Financial globalization, public goods and democracy

Gabriel Porcile

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Abstract

This paper discusses the impact of financial globalization on the transition from an immature democracy (based on a simple technology and pure redistribution) to a mature democracy (based on a complex technology and the provision of public goods). The model includes two countries in the international economy with two different production functions, a Solovian South and a Schumpeterian North. It also considers two different international regimes of capital mobility, the Bretton Woods regime (BG) and Rodrik's hyperglobalization (HG) regime. It is argued that a) HG compromises the emergence of a mature democracy in the South by reducing the ability of the citizens to tax and provide public goods which are crucial for technical change; b) barriers to capital mobility applied at a national level may encourage the elite to stage a coup to impose financial liberalization. The results of the model are consistent with the empirical evidence showing that financial globalization is associated with democracy mostly in countries which already provide public goods; that countries that democratize at lower levels of income per capita tend to have less stable democracies; and that there exists a positive association between economic diversification and more stable democracies.

1. Introduction

The political consequences of globalization have been attracting a great deal of attention among scholars and political analysts, especially as a result of rising political unrest and loss of confidence on liberal democracy in many developed and developing countries (Diamond, 2015 and Galston, 2018). Rodrik (2018) and Stiglitz (2013), among others, have highlighted the growing tensions that exist between political democracy and financial globalization, as the latter reduces the policy space of democratic governments and strengthens the political and economic influence of international financial actors (Tooze, 2018).

This paper discusses these tensions in the context of an asymmetric international system in which there are two countries with different technological and state capabilities, a developing South and a developed North. To do so, the Acemoglu and Robinson (2006, chapter 4) workhorse model (thereafter AR) on the economic basis of democracy is extended to include the role of public goods and technological change in the development process. As in AR, South and North are populated by two types of actors, the elite—who decide whether to accept democracy or stage a coup—and citizens—who decide on the level and uses of taxes, either for redistribution or for the provision of public goods. The focus is on the conditions that favor the transition of the South from an immature democracy towards a mature democracy. The immature democracy is represented by a simple, poorly diversified economy in which the citizens vote for pure redistribution and there is no production of public goods. The mature democracy, on the other hand, is characterized by a complex production function and a high division of labor based on the provision of public goods. The extended model also discusses the conditions in which a dictatorship may emerge and persist in the South.

A mature democracy corresponds to what Acemoglu and Robinson (2017) have called "inclusive institutions", which involve at the same time an equal distribution of political power and strong state and fiscal capabilities[1]. The transition from an immature to a mature

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[1] The mature economy is similar to the "common interest state" of Besley et al (2013), the "open access order" of North et al (2009), and Acemoglu's "consensually-strong state" (Acemoglu 2005). The immature economy, in turn. is similar to the "weak state" of Besley et al (2013) and Acemolgu (2013). The terms "mature" and "immature" are used in this paper to emphasize the co-evolution between the political dynamics and technological and structural change.

democracy is a path towards inclusive institutions. This work claims that financial globalization may compromise this transition by limiting the ability of the citizens of the South to tax the elite, build state capabilities and provide public goods that are crucial for technical change and economic diversification. While financial liberalization discourages the elite to change the political institutions, at the same time it fosters a fragile democracy in which instability is endemic[2].

Public goods are closely associated with economic development and technical change. Public goods are necessary for technical change because they provide key inputs demanded by advanced technologies, such as education, knowledge spill-overs from public R&D, and Insurance against technological shocks and technological uncertainty. Schumpeter placed the emergence of new production functions, and the disappearance of old technologies, at the center of his development theory, a view subsequently incorporated and expanded in the literature on economic growth (Nelson and Winter, 1982; Romer, 1990; Aghion and Howitt, 1992). Drawing from this perspective, technical change is included in the model in the form of a shift from a traditional neoclassical production function with decreasing returns to capital—the Solovian technology—to one with constants returns to capital, which uses public goods and heightens the division of labor—the Schumpeterian technology. Along the path towards inclusive institutions, the tax system, state capabilities, the complexity of production and the provision of public goods coevolve.

The association between democracy and public goods is far from linear. Public goods may be produced by nondemocratic regimes too (Bardhan, 1999). Nevertheless, the empirical evidence suggests that democracies tend to produce more public goods than non-democracies, especially those public goods crucial for long-run growth (Sen, 1999; Besley and Persson, 2010 and 2017; Acemoglu et al, 2013; Lindert, 2004: Deacon, 2009). For these reason, the analysis is constrained to the economic conditions required to traverse from an immature democracy to a mature democracy. The possibility of alternative (nondemocratic) paths to the provision of public goods is suggested at the end of the paper as a topic for further investigation.

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[2] The problem of instability in redistributive democracies was early raised by Acemoglu and Robinson (2001, p. 939).

Section 2 briefly reviews the literature discussing the interactions between democracy, public goods and technical change. Section 3 presents the basic equations of the extended AR model. Section 4 discusses the payoffs and best responses of the citizens and the conditions required to elicit the provision of public goods. Section 5 discusses the best responses of the elite and the allocation of capital in an international system with perfect capital mobility. Section 6 discusses how financial globalization and the existence of different production functions may produce a scenario in which capital outflows prevent the tax base in the South from expanding to the point in which the citizens choose public goods over redistribution. Section 7 analyzes the impact of exogenous barriers to capital flows—as those in place during the Bretton Wood international regime—on the emergence of a mature democracy. Section 8 considers the case in which capital controls are endogenous and hence the citizens (not Nature) decide on both taxes and capital controls. It is shown than under certain conditions the elite may stage a coup to liberalize the capital account. A final section concludes pointing out topics for further research.

2. Public goods, globalization and democracy

Is financial globalization a positive force for democracy?

The idea that openness to trade and foreign capital favors democracy has a long tradition. The predominant view is that openness boosts the diffusion of ideas, erodes old forms of domination and strengthens the benefits of peace and cooperation (Montesquieu's famous assertion that commerce softens manners resumes this view). Financial globalization is expected to have a positive effect on democracy through three channels (Acemoglu and Robinson, 2006, pp. 338-343). The first is the impact of capital flows on equality. From standard economic theory, capital is expected to flow from rich to poor countries, raising real wages and curbing the rental price of capital in the latter. Lower inequality makes the median voter less inclined to tax the rich, who in turn will have less incentives to overthrow a democratic government. The second channel works through changes in the economic structure. Capital inflows make the economy more diversified and complex. The costs of a coup disrupting highly

integrated and specialized production chains are higher than when it disrupts simpler economies, where such networks are weak. The third effect is related to the ability of the elite to avoid taxes (the "capital out" scenario). When capital moves freely in the global financial system, the elite can escape more easily from taxation (as shown by the examples of the "Panama" and "Paradise" papers). They will therefore be less concerned with redistribution in democracy.

All these forces are expected to reduce incentives for a coup and work in favor of democratic consolidation. However, at least two of the three channels through which financial globalization is expected to help democracy (falling inequality and rising economic complexity) are at least controversial in the empirical literature. First, financial integration has gone hand in hand with more and not less inequality in most developed and developing economies (Furceri and Loungani, 2015). Secondly, by shifting the focus of investors towards short-term financial returns, financial liberalization may penalize the long-term view required by structural and technological change, which are the engines of economic complexity (Cecchetti and Kharroubi, 2012). The evidence provided by the recent economic history of several developing economies also give some support to this view: Korea and China experienced very fast technological and structural change with closed capital accounts, while financial liberalization was associated with deindustrialization in Latin America[3].

On the other hand, there is evidence in favor of the third channel through which financial liberalization may help democracy, namely the idea that the former reduces the ability of democratic governments to collect taxes and constrains the citizens to choose those policies which the elite deem less detrimental to their interests[4]. An extreme version of these constraints on policy are concisely expressed in Margaret Thatcher's motto, "there is no alternative" (TINA). There is just one type of economic policy considered to be sound and

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[3] Classical accounts of the Asian experience are Amsden (1989) and Wade (1994). See also Lee (2013) and Poo (2014) on Asia and Bértola and Ocampo (2010) and Nassif et al (2011) on the Latin American experience of industrialization and financial openness. Frieden (2015, chapter 5) compares the management of the capital account and the real exchange rate in Asia and Latin America and show that the Asian countries used capital controls to sustain competitiveness. Guzmán et al (2018) stress the importance of regulations on capital flows in on growth and structural change in Latin America.

[4] This applies even to the canonical view of the landowners as the class most inclined to support a coup. See Albertus (2017).

rational; any other policy will be vetoed by capital outflows and macroeconomic volatility. The elite do not need to change the political institutions to get the policies they prefer: the citizens will choose these policies anyway, because they are the best response to the constraints imposed by financial globalization.

However, while reducing the incentives for a coup d'état, the enlarged economic power of the elite compromises the quality and stability of democracy[5]. This point is expressed in Rodrik's trilemma: financial globalization, democracy and national states constitute a trilemma because one may choose two out of three but cannot have the three at the same time (Rodrik, 2011, chapter 9). A perfectly open capital account gives veto powers on economic policy to global investors, constraining the political power of the citizens. In a global economy composed by democratic national states, the reduction of the policy space of the citizens intensifies political conflicts, which would be eventually solved by either weakening democracy or curbing financial integration. This tension has become more acute in recent years: while until the early 2000s democracy spread towards many parts of the globe, such a trend was reversed afterwards[6]. Even in those countries in which democracy is firmly established, political processes have become more polarized. Globalization has been related to a rising tide of political unrest and the strengthening of fringe political parties which in many countries play the card of racial and national antagonisms, downgrading the quality of democracy[7].

Public goods, technology and development

Development requires moving towards more technology-intensive production processes. This in turn demands public goods. Historically, defense was among the first (and almost exclusive) public good produced by the states (Alesina et al, 2017). The focus on war also implied an early link between public goods and technical change: actual or potential

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[5] The problem of the quality of democracy—as different from defining democracy in a more restrictive way, namely having or not having elections and electoral competition—is highlighted in O'Donnell (1998) and Przeworski (2009). See also Diamond and Morlino (2004).

