary education. Source: Barro & Lee
Tertiary	Log of the average years society spends on tertiary education. Source: Barro & Lee

Table 5. Correlations Table

	Good Reforms	Bad Reforms	Democracy	Political Rights	GDP pc	Rule of Law	Schooling	Primary	Secondary	Tertiary
Good Reforms	1									
Bad Reforms	0.3026	1								
Democracy	0.3032	0.138	1							
Political Rights	-0.2996	-0.1223	-0.9009	1						
GDP pc	-0.1241	-0.085	0.3167	-0.4807	1					
Rule of Law	-0.0178	-0.0433	0.4464	-0.6487	0.7978	1				
Schooling	-0.1355	0.0004	0.3789	-0.4286	0.7477	0.5827	1			
Primary	-0.0222	0.0544	0.3934	-0.4167	0.6292	0.4805	0.8991	1		
Secondary	-0.2204	-0.0557	0.2711	-0.3365	0.7171	0.5388	0.897	0.6347	1	
Tertiary	-0.156	-0.0616	0.3223	-0.4058	0.7784	0.6055	0.786	0.5809	0.8201	1

Table 6. Determinants of good reforms

Good Reforms	1	2	3	4	5	6	7
Democracy	0.002*	0.002*	0.002*	0.002*	0.002*	0.003**	0.004
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
GDP pc		-0.006*	-0.005**	-0.001	0	-0.001	0
		(0.0017)	(0.003)	(0.003)	(0.004)	(0.003)	(0.004)
Rule of Law			-0.001	-0.002	-0.001	-0.001	0.002
			(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Schooling				-0.016**		-0.013***	
				(0.008)		(0.01)	
Primary					0.002		0.01
					(0.009)		(0.008)
Secondary					-0.01***		-0.018
					(0.006)		(0.009)
Tertiary					-0.001		-0.003
					(0.004)		(0.005)
Democracy x						-0.001	
schooling						(0.001)	
Democracy x							-0.0012
Primary							(0.005)
Democracy x							0.001
Secondary							(0.001)
Democracy x							0.0002
Tertiary							(0.001)
R^2	0.13	0.13	0.18	0.2	0.21	0.2	0.21
Significance level: *(1% or less) **(5% or less) ***(10% or less). Values in brackets indicate robust standard errors.							

Table 7. Determinants of good reforms (robustness via Political Rights)

Good Reforms	1	2	3	4	5	6	7
Political Rights	-0.005*	-0.008*	-0.009*	-0.01*	-0.009*	-0.006	-0.009
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.01)
GDP pc		-0.008*	-0.004***	-0.001	0.001	-0.001	-0.001
		(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)
Rule of Law			-0.007	-0.008***	-0.008	-0.008***	-0.008***
			(0.004)	(0.005)	(0.004)	(0.004)	(0.005)
Schooling				-0.012***		-0.007	
				(0.007)		(0.012)	
Primary					0.003		0.001
					(0.008)		(0.021)
Secondary					-0.009		-0.003
					(0.006)		(0.014)
Tertiary					-0.001		-0.001
					(0.004)		(0.007)
Democracy x						-0.001	
schooling						(0.003)	
Democracy x							0.00)
Primary							0.005
Democracy x							-0.002
Secondary							(0.003)
Democracy x							0
Tertiary							(0.001)
R^2	0.13	0.22	0.23	0.25	0.25	0.25	0.26
Significance level: *(1% or less) **(5% or less) ***(10% or less). Values in brackets indicate robust standard errors.							

Table 8. Determinants of bad reforms

Bad Reforms	1	2	3	4	5	6	7
Democracy	0.001*	0.001*	0.001*	0.001*	0.001*	0.001	0.003***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
GDP pc		-0.003*	-0.004***	-0.005***	-0.005	-0.005***	-0.004
		(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
Rule of Law			0.002	0.002	0.003	0.002	0.002
			(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Schooling				0.004		0.006	
				(0.005)		(0.006)	
Primary					0.007		0.007
					(0.005)		(0.006)
Secondary					0.001		0.004
					(0.004)		(0.005)
Tertiary					-0.001		-0.005
					(0.002)		(0.004)
Democracy x schooling						0.000	
						(0.000)	
Democracy x Primary							0.000
							(0.001)
Democracy x Secondary							-0.001
							(0.001)
Democracy x Tertiary							0.001
							(0.000)
R^2	0.05	0.1	0.11	0.11	0.12	0.11	0.14
Significance level: *(1% or less) **(5% or less) ***(10% or less). Values in brackets indicate robust standard errors.							

Table 9. Determinants of bad reforms (robustness via Political Rights)

Bad Reforms	1	2	3	4	5	6	7
Political Rights	-0.002**	-0.003*	-0.003*	-0.003*	-0.003*	-0.002	-0.010***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.003)	(0.005)
GDP pc		-0.004*	-0.004***	-0.005***	-0.005***	-0.005***	-0.004
		(0.011)	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)
Rule of Law			0.000	0.000	0.001	0.000	0.000
			(0.00)3	(0.003)	(0.003)	(0.003)	(0.004)
Schooling				0.006		0.007	
				(0.005)		(0.007)	
Primary					0.007		-0.005
					(0.005)		(0.012)
Secondary					0.001		0.002
					(0.005)		(0.008)
Tertiary					-0.001		0.003
					(0.002)		(0.004)
Democracy x schooling						0.000	
						(0.002)	
Democracy x Primary							0.004
							(0.003)
Democracy x Secondary							0.000
							(0.002)
Democracy x Tertiary							-0.001
							(0.001)
R^2	0.04	0.11	0.12	0.13	0.14	0.13	0.15
Significance level: *(1% or less) **(5% or less) ***(10% or less). Values in brackets indicate robust standard errors.							

Figure 1. Histograms of raw reforms

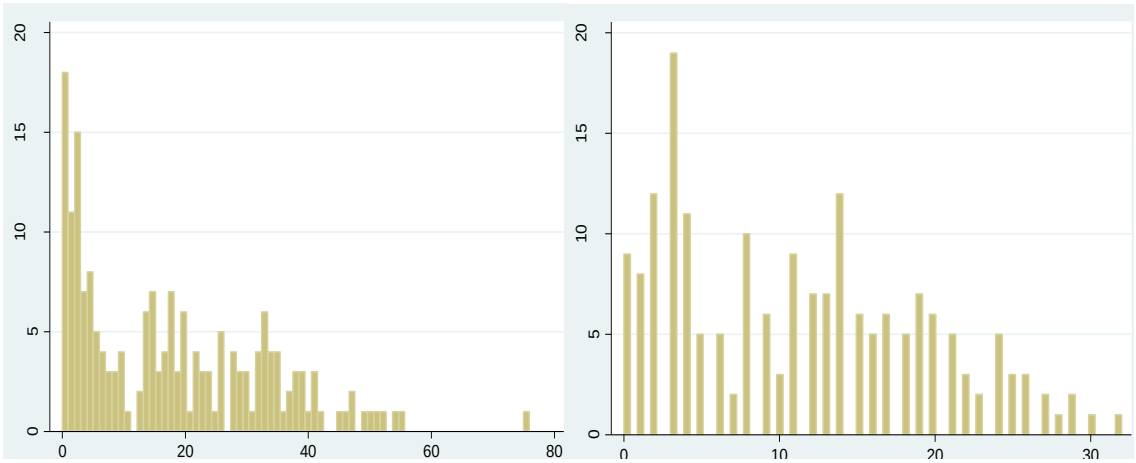

Figure 2. Histograms of reforms