[6] The Economist, "What's gone wrong with democracy", http://www.economist.com/news/essays/21596796-democracy-was-most-successful-political-idea-20th-century-why-has-it-run-trouble-and-what-can-be-do, on December 18th 2017.

[7] See Hu and Spence (2017). Hirst (2004, p. 155) argues that "*celebrating the diffusion of democracy (…) misses the question of whether the success of democratization is merely the other side of the declining effectiveness of state as a result of globalization*".

military conflicts accelerated technological efforts and advances that subsequently diffused to civilian markets[8]. Gradually, the provision of public goods extended to the welfare and education realms, especially after War World II. Such public goods play a crucial role in supporting learning, productivity growth and innovation. Their importance for development has been further enhanced by the latest technological revolution[9].

Stronger welfare states and productivity growth advanced hand in hand. In a pioneer work, Katzenstein (1978) argued that the provision of welfare and social security was the necessary counterpart to the ability of the small open economies of Europe to thrive in the international system. Political and economic equality themselves can be seen as a public good. Acemoglu et al (2013) offer evidence that democracies tend to be associated with the expansion of secondary schooling and faster structural change. Bowles (2012) and Stiglitz (2013) make the case for the productivity-enhancing effects of welfare and equality. In the words of Bowles (2012, p. 162):

"*A prominent reason to doubt equality pessimism* (...) *is the cost of economic disparity: the blunted incentives of the wage worker, the exclusion of the would-be entrepreneur from credit markets, the impediments to trust and mutual concern essential to finding co-operative solutions to workplace, neighborhood, and global problems, and the mounting cost of containing the conflicts endemic to a society of haves and have-nots".*

Taxes and public goods are at the core of the technological transition required by economic development. State capabilities are a particularly scarce factor in developing economies, whose production demands a significant rise in taxes. Besley and Persson (2013, p.2) observe that "*(T)he central question in taxation and development is: how does a government go from raising around 10% of GDP in taxes to raising around 40%?*". The rise in taxation reflects a "*broader range of development goals (including the structural transformation of an economy)*" (Bardahn, 2016, p. 863; see also Besley and Parsson, 2013). From this

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[8] In modern times, the internet is a canonical case of a technology that began as a military project having subsequently a massive impact on the economy (Abbate, 1999).

[9] Information technologies are highly intensive in public goods, social capabilities and social networks (Benkler, 2006, chapter 2).

perspective, the erosion of the tax base is especially harmful for developing economies as it hinders the institutional capabilities required by political and structural change[10].

A different but related point is how the provision of public goods affects the attractiveness of the country to foreign capital. Public goods are not only demanded by the citizens. The elite also need state capabilities generating a stable and predictable environment for business and social interactions (Evans, 1997). The absence of public goods complementary to private investment explains why capital does not massively flow towards countries in which capital is the scarce factor. On the contrary, developed countries capture the largest share of total foreign direct investment in the international economy (almost 60%, according to UNCTAD, *World Investment Report*, 2017). A race to the bottom in taxes and public goods in the competition for foreign investment may actually hurt the ability of the economy to attract these investments. This is a point missed in the TINA view, in the AR view of a positive role of financial liberalization in enhancing economic complexity, and even in Rodrik's trilemma: the advantages that investors could gain from having a lower tax rate and minimal transaction costs may be lost out of negative effects on state capabilities and public goods.

The model presented in the next sections discusses how the interactions between taxes, public goods, technology and capital mobility may lead to the emergence of either a mature or an immature democracy. The model acknowledges the role of public goods in shaping the returns to capital and the optimal allocation of capital in the international economy. It is also consistent with the evidence that open capital accounts have been associated with growing inequality, less economic diversification and democracies which are, at the same time, more resilient and more contentious.

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[10] As noted by Robinson (2016, p. 516): "*With economic development, productive relationships change significantly; (…); physical capital, and later human capital and technology, become more important; and the whole economic structure becomes transformed.*"

3. Technology, agents and actions

This section presents the main assumptions and basic equations of a model of financial globalization and the transition to a mature democracy, starting from the AR workhorse model. As in AR, there are two classes of agents, the elite (the owners of capital) and the citizens (who supply labor). Being the majority, the citizens define the level and uses of taxes. At variance with AR, however, two technologies are available: one is represented by a conventional neoclassical production function with decreasing returns to capital (Solovian technology); the other is more complex and represented by a production function with constant returns to capital that uses public goods as inputs (Schumpeterian technology). There are two countries, a Solovian South and a Schumpeterian North, both are democracies. Only one good is produced, capital is mobile, but labor is not. Technical change and industrial transformation are represented by a shift from the Solovian to the Schumpeterian technology. The labor, capital and goods markets are competitive. The North is a large country: capital flows between South and North do not affect the payoffs of citizens and elite in the North.

The population in the South is normalized to unity ($L = 1$). A fraction d of the population represents the elite and a fraction $(1 - d)$ represents the citizens, being $d << 1/2$. Citizens and elite are homogeneous (all members of the elite own the same amount of capital) and the higher the share of the elite in total population the less concentrated the property of capital is. Although some of the capital in the South is owned by people in the North and vice-versa, the impact on income distribution of profit remittances will be neglected, which implies that differences between Gross Domestic Product and Gross National Income are ignored[11].

There are two alternative uses for taxes, pure redistribution (action R) or the provision of public goods (action G)[12]. It is assumed they are totally separated policies, although in actual

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[11] Data from the Penn Tables suggest that GNP is usually about 95-99 % of GDP in developing economies. For instance, in the 2000s, the GNP/GDP ratio fluctuated between 0.96 and 0.99 in Mexico; around 0.97 in Argentina and Brazil, and around 0.95 in Thailand. Therefore, ignoring the distributive effects of profit remittances does not significantly alter the payoffs of the elite and outcomes of the model.

[12] A similar distinction between "redistribution" and "provision of public goods" as political choices is made by Lizzeri and Persico (2004). However, these authors consider redistribution exclusively as a mechanism for targeting swing voters within the elite. De Mesquita el al (2003) argue that policies are always aimed at favoring the elite. For these authors, public goods are more likely to be provided in democracy because the size of the elite with

economies purely redistributive transfers coexist with the provision of public goods. The elite decide between changing the political institutions (more specifically, staging a coup, action N for non-democracy) or paying taxes while allowing democracy to persist (action D for democracy). Public goods are an input in the Schumpeterian production function. If the citizens produce public goods, the elite adopt the Schumpeterian technology. The rationale behind this assumption is that the provision of public goods—for instance, certain types of infrastructure, skills and training, as well as knowledge spillovers from R&D institutes—makes the old technology unfeasible. The decision of the elite to move capital between South and North is a function of the rate of return of capital in each country. The latter depends on the capital endowment in South and North, but also on technology.

As South and North are democracies, under the usual assumptions the median voter theorem applies. The citizens in democracy set their preferred tax rate, which is the one that maximizes their income. The optimal tax rate for the citizens depends on whether they redistribute or provide public goods. When they redistribute, the payoff consists of wages plus a lump sum that comes from redistribution, while the payoff of the elite is profits minus the redistribution. When taxes are used to provide public goods, there is no redistribution: citizens earn wages minus taxes and the elite profits minus taxes. Levying taxes and using tax receipts for either redistribution or providing public goods have a cost. There is a loss of income in the process (Okun's "leaky-bucket" effect) which is a function of the tax rate, represented by $c(t)$ in the case of redistribution and by $j(t)$ in the case of the provision of public goods.

Equation (1) is a conventional neoclassical production function whose output is Y^R; equation (2) gives the knowledge-intensive production function which uses public goods (G) and whose output is Y^G (Barro, 1990). Public goods in the Schumpeterian technology include infrastructure, education and a welfare system that functions as a social insurance for all citizens in the Katzenstein-Bowles-Stiglitz sense discussed above: such public goods raise the workers' efforts, ensure higher social cohesion and cooperation, and make workers more inclined to learn and innovate—and as a result enhance labor productivity. This entails an implicit redistributive effect embedded in the production function, which is taken into account

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respect the total population is higher than in a dictatorship. In this work, however, democracy always favors the citizen either by redistribution (private gains) or by providing public goods.

by assuming $0 < b < a < 1$ (the labor share in total production is higher with the Schumpeterian technology than with the Solovian technology).

$$1)Y^R = K^a(1-d)^{1-a}, 1 > a > 0,$$

$$2)Y^G = K^b[G(1-d)]^{1-b}$$

The public goods required by the Schumpeterian technology are financed through a uniform tax rate t^G levied on both citizens and the elite:

$$3)G = (t)^G(1-j)Y^G$$

Plugging equation (2) in (3) renders:

$$4)G = (t)^G(1-j)K^b(1-d)^{1-b}(G)^{1-b} \text{ and hence:}$$

$$5)G = [(t)^G(1-j)]^{\frac{1}{b}} K(1-d)^{\frac{1-b}{b}}$$

Using equation (5) in equation (2) returns the aggregate Schumpeterian production function:

$$6) \quad Y^G = K(1-d)^{\frac{1-b}{b}}[t^G(1-j)]^{\frac{1-b}{b}}$$

The problem of the democratic transition towards inclusive institutions can be represented as a simple game in which the strategic profiles are: $P = \{NR, NG, DR, DG\}$. The first letter gives the action of the elite and the second that of the citizens. The problem at hand (the path towards inclusive institutions) is to determine the conditions that allow the South to move from a Nash equilibrium in which the best response of the actors is the pair of actions (D, R) to one in which the best response is (DG), meaning that the elite accept existing political institutions (democracy) and pay taxes, while the citizens use tax revenues to provide public goods. Citizens and elite play simultaneously a game of complete but imperfect information. The payoffs of the elite and the citizens depend solely on their incomes. To save notation, indirect utilities are represented by income per capita, whereas r is the income per capita of the elite and w that of the citizens.

4. <u>The tax rate and the payoffs of the citizens in the South.</u>

The analysis begins with the case in which the elite pay taxes and the citizens redistribute (strategic profile DR), which implies a Solovian techology. As in AR, the workers' income after tax and transfers (w) is:

$$7) w = w^R + t^R(Y^R - w^R) - c(t)Y^R$$

The first term on the right-hand-side (w^R) is the real wage under perfect competition; the second term captures the extra income the citizens receive from redistribution (where t^R is the tax rate and Y^R the average income, which equals the aggregate income since $L = 1$); and the third term represents the cost of redistribution ("leaky bucket" effect). The cost function has the following properties: $c'(t) > 0, c''(t) > 0, c'(0) = 0, c'(1) = 1$. For concreteness assume it takes the specific form:

$$8) c(t) = \frac{1}{2}(t^R)^2$$

The competitive real wage is:

$$9) w^R = \partial Y^R / \partial(1 - d) = [(1 - a)/(1 - d)]Y^R$$

The citizens choose t^R to maximize w in equation (7). By plugging (8) and (9) in (7) and taking the derivative with respect to t, it is possible to find the value of t that maximizes w, which is:

$$10) \qquad t^R = \frac{a-d}{1-d}$$

Combining (7), (8) and (9) renders:

$$11) w(DR) = K^a(1-d)^{1-a}\left[\frac{1-a}{1-d} + t^R\left(1 - \frac{1-a}{1-d}\right) - \frac{(t^R)^2}{2}\right]$$

Using (10) in (11) gives the citizens payoff when the elite pay taxes and the citizens redistribute:

$$12) \qquad w(DR) = K^a(1-d)^{1-a}\left[\frac{1-a}{1-d} + \frac{1}{2}\left(\frac{a-d}{1-d}\right)^2\right]$$

The previous result is the one in AR. The analysis now departs from AR to evaluate the citizens' payoffs when they provide public goods—always in a scenario in which the elite does not alter the political institutions (strategic profile DG). With public goods, the competitive real wage in equilibrium is:

13) $w^G = \left(\frac{1-b}{1-d}\right) Y^G$

Therefore, the income of the citizens after taxes (the tax rate in this case is t^G) with the Schumpeterian technology will be:

14) $w(DG) = \left(\frac{1-b}{1-d}\right)(1 - t^G) Y^G$

The citizens choose t^G to maximize $w(DG)$ in equation (14). They elect representatives that look at the optimization problem considering the externalities produced by the public goods—in other words: they use the aggregate production function (6) to find the optimal tax rate with public goods. This is the same tax rate that maximizes $Y^G(1 - t)$ for there is no direct redistribution. Therefore:

15) $\frac{\partial(w(DG))}{\partial t^G} = \left(\frac{1-b}{1-d}\right)(1 - t^G)Y(t^G) = 0$

Which gives the optimal tax rate:

16) $t^G = 1 - b$

Using (16) in (15) gives the citizens' payoff in a mature democracy:

17) $w(DG) = \left(\frac{1-b}{1-d}\right) bAK$, where $A \equiv [(1 - b)(1 - j)(1 - d)]^{\frac{1-b}{b}}$

Per equation (10), the optimal tax rate for the citizens increases with inequality in a redistributive democracy: the higher is a and the more concentrated the ownership of capital (as measured by the share of the elite in total population, d), the higher is t^R. Inversely, per equation (16), the optimal tax rate for the citizens when public goods are provided falls with inequality (the higher is b, the lower t^G). The second result is at odds with the median voter theorem (which states that higher inequality leads to higher taxes), but broadly consistent with the evidence of a positive correlation between public goods, technological sophistication, equality and taxes. A rapid comparison of the economies of, for instance, Latin America and Northern Europe, suggest that this result is compatible with the differences observed in taxation, productivity and equality between developing and developed countries.

What is the best response of the citizens when the elite pay taxes? The citizens prefer a democracy with redistribution over a democracy with public goods only if $w(DR) > w(DG)$ (if $w(DR) = w(DG)$, the citizens prefer democracy with public goods). These payoffs in turn

depend on the stock of capital per capita[13] in the economy. Define $w(DR/DG)$ as the ratio between equations (12) and (17), $w(DR)/w(DG)$. Figure 1 presents this ratio as a function of the stock of capital in the economy.

Figure 1. From redistribution to public goods: the citizens' critical payoff
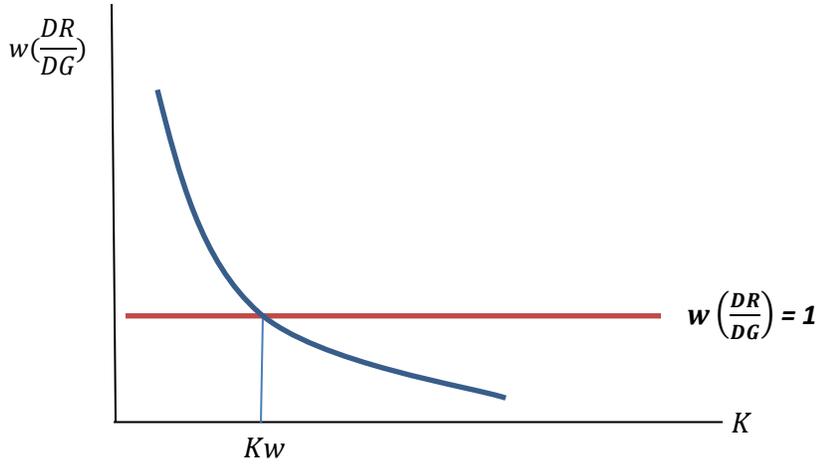
If the economy is poorly endowed with capital and the production function is neoclassical, the rates of return to capital are high. It is therefore more attractive for the citizens to tax and redistribute in the form of private consumption than in the form of public goods. As the stock of capital accumulates, the Solovian wages increase at a slower pace than the Schumpeterian wages. When the capital stock reaches the critical value K^w, the citizens vote in favor of producing public goods and shift to the Schumpeterian technology. This critical threshold is given by equation (18):

$$18)\ K^w = \left\{ \frac{(1-d)^{2-a}S^w}{b(1-b)A} \right\}^{\frac{1}{1-a}}$$

where $S^w \equiv \left[\frac{1-a}{1-d} + \frac{1}{2}\left(\frac{a-d}{1-d}\right)^2 \right]$ is the proportional share of the citizens in total income (respecting their share in total population) after taxes and transfers.

If the elite stage a coup (action N) and redefine the political institutions, the tax rate is set equal to zero. The preferences of the citizens no longer count in this case and profiles (NR)

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[13] Since the total population is constant and equal to the unity, all the results in terms of stock of capital can be understood as referring to the stock of capital per capita.

and (NG) render the same payoff. The citizens receive w^W minus a fraction φ which is the cost of the coup, represented by a constant fraction of the citizens' income (as in AR, pp. 225-228):

$$19) \quad w(NR) = w(NG) = (K)^a(1-d)^{1-a}\left(\frac{1-a}{1-d}\right)(1-\varphi)$$

Throughout the paper it is assumed that the "revolutionary constraint" is not binding, i.e. a revolution is not an option for the citizens to challenge the coup. The costs of a revolution are so high that the payoff of the citizens in equation (19) is higher than the payoff they could obtain from expropriating the elite[14].

The evaluation of the set of payoffs for the citizens is now complete. The next section discusses the payoffs of the elite. Sections 5-6 assume that there are no barriers to capital flows—the hyperglobalization regime—, while sections 7 and 8 allow for the possibility of different international monetary regimes.

5. The equilibrium stock of capital in the South with financial globalization

South-North equilibrium under democracy

Consider now the elite's payoffs when the citizens adopt a redistributive policy and the elite do not challenge the political institutions $(r(DR))$. The elite in the South with democracy and redistribution will get:

$$20)\; r(DR) = \frac{r^R K}{d} + t^R\left(Y^R - \frac{r^R K}{d}\right) - \frac{(t^R)^2}{2}$$

Note that $r^R = a(K)^{a-1}(1-d)^{1-a}$ is the competitive rental price of capital. Using this result and (1) in (20) gives:

$$21)\; r(DR) = (K)^a(1-d)^{1-a}\left[\frac{a}{d} + t^R\left(1-\frac{a}{d}\right) - \frac{(t^R)^2}{2}\right]$$

As in the previous section, $t^R = (a-d)/(1-d)$ is the optimal tax rate for the citizens. The tax system redistributes in favor of the workers and against the elite: the term $[t^R(1-(a/d)) - (t^R)^2(1/2)]$ is negative since $a > d$.

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[14] Note, however, that in the past the revolutionary constraint must have been binding in order to explain why there was democratization in the first place, as argued by Robinson (2001).

The payoff after taxes of each member of the elite when the citizens vote for providing public goods $(r(DG))$ is the rental price of capital times the stock of capital, divided by the share of the elite in total population. In equilibrium, the rate of return of capital after taxes is $(1 - t^G)bAK$, with $t^G = 1 - b$ and $G = t^G (1 - j)Y^G$. The aggregate payoff of each member of the elite in a mature democracy is:

$$22)\ r(DG) = \frac{b^2 Y^G}{d} = \frac{b^2}{d} AK$$

Since by assumption the North is always a mature democracy, $r(DG)$ is also what the elite can obtain in the North if there are no barriers to capital flows (other possible scenarios are addressed later). In equilibrium, the elite allocate capital in such a way as to equalize their payoff in South and North. Under democracy this entails:

$$23)\ \ (K)^{a-1}(1 - d)^{1-a}(S^r) = \frac{b^2 A}{d}$$

$S^r \equiv \left[\frac{a}{d} + t^R \left(1 - \frac{a}{d}\right) - \frac{(t^R)^2}{2}\right]$ is the proportional share of the elite in total income (respecting the elite's share in total population) in the Solovian democracy after tax and transfers. The stock of capital in equilibrium with democracy and redistribution in the South is:

$$24)\ \ K^D = \left[\frac{(1-d)^{1-a}dS^r}{b^2 A}\right]^{\frac{1}{1-a}}$$

Paying taxes is just a possible course of action for the elite. They may also consider staging a coup and setting the tax rate at zero with a cost which—as stated in the previous section—is the fraction φ of the income destroyed by political upheaval. Throughout the paper, it is assumed that the citizens are in favor of democracy, while the elites will favor a coup if there are economic incentives to do so[15].

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[15] Citizens do not always support democracy, especially when the democratic regime is new (see Brender and Drazen, 2009). In many developing economies, the poor do not expect to be the main beneficiaries of redistributive policies, giving rise to a "truncated welfare state" (Holland, 2018). These more complicated scenarios are not considered in the analysis.

The inequality constraint on democracy

Whether the citizens prefer to redistribute or to provide public goods is insubstantial in a dictatorship, because the citizens no longer have power to set taxes (hence $r(NR) = r(NG)$). The payoff of the elite under dictatorship is:

25) $r(NR) = r(NG) = (K)^a (1-d)^{1-a} \left(\frac{a}{d}\right)(1-\varphi)$

The coup will not occur if the tax burden for the elite is lower than the cost of the coup. Inversely, the coup becomes attractive if $r(NR) > r(DR)$ (recall there is no revolutionary constraint preventing the coup). Inequality (26) gives the AR economic condition that trigger a coup:

26) $-\frac{1}{a}\left[t^R(d-a) - \frac{(t^R)^2}{2}d\right] > \varphi$

There is a critical value of t^R, say $\tilde{t}$, for which $\varphi = -\frac{1}{a}\left[\tilde{t}(d-a) - \frac{(\tilde{t})^2}{2}d\right]$, leaving the elite indifferent between dictatorship and democracy. Since t^R increases with inequality, higher inequality makes the coup more likely.

The immature democracy scenario is defined, first, by having $K^D < K^W$ (the citizens have no incentives to produce public goods); and, second, by having $\varphi > -\frac{1}{a}\left[t^R(d-a) - \frac{(t^R)^2}{2}d\right]$ (the elite have no incentives to stage a coup). On the other hand, democracy will not persist if $K^D < K^W$ and $\varphi < -\frac{1}{a}\left[t^R(d-a) - \frac{(t^R)^2}{2}d\right]$. This condition poses an inequality constraint for democracy: if a is too high or d too low, not even an immature democracy will be possible. Empirically, this means that high levels of inequality will be associated with non-democracies. This result is valid even with perfect capital mobility. Global equilibrium in the allocation of capital in the coup scenario satisfies the following equation:

27) $r(NR) = r(DG)$

Using (25) and (22) in (27) gives the stock of capital in the South in equilibrium with a coup, K^N:

28) $K^N = \left[\frac{(1-d)^{1-a}a(1-\varphi)}{b^2 A}\right]^{\frac{1}{1-a}}$

With perfect capital mobility, the Southern economy will rapidly move (in theory, almost instantaneously) to K^N. The world will then be formed by two types of economies, a dictatorship with a Solovian technology in the South, and a mature democracy with public goods (and a more sophisticated economic structure) in the North. Unless the nationality of the elite influences their disposition to stage a coup, there is no reason why capital mobility could help democracy in a scenario of very high inequality[16].

A coup is not inevitable: perfect-foresighted citizens may deter it by setting the tax rate slightly below the critical tax rate $\tilde{t}$. But if one rules out a democracy whose survival depends entirely on the abdication by the citizens of the power to tax (i.e. setting $t \leq \tilde{t}$), the only antidote against a coup would be either to raise the costs of the coup, to reduce inequality (by lowering a or increasing d) or to secure the provision of public goods by the citizens. The conditions that favor the latter alternative are addressed in the next section.

6. Financial globalization and the immature democracy in the South

The discussion will now focus on the case in which there are no incentives for the elite to stage a coup because the inequality $\varphi > -\frac{1}{a}\left[t^R(d-a) - \frac{(t^R)^2}{2}d\right]$ holds (the inequality constraint on democracy is not binding). Capital will move to the South until $K = K^D$, where K^D is given by equation (24). While under dictatorship what the citizens prefer does not matter, in democracy they do have the upper hand. The democracy will be Schumpeterian or Solovian depending entirely on the best response the citizens at K^D—i.e, whether $K^w \leq K^D$ or $K^w > K^D$.

Assume that the initial stock of capital in the South is $K^0 < K^w \leq K^D$. As capital goes to the South, the Solovian technology becomes less attractive vis-à-vis the Schumpeterian one. When the stock of capital reaches the threshold K^w, the citizens' best response will be to provide

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[16] There is no evidence that foreign elites are more reluctant to support a coup than the domestic elite. Classical accounts of the destabilizing role of foreign capital in domestic politics in Latin America are Cardoso and Faletto (1979) and Sunkel and Paz (1980). A modern reassessment of the role of foreign investment in escalating political violence in the first globalization era is Hauner et al (2017).

public goods. Once public goods are produced, and the production process thereby transformed, the elite shift to the Schumpeterian technology. As a result, after surpassing the critical threshold $K = K^W$ the South begins its transit in democracy towards a more diversified, sophisticated economy with a higher tax rate, higher productivity and better income distribution—i.e. the South enters a path towards inclusive institutions. On the other hand, if $K_0 < K^D < K^W$ capital stops moving into the South before reaching K^W. Consequently, the processes of political and technological transformation are halted.

When the stock of capital reaches the point $K = K^D$, capital accumulation in the South stops. Any addition to the stock of capital in the South reduces the rate of return below that of the North. As a result, all savings in the South will be invested at a constant rate of return in the North instead of being invested in the South. The North grows at a constant rate while the South experiences zero growth[17].

The previous discussion gives a critical role in the emergence of a mature democracy to the parameters that determine K^W and K^D. Define the ratio $\widetilde{K}$ between the critical capital stock K^W and the equilibrium capital stock K^D in the South as:

$$29)\ \widetilde{K} \equiv \frac{K^W}{K^D} = \left(\frac{1-d}{d}\frac{b}{1-b}\frac{S^W}{S^r}\right)^{\frac{1}{1-a}},$$

If $K^W \le K^D$ and therefore $\widetilde{K} \le 1$, capital accumulation and foreign capital inflows endogenously create the conditions for a mature democracy; inversely, if $K^W > K^D$, and $\widetilde{K} > 1$, capital inflows stop or begins to leave the country before capital accumulation (and the tax base) has expanded enough to elicit the provision of public goods as the citizens' best response. In the latter case, democracy remains immature.

Equation (29) allows for discussing the conditions in which development is more likely to occur. It is more likely that $\widetilde{K} \le 1$ when: a) the property of capital is diffused rather than concentrated and therefore $(1-d)/d$ is lower; b) the labor share is higher in the mature democracy and therefore $b/(1-b)$ is lower; c) the ability of the citizens to redistributive

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income through tax and transfers in the Solovian economy is lower and therefore so is the ratio S^w/S^r (which makes more appealing for the citizens to move towards the Schumpeterian economy).

A simple back-of-the envelope calculation provides an estimation of the values that $\widetilde{K}$ may adopt, which depends on a, b and d. Taking Germany as an example of a mature democracy based on a complex production system, it can be observed that in this country the top 10 % captured about 40 % of the total income in 2014, which gives a b/d ratio of 4^{18}. It follows that the product $[(1-d)/d][b/(1-b)]$ is about 2.7. Letting a vary between 0.5 and 0.8 gives $\widetilde{K} > 1$ for all possible values of a ($\widetilde{K}$ varies between approximately 2 to 5). Such set of results suggests that the optimal allocation of capital worldwide (with technological asymmetries and perfect capital mobility) hinders a transition towards a democracy with public goods.

This outcome, however, is not immutable. Institutional changes may redefine the value of $\widetilde{K}$. If the property of capital is more evenly distributed in the economy—d is higher—, the value of $\widetilde{K}$ falls. Another avenue for having $\widetilde{K} < 1$ is to reduce the incentives to export capital. If there were barriers to capital exports that reduce the rate of return that the elite in the South attain investing in the North, capital accumulation in the South would continue (out of South own savings) along with the expansion of the tax base. However, the outcomes of the model depend critically on whether the barriers to financial globalization are exogenous or endogenous from the citizens standpoint. This is the topic addressed in the next two sections.

The results of the model are in line with some stylized facts highlighted in the empirical literature. The need of a higher level of stock of capital (and income per capita) to produce a stable democracy was raised by Lipsey (1960) and discussed by Przeworski (2009, pp. 22-23), who observes that the "*probability that, once in place, a democracy survives increases steeply in per capita income, converging to certainty when income is sufficiently high*". He also argues that if a country enters democracy at a low-income level, the probability of falling to a dictatorship is very high. Przeworski explains the fragility of democracy to the lower cost of violating democratic rules in conflict resolution when the income per capita is low. In the suggested

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[18] See Alvaredo et al (2018). Labor shares have tended to decline in most advanced and developing countries, see ILO/OECD (2015) and Dao et al (2017). This may make the transition towards a mature democracy more difficult.

model, the reason behind the rise in the costs of violating democratic norms in the mature democracy lies on a qualitative change in the political and economic dynamics. The economy moves from a zero-sum game between the citizens and the elite to a positive sum game based on the externalities produced by the public goods.

A similar conclusion is set forth by Ian Shapiro in the additional chapters he wrote for the second edition of Robert Dahl's classic *On Democracy* (Dahl and Shapiro, 2015). In the words of Shapiro (2015, p. 196), *"(T)he bulk of the story for democratic survival seems to be economic. Specifically, if per capita income (PCI) reaches and remains above $ 13,000 (measured in 2014 dollars), an existing democracy will likely survive indefinitely. But as PCI falls below that threshold, democracy becomes vulnerable, and the further it falls, more vulnerable democracy becomes"*. In addition, this author stresses the idea that diversification contributes to the stability of a democratic regime. He argues that "*the diversification of the economy matters more than inequality, and perhaps even as much as PCI. What counts is the extent to which everyone's eggs are in the same basket*" (Dahl and Shapiro, 2015, p. 198). In our model the convergence of interests emerges from the production of public goods that benefit all the agents in the economy.
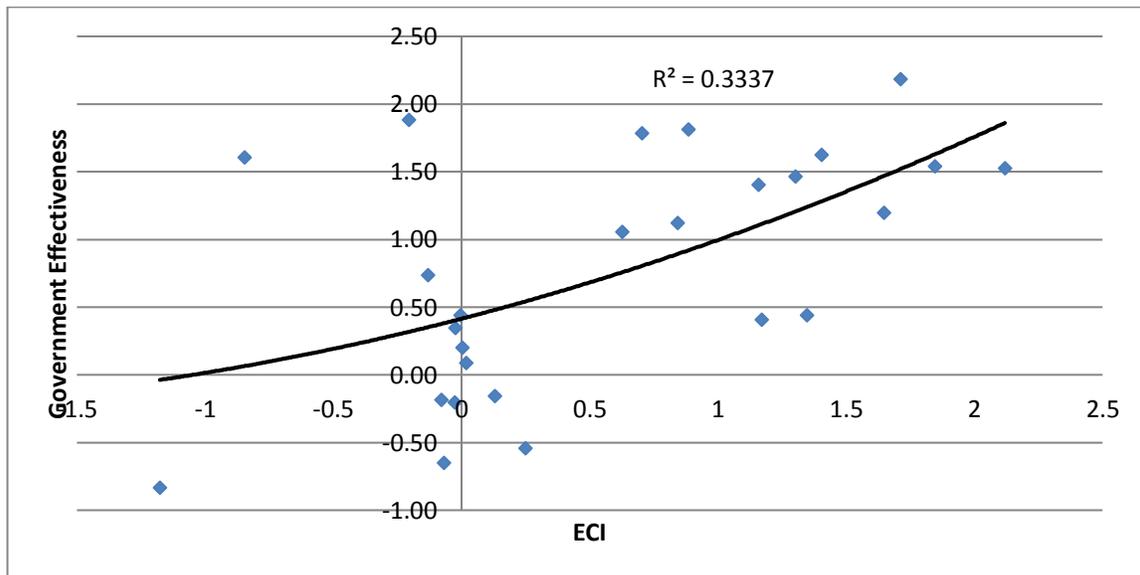
Figures 2 and 3 illustrates the association between public goods, inequality and the sophistication of the production structure.

Figure 2. Government Effectiveness and Inequality
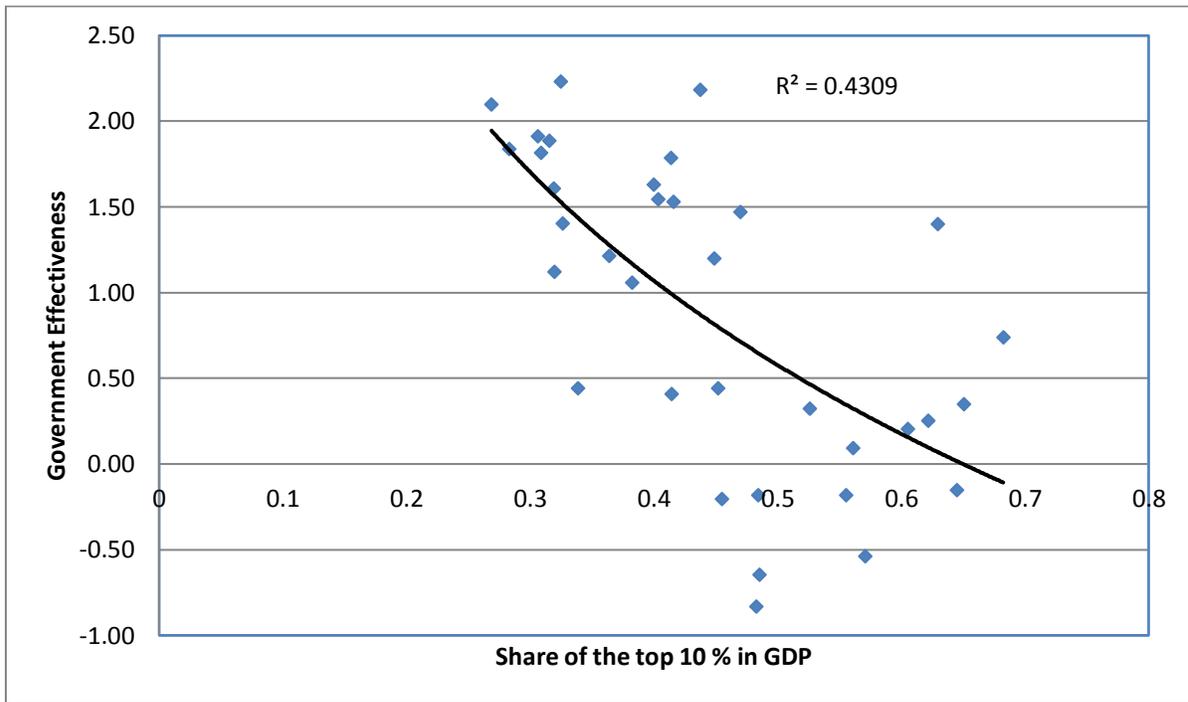
Source: World Bank (GovData360) and World Inequality Database (sample: 35 countries)

Figure 3. Government Effectiveness and Economic Structure

Source: World Bank (GovData360) and The Observatory of Economic Complexity (https://atlas.media.mit.edu/en/) (sample: 35 countries)

Figure 2 plots a proxy for the provision of public goods (the Government Effectiveness indicator of the World Bank) against an indicator of inequality (the share of the 10 % in total income). Besides the negative association between these two variables, figure 2 also gives a rough estimate of the inequality constraint on democracy: most countries in which the top 10 % captures more than 55 % of total income are non-democracies. Figure 3 plots Government Effectiveness against the Economic Complexity Index, which captures the degree of diversification and sophistication of the production structure of the economy (see Simoes and Hidalgo, 2011). It suggests a positive association between democracy and diversification. In both cases Latin America appears in an intermediate region (red dots), which is the one associated with immature democracies.

7. <u>The international monetary system: From Bretton Woods to Hyperglobalization</u>

Assume now that there are barriers for moving capital out of the countries which do not depend on decisions taken by the citizens of the South, but on exogenous regulations of the international financial system. Barriers to capital flows are represented in the same way as transport costs in trade models: a proportion $0 \leq f < 1$ of total capital is lost in the process of moving capital across the border. Such costs create a gap between the rate of return that the elite of the South can attain from investing in the South (North) vis-à-vis investing in the North (South). While barriers to capital mobility hinder capital flows from North to South—and therefore slow down capital accumulation in the South—, at the same time reduce the incentives for exporting profits from South to North after the breaking point in which $K = K^D$ when $f = 0$.

With $f > 0$, the elite in the South will continue to invest their profits in the South until the rate of return in the South equals the rate of return in the North minus the cost of moving the capital out of the country, i.e. $(K)^{a-1}(1-d)^{1-a}(S^r) = \frac{(1-f)b^2 A}{d}$. This implies a higher stock of capital in equilibrium in the South with a Solovian democracy:

$$30) \; K^D = \left[\frac{(1-d)^{1-a}dS^r}{b^2A(1-f)}\right]^{\frac{1}{1-a}}$$

Perfect capital mobility implies $f = 0$ and f increases with the barriers to capital mobility (less financial integration). Consider now two different scenarios respecting capital mobility, the Bretton Woods system (BG) and the post-Bretton Woods or "hyperglobalization" system (HG). These are Weberian types, highly stylized representations of the two international monetary systems that were in place in the post-World War II period (see Eichengreen, 2008, especially chapters 4 and 5)

The BW scenario was established with the signature of the Bretton Woods Agreements in July 1948. It defined rules for the monetary system based on fixed exchange rates for the main currencies with respect to the dollar and a fixed parity of the dollar with respect to gold. BG required inhibiting large-scale speculation with currencies and hence imposing restrictions on capital mobility. A world with free capital movements would be difficult to conciliate with a system of fixed exchange rates (as it provides an easy target for speculative attacks in a country going through external unbalances). As noted by Ghosh and Quaresh (2016), "the *Bretton Woods era was characterized by widespread use of restrictive measures (...). As in the interwar period, these were mainly controls on outflows rather than on inflows; unlike that period, they were typically not exchange restrictions but specifically capital controls since the IMF's Articles prohibit exchange restrictions on current account transactions*".

Inversely, the post-Bretton Woods or HG scenario allowed the exchange rates to fluctuate and capital to move freely across the borders. FG began *de facto* in August 1971, when Nixon ended the convertibility of the dollar with respect to gold, and *de jure* in January 1976 after the Jamaica Accords, when the FMI formally declared the end of the era of fixed exchange rates in the international monetary system. Since the late seventies and early eighties, capital mobility increased steadily as capital accounts were liberalized in most developed countries (and gradually in many developing ones). In a world highly integrated by financial flows, these flows had a major influence on the policy space and macroeconomic performance of national economies (Palma, 2012; Turner, 2015).

In terms of the model presented above, the BG regime can be represented by an exogenous f high enough as to significantly increase the stock of capital in equilibrium in the

South. The outcomes of the model now depend on the specific value of f. $\widetilde{K} > 1$ is the most likely outcome of equation (29) when $f = 0$. As f increases, the numerator of this equation falls. Replacing K^D in equation (29) by the result found in equation (30) renders the critical value $f = f^D = 1 - \frac{(1-d)}{(1-b)} \frac{d}{b} \frac{S^r}{S^w}$ which makes $\widetilde{K} = 1$ and hence fosters the emergence of a democracy with public goods in the BG regime.

Such a path to inclusive institutions can be modeled as a static game between Nature, citizens and elite. Nature chooses first the capital account regime. It may choose BG ($f \geq f^D$) of HG ($f < f^D$). Citizens and elite observe the move by Nature and then play simultaneously. To simplify the presentation, the decisions of citizens and elite are analyzed as separate games after the decision of Nature has been revealed to them (which are singletons). The two payoff matrices are in figures 4 (FG) and 5 (HG). In all cases the assumption is that $\varphi > -\frac{1}{a}\left[t^R(d - a) - \frac{(t^R)^2}{2}d\right]$ and hence there is no incentives for a coup (the inequality constraint on democracy is not binding).

Take first the FG case (figure 4, where for simplicity $f = 0$). Overlined responses represent best responses. The elite has a dominant strategy, which is D, to maintain the political institutions and pay taxes. The citizens know this and therefore limit the decision space to row D in the payoff matrix. With $\widetilde{K} > 1$, the best response for the citizens is to redistribute. The best response of the elite and citizens determines a unique Nash equilibrium with a Solovian (immature) democratic South (southwest box, $\overline{r(DR)}, \overline{w(DR)}$).

It can be argued that in figure 4 the economy is trapped in an inefficient equilibrium: the elite no longer invest in the South because there are no public goods, and the citizens do not provide public goods because the stock of capital and the tax base are too low. This scenario represents the type of political middle-income trap suggested by Doner & Ros-Schneider (2016). The elite receive high returns out of a poorly diversified economy, the citizens' redistribute as much as possible, and state capabilities remain feeble. None of these strategies encourage diversification and technical change.

Political stability and the intensity of political conflict will differ markedly in North and South. Politics in the South revolves around redistribution within a zero-sum game; political

negotiations in the North focus on the provision of public goods that represent an externality for capital accumulation. This makes room in the political arena to a positive-sum game based on the "politics of productivity", as labeled by Meier (1977), less susceptible to be shaken by either coups or revolutions. The political processes in the Solovian democracy are much more disruptive than in the Schumpeterian democracy. In the former, political instability is endemic; at each point in time the citizens and the elite play the cards of revolt, cooptation and repression as part of bargaining process over taxing and redistributing. Not surprisingly, the concept of the "politics of productivity" was coined by Meier as an enlightened response of the elite and citizens in the US and Europe to curb the risk of a spiraling conflict between labor and capital in the context of the cold war.

Figure 4. The immature democracy

With $f < f^D, \widetilde{K} > 1$ and $\varphi > -\frac{1}{a}\left[t^R(d-a) - \frac{(t^R)^2}{2}d\right]$

Citizens		R	G
Elite	N	$r(NR), \overline{w(NR)}$	$r(NG), \overline{w(NG)}$
	D	$\overline{r(DR)}, \overline{w(DR)}$	$\overline{r(DG)}, w(DG)$

Note: Best responses overlined

Figure 5. A path to inclusive institutions

With $f > f^D, \widetilde{K} < 1$ and $\varphi > -\frac{1}{a}\left[t^R(d-a) - \frac{(t^R)^2}{2}d\right]$

Citizens		R	G
Elite	N	$r(NR), \overline{w(NR)}$	$r(NG), \overline{w(NG)}$
	D	$\overline{r(DR)}, w(DR)$	$\overline{r(DG)}, \overline{w(DG)}$

Note: Best responses overlined

Figure 5, in turn, represents the game in the BG scenario—there are barriers to capital flights high enough as to make $f > f^D$ and hence $\widetilde{K} < 1$. The elite still have a dominant strategy, which is to keep the democratic institutions in place and pay taxes. The difference is that now the best response of the citizens is to provide public goods. There is a unique Nash equilibrium represented by the southwest box, $\overline{r(DG)}, \overline{w(DG)}$, in which both regions are mature democracies.

Once the public goods have been produced in the South, neither the citizens nor the elite have incentives to change their strategy. The production of public goods not only makes the old technology passé, but also makes pure redistribution an inefficient path to raise the citizens' payoff. The corollary is that these countries that were mature democracies in a BG scenario would remain democracies with HG. Moreover, temporary restrictions on the mobility of capital (such as those embedded in BG until 1971) may give rise to hysteresis phenomena. This will occur if the expansion of the tax base and the provision of public goods change the production system in a way that cannot be easily reverted by the subsequent opening of the capital account.

In an empirical study, Eichengreen and Legrand (2008) found a positive association between democracy and financial openness, *with the exemption* of the BG period. These authors observed that "(*T*)*his finding would appear to reflect the tendency for advanced democracies that were part of the Bretton Woods system of pegged exchange rates to use capital controls to free up monetary policy to serve constituent demands*". They also observed that when "*democracies allowed their exchange rates to float following the breakdown of Bretton Woods, controls were no longer required for monetary policy autonomy*". Their result is consistent with the findings of the model, but the latter offers a different interpretation: BG opened space for the consolidation of inclusive institutions and advance technological change; once these institutions were consolidated, democracy and public goods became less vulnerable (albeit not impervious) to capital flights in the HG era. This is also consistent with the results reported by Dailami (2000) and Rudra (2005), namely that financial openness and democracy have a positive association *conditional* on the existence of high levels of social expenditure, as an insurance policy that protects the citizens against financial shocks and instability.

The BG period marked the heydays of the construction of the modern welfare state in Europe (and to a lesser extent in the USA, as in Lyndon Johnson's Great Society). With all its shortcomings, BG represented a case of democracy-enhancing multilateralism (Keohane et al, 2009). The HG, on the other hand, came hand in hand with the weakening of the welfare state in the North and more instable politics in the democracies of both North and South.

8. Endogenous barriers to capital flows

So far it was assumed that the value of f is determined by exogenous forces—the rules of the game in the international monetary system. However, even in the HG era, some countries (either democratic or not) continued to apply restrictions to capital flows (Doodley et al, 2004). China, Brazil, India are Korea are examples of developing economies that kept significant barriers to capital movements after 1976, and still deploy such barriers with different intensity (Wade, 1992; Poo, 2012). In this sense, f may be seen as an endogenous variable upon which national governments (and the citizens, if they are democracies) have some degree of control. The structure of the game presented in figures 4 and 5 changes when f is endogenous. If the citizens have power to choose f, the optimal action for them is to set it equal to f^D. By doing so, they ensure the country's transit towards a mature democracy with better income distribution and a higher payoff for them.

However, the rise in f increases the cost of democracy for the elite and makes a coup more likely. In effect, assume that $\varphi > -\frac{1}{a}\left[t^R(d-a) - \frac{(t^R)^2}{2}d\right]$ and $\widetilde{K} > 1$ when $f = 0$. With no capital controls, or with exogenous capital controls, there will be no coup. However, with endogenous $f > 0$, taxes are no longer the only burden of democracy for the elite, who also bear the opportunity costs stemming from restrictions on capital exports. The elite will keep democracy in place if the elite's payoff when the citizens set $t = t^R$ and $f = f^D$ is higher than the elite's payoff under dictatorship, when the elite set $t = f = 0$. Otherwise they stage a coup to get rid of both taxes and capital controls.

Assume that capital accumulation starts in the South at K^0 in figure 6. Assume also that $\varphi > (t^R(1 - a/d) - (1/2)(t^R)^2)$ holds, in such a way that the payoff for the elite is lower

with a coup than with democracy ($r(NR) < r(DR)$). As capital inflows boost capital accumulation in the South, the rate of return in the South with respect to the rate of the return in the North falls along the $r(DR)/r(DG)$ curve. At some point in time (point A when $K = K_{f=0}^D$) the rate of return in the domestic economy falls below the rate of return that would be obtained in the North if capital were free to migrate (i.e. if $f = 0$). This creates an incentive for the elite in the South to export capital to the North, something they cannot do because the citizens impose capital controls. As capital continues to accumulate, the opportunity cost of not investing in the North increases, until point B in which $K = K^Z$, when the opportunity cost for the elite of capital controls equals that of the coup. From this point onwards, the elite will be inclined to change the political institutions. The critical stock of capital K^Z must satisfy the following condition:

31) $\dfrac{r(DR)}{r(DG)(1-\varphi)} = 1$

In equilibrium with a coup, the elite will keep K^N of its capital in the South and move $K^Z - K^N$ to the North (see figure 5). Using equations (21) and (22) in equation (32) gives:

32) $K^Z = \left[\dfrac{(1-d)^{1-a}dS^r}{b^2A(1-\varphi)}\right]^{\frac{1}{1-a}}$

Comparing equations (30) and (32), it is easy to see that if the cost of the coup (in terms of capital destruction, φ) is lower than cost of capital controls (in terms of capital losses, f), the elite will have incentives to stage a coup when the stock of capital reaches $K^Z < K^D$. It will be rational for the citizens to always choose $f < \varphi$ to prevent a coup. It also implies that capital controls may effectively serve to encourage a path towards inclusive institutions if and only if $f^D < \varphi$.

The case analyzed above confirms the assertion of the AR model that financial liberalization might prevent a coup from happening. Under certain parameter values, the coup will not take place if $f^D < \varphi$. On the other hand, it is also clear that a coup may be staged *precisely to impose financial liberalization* when this condition does not hold. A reformist government that aims at fostering a transition towards a mature democracy may see this transition frustrated by the reaction the elite. The latter will change the political institutions to benefit from freely exporting part of the capital originally accumulated under capital control

restrictions[19].

Figure 6. Endogenous barriers to capital flows and the incentives for a coup
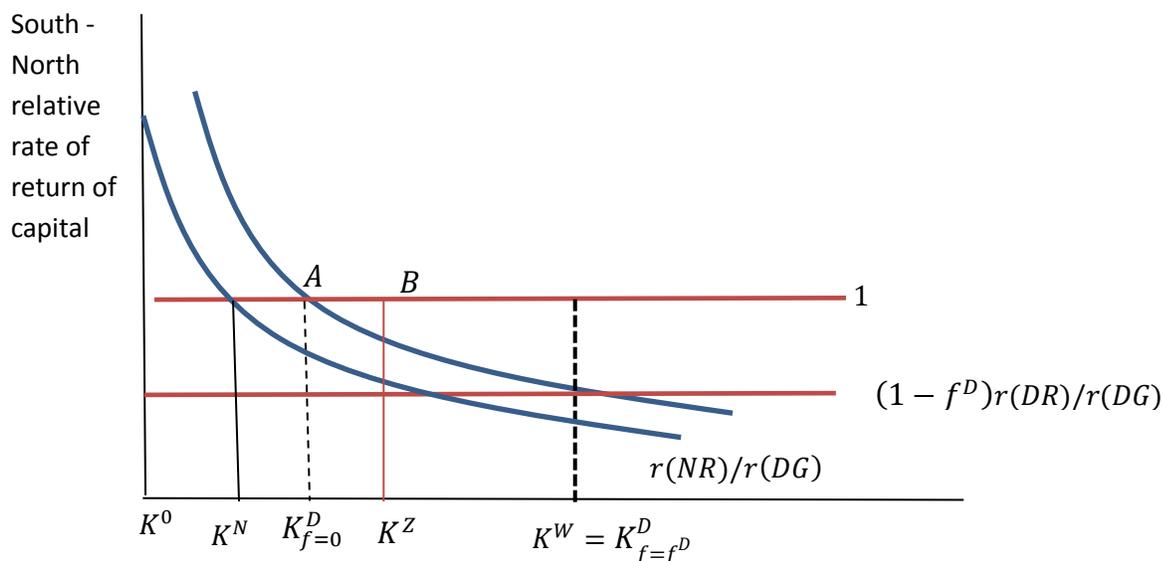
Various episodes of the Latin American economic history can be used to illustrate this point. In the second half of the seventies, after the collapse of the Bretton Woods system, several *coup d'etat* were staged in the Southern cone of Latin America (Uruguay, June 1973; Chile, September 1973 and Argentina, March 1976). Among other objectives (which broadly speaking represented what is nowadays known as the neoliberal agenda), the military governments sought to liberalize the capital account, hand in hand with the adoption of the monetary approach to the Balance-of-Payments (which was the macroeconomic fad of the period). They aimed at putting an end to "financial repression"—the name of the problem being ironic in the light of the intense political repression deemed necessary to liberalize the capital account.

The cases of Argentina, Chile and Uruguay in the seventies are examples of what the Argentine political scientist Guillermo O'Donnel (1978) called the "Bureaucratic-Authoritarian

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[19] This point helps interpret the finding of Eichengreen and Leblang (2008): "*For financial openness (…), we find no impact of capital controls on democracy but find that democracies that are closed to capital flows are likely to become autocracies*". From the model's standpoint, is not that a closed capital account strengthens the hand of potential autocrats what explains the association between a closed capital account in one period and the emergence of a dictatorship in the other. It is the increasing opportunity cost of the stock of capital accumulated under decreasing returns in an economy.

State" (BA), a new style of dictatorship aimed at modernizing and liberalizing the economies of the region (see the works published in the volume edited by O'Donnell et al, 1991). In all these cases, closed capital accounts encouraged the emergence of dictatorships, one of whose aims was to allow capital to freely leave the country. Schvarzer (1983) stressed the political rationale of the economic policy of the dictatorships of the 1970s: by liberalizing the capital account the elite took away from the citizens the capacity to collect taxes at the level that was optimal for them. The expectations of the staff of the BA state was that, after liberalizing the capital account, the de facto power of the citizens to tax and redistribute would be permanently weakened, even if the restoration of democracy brings political power back to the citizens. To some extent, this strategy succeeded, but for reasons different from those the BA staff had imagined. The liberalization of the capital account led to a major external crisis that turned into a fiscal crisis after the military governments engineered a massive bail-out of the external debt of private banks. This severely crippled the ability of the Southern Cone recently restored democracies in the second half of the 1980s to either redistributive or provide public goods (Stalling and Peres, 2000).

In sum, with endogenous barriers to capital flights, there are two possible equilibria. If the cost of the coup is so high as to make more profitable for the elite to keep investing in the South even at a lower rate of return than in the North when $f = f^D < \varphi$, then the Nash equilibrium is a mature democracy both in South and North. But if capital controls are so costly for the elite as to generate incentives for a coup when $f = f^D > \varphi$, then the citizens of the South will be compelled to abandon the reformist path. They will prefer to conform to the inferior outcome of a Solovian democracy with no capital controls ($f = 0$) than to run the risk of a regime change triggered by the cost for the elite of less financial integration.

Concluding Remarks

The paper discussed the conditions that favor a path to inclusive institutions. Starting from an immature democracy, a transition towards a mature democracy is more likely to succeed when the elite is less concentrated (i.e. economic power is more diffused) and the benefits to be received by the workers from public goods are higher than the private benefits

they can obtain from redistribution. The emergence of a mature democracy requires a critical stock of capital that makes the shift to the provision of public goods (and the corresponding adoption of the Schumpeterian technology) attractive to the citizens. With perfect financial globalization, and with high rates of return in the North associated with its superior technological capabilities, capital will move out of the South before such critical level could be attained. Between 1948 and 1971, the Bretton Woods system (and the "politics of productivity" of the Cold War era) facilitated the accumulation of capital and the expansion of the tax base required for the provision of public goods, while the hyperglobalization (post-Bretton Woods) era made the transition more difficult. In parallel, the quality of democracy deteriorated, becoming more unstable and contentious.

There are many important points that the model fails to grasp. One of them is that it does not allow for having at the same time redistribution and the provision of public goods. The citizens have to choose between two polar strategies. However, most developing and developed countries apply both types of policies. In particular, the purely redistributive effect of taxes and transfers are usually very high in developed economies. This is not considered in the model, which assumes that in the mature economy all taxes are used in a way which is productivity-enhancing (and the redistributive effects come as a result of the adoption of the Schumpeterian production function). Although this assumption is extreme, it is in line with the literature on the new economics of inequality and with the crucial role that the provision of public goods plays in modern advanced democracies, whose economies are heavily based on innovation and technical change.

Second, it is assumed that the creation of a mature democracy is a process that cannot be reverted. This allowed for keeping the focus on the transition to a mature democracy, not on the threats that financial globalization may pose to an advanced economy. However, capital mobility allows the elite to arbitrate over different tax systems, heightening distributive conflicts in both developed and developing countries. The possibility of a regression to an immature democracy in the North and the emergence of more complex interactions between South and North are important topics not addressed in the model.

Third, a scenario not explored in this paper is the one in which $K^D < K^N \geq K^W$. In this case, a "conquering bourgeoisie" accumulates enough capital to make the provision of public goods attractive for the citizens when democracy is established. This can happen if an exogenous shock creates conditions for the emergence of a democracy—even if the shock is transitory and the new political conditions empowering the citizens do not last. The citizens will vote for providing public goods. And the elite will no longer have incentives to re-impose a dictatorship.

Last but not least, the model assumes that if the stock of capital never reaches the critical level required to produce public goods, the accumulated experience in democracy and production is useless from a development perspective. This is too strong an assumption. It would be more realistic to assume that the building of state capabilities, public goods and technical change are continuous functions of the accumulation of capital and years of democracy (what Persson and Tabellini, 2009, call the country's "democratic capital"). This cumulative view of democratic consolidation would change the outcomes of the model. In particular, it would open to more space for alternative paths to development and make democracy more resilient to financial shocks, as documented in the economic history literature.

References

Abbate, J. (1999) *Inventing the Internet*, Cambridge, Mass: MIT Press, 1999.

Acemoglu, Daron, 2005. "Politics and economics in weak and strong states," Journal of Monetary Economics, Elsevier, vol. 52(7), pp. 1199-1226, October.

Acemoglu, D, and Robinson, J. (2001) "A Theory of Political Transitions", *The American Economic Review*, Vol. 91, No. 4 (Sep., 2001), pp. 938-963.

Acemoglu, D, and Robinson, J. (2006) *The Economics Origins of Dictatorship and Democracy*. Cambridge University Press.

Acemoglu, D. and Robinson, J. (2017) "Paths to Inclusive Institutions", MIT Economics, 19 January 2017.

Acemoglu, D.; Neidu, S.; Restrepo, P. and Robinson, J. (2015) "Democracy, Redistribution and Inequality", in Atkinson, A. and Bourguignon, F. (eds) *Handbook of Income Distribution*, *vol. 2B*, chapter 21. North Holland: Elsevier.

Aghion, P. and Howitt, P. (1992), "A Model of Growth through Creative Destruction," *Econometrica*, vol. 60(2), pages 323-351, March.

Albertus, M. (2017). "Landowners and Democracy: The Social Origins of Democracy Reconsidered", *World Politics, 69*(2), 233-276.

Alesina, R., Reich, R.; Ribboni, A. (2017) "Nation-building, Nationalism and War", *NBER Working Paper 23235*, October.

Alvaredo, F.; Chancel, L.; Piketty, T. Saez, E. and Zucman, G. (2018) *World Inequality Report 2018*, World Inequality Lab, https://wid.world/world-inequality-lab/.

Amsden, A. (1989), *Asia's Next Giant: South Korea and Late Industrialization,* New York, Oxford University Press.

Bardhan, P. (1999) "Democracy and Development: A Complex Relationship", in I. Shapiro and C. Hacker-Cordon (eds.), *Democracy's Value*, Cambridge University Press.

Bardhan, P. (2016), "State and Development: The Need of Reappraisal of the Recent Literature", *Journal of Economic Literature*, 54 (3), September, pp. 862-92.

Barro, R. (1990) "Government Spending in a Simple Model of Endogenous Growth", *The Journal of Political Economy*, 98 (5, part 2), pp. S103-S125.

Benkler, Y. (2006) *The Wealth of Networks: How Social Production Transforms Markets and Freedom*, New Heaven: Yale University Press.

Bértola, L. and Ocampo, J.A. (2010), *The Economic Development of Latin America Since Independence*, Oxford University Press.

Besley, T. and Persson, T. (2010) "State Capacity, Conflict, and Development" *Econometrica,* Vol. 78, No. 1, January, pp. 1-34.

Besley, T. and Parsson, T. (2013), "Taxation and Development", in Auerbach , A. Chetty, R. Feldstein, M. and Saez, E. (eds), *Handbook of Public Economics*, volume 5, North Holland: Elsevier.

Besley, T. Ilzetski, E. and Persson, T. (2013), " Weak States and Steady States: The Dynamics of Fiscal Capacity" , *The American Economic Journal: Macroeconomics*, Vol. 5, No. 4 (October 2013), pp. 205-235

Bowles, S. (2012) *The New Economics of Inequality and Redistribution.* Cambridge University Press.

Brender, A. and Drazen, A. "Consolidation of New Democracy, Mass Attitudes, and Clientelism", *The American Economic Review*, Vol. 99, No. 2, Papers and Proceedings of the OneHundred Twenty-First Meeting of the American Economic Association (May), pp.304-309.

Bueno de Mesquita, B., Morrow, J. D., Siverson, R. M., & Smith, A. (2003). *The logic of political survival*. Cambridge: MIT.

Cardoso, F.H. y Faletto, E. (1979) *Dependency and Development in Latin America*, University of California Press.

Cecchetti, S. y E. Kharroubi, (2012) "Reassessing the Impact of Finance on Growth", *BIS Working Papers* N 381, July.

Chong and Gradstein, "Institutions and Inequality", *The Review of Economics and Statistics,* Agosto 2007, 89(3): 454–465.

Dahl, R. and Shapiro, I. (2015) *On Democracy. Second Edition*. New Haven: Yale University Press.

Dailami, M. (2008), "Financial Openness, Democracy and Redistribution Policy", *World Bank Working Paper* 2372, June 2000.

Dao, M.C.; Das, M. ; Koczan, Z. and Lian, W. "Why is Labor Receiving a Smaller Share of Global Income? Theory and Empirical Evidence", IMF Working Paper, 17/169, July.

Deacon, R. (2009), "Public good provision under dictatorship and democracy", *Public Choice*, April 2009, Volume 139, Issue 1–2, pp 241–262.

Diamond, L. (2015) "Facing Up to the Democratic Recession," *Journal of Democracy*, 26(1), January, pp. 141-155.

Diamond, L. and Morlino, L. (2004) "Tue quality of Democracy: An Overview", *Journal of Democracy*, 15 (4), pp. 20-31, October.

Doner, R. and Ross Schneider, B. (2016). "The Middle-Income Trap: More Politics than Economics", *World Politics*, 68(4), 608-644.

Dooley, M.P.; Folkerts-Landau, D. and Garber, P. (2004) "The Revived Bretton Woods System", *International Journal of Finance and Economics*, 9, pp. 307-313.

Eichengreen, B. (2008) *Globalizing Capital: A History of the International Monetary System*, Princeton, NJ: Princeton University Press.

Eichengreen, B. and Leblang, D. (2008), "Democracy and Globalization", Economics and Politics, 20 (3), pp. 289-334.

Evans, P. (1997). The Eclipse of the State? Reflections on Stateness in an Era of Globalization. *World Politics, 50*(1), 62-87.

Frieden, J.A. (2015) *Currency Politics: the Political Economy of Exchange Rate Policy*, Princeton, NJ: Princeton University Press.

Furceri, D. and Loungani, P. (2015), "Capital Account Liberalization and Inequality", *IMF Working Paper*, Research Department, WP/15/243, November.

Galston, W. (2018) "The Populist Challenge to Liberal Democracy", *Journal of Democracy*, 29 (2), April, pp. 5-19.

Gosh, A.R. and Quresh, M.S. (2016) "What's In a Name? That Which We Call Capital Controls ", IMF Working Papers, 16/25, February.

Guzmán, M; Ocampo, J.A. and Stiglitz, J. (2018) "Real Exchange Rate Policies for Economic Development", *World Development* 110, pp. 51-62.

Hirst, P. " What is Globalization", in Engelstad, F. and Osterud, O. *Power and Democracy*, 2004: Aldershot: Ashgate.

Holland, A. (2018). "Diminished Expectations: Redistributive Preferences in Truncated Welfare States", *World Politics, 70*(4), 555-594.

Hu, F. y Spence, M. (2017) "Why Globalization Stalled", *Foreign Affairs*, July-August 2017.

Keohane, S.; Macedo, S. and Moravcsik, A. (2009) "Democracy-Enhancing Multilateralism", *International Organization*, 63, pp. 1-31.

Light, S. (2005*) From Warfare to Welfare: Defense Intellectuals and Urban Problems in Cold War America.* Baltimore: The John Hopkins University press.

Lipset, S.M. (1960), *Political Man: The Social Bases of Politics*, Garden City: Doubleday.

Lizzeri, A. and Persico, N. " Why did the Elites Extend the Suffrage? Democracy and the Scope of Government, with an Application to Britain's Age of Reform", *The Quarterly Journal of Economics*, Vol. 119, No. 2 (May, 2004), pp. 707-765

Meier, C.S. (1977) "The politics of productivity: foundations of American international economic policy after World War II", *International organization*, Volume 31, Issue 4, Autumn 1977, pp. 607-633.

Nassif, A.; Feijo, C.; Araujo, E. (2011) "The Long Term Optimal Real Exchange rate and the Currency Overvaluation Trend in Open Emerging Economies: The case of Brazil", *UNCTAD Discussion Papers* 206, December.

Nelson, R. and Winter, S. (1982) *An Evolutionary Theory of Economic Change*. Harvard University Press.

North, D. C., Wallis, J. J., & Weingast, B. R. (2009). *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History*. New York: Cambridge University Press.

O'Donnell, G. (1978) "State and Alliances in Argentina, 1956 – 1976", *Journal of Development Studies*, 15 (1), pp. 3-33.

O'Donnell, G.; Schmitter, P. y Withehead, L. (eds) (1991) *Transitions from Authoritarian Rule: Comparative Perspectives*, The Johns Hopkins University Press, third printing.

O'Donnell, G. (1998) "Polyarchies and the (Un)Rule of Law in Latin America", paper presented at the meeting of the Latin American Studies Association, Chicago, September.

Palma, J.G. (2012), "How the full opening of the capital account to highly liquid financial markets led Latin America to two and a half cycles of 'mania, panic and crash'", *Cambridge Working Papers in Economics* 1201, January.

Persson, T. and Tabellini, G. (2009) "Democratic Capital: The nexus Between Economic and Political Change, *American Economic Journal: Macroeconomics,* Vol. 1, No. 2 (July 2009), pp. 88-126.

Poo, D. (2014) "China's Development Trajectory: A Strategic Opening for Industrial Policy in the South", UNIDO, *Working Paper*, N. 218, December.

Przeworski, A (2009a) "Democracy, Equality, and Redistribution." In Richard Bourke and Raymond Geuss (eds.), *Political Judgement: Essays in Honour of John Dunn*. Cambridge: Cambridge University Press, pp. 281-312.

Przeworski, A (2009b), "The Mechanics of Regime Instability in Latin America", *Journal of Politics in Latin America*, 1, 1, 5-36.

Robinson, J. (2006) "Economic Development and Democracy:"*, Annual Review of Political Science*, 9, pp. 503-27.

Rodrik, D. (2011) *The Globalization Paradox: Democracy and the Futrue of the World Economy*, New York: W.W. Norton and Company.

Rodrik, d. (2018) "Populism and the Economics of Globalization", *Journal of International Business Policy*, (1), issue 1-2, pp. 12-33.

Romer, P. (1990), "Endogenous Technological Change". *Journal of Political Economy*, 98: S71-S102.

Rudra, N. (2005), "Globalization and the Strengthening of Democracy in the Developing World," *American Journal of Political Science* 49, pp.704-730.

Schvarzer, J. (1998) *Implantación de un modelo económico: la experiencia argentina entre 1975 y el 2000*, Buenos Aires: A-Z Editora.

Sen, A, (1999) "Democracy as a Universal Value", *Journal of Democracy*, 10 (3), pp. 3-17.

Stalling, B. and Peres, W. (2000) *Growth, Employment and Equity: The Impact of Economic Reforms in Latin America and the Caribbean*, Washington, DC: Brookings Institution Press.

Stiglitz, J. (2014) "Leaders and Followers: Perspectives on the Nordic Model and the Economics of Innovation", *Journal of Public Economics*, v, 127, July, pp. 3-16.

Stiglitz, J. (2013) *The Price of Inequality: How Today's Divided Society Endangers Our Future*, New York: Norton.

Sunkel, O. y Paz, P. (1970) "El Subdesarrollo Latinoamericano y la Teoría del Desarrollo", México, Siglo XXI.

Tooze, A. (2018) *Crashed: How a Decade of Financial Crises Changed the World*, London: Viking.

Turner, A. (2015), *Between Debt and Devil*, Princeton, NJ: Princeton University Press.

Wade, R. (1992) "East Asia's Economic Success: Conflicting Perspectives, Partial Insights, Shaky Evidence", *World Politics*, 44 (2): 270-320, January.