Inception Paper for the STEG Political Economy Theme:

"POLITICAL ECONOMY AND STRUCTURAL TRANSFORMATION:

DEMOCRACY, REGULATION AND PUBLIC INVESTMENT"

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1. Introduction

Structural transformation, defined as the reallocation of economic activities across agriculture, manufacturing, and services in the process of development is driven, in large part, by technological change. Indeed, it is the differences in technical progress across sectors that is the primary factor pushing for structural transformation (Herrendorf et al. 2015). In other words, the process of technological adoption and innovation in different sectors of a given economy is key to understanding structural transformation and, in turn, economic growth.

Development and growth economists have traditionally studied productivity differences through the lens of cross-country income differences (Mankiw, Romer and Weil 1992). Development accounting exercises suggest that at least 50% of cross-country income differences can be accounted by differences in Total Factor Productivity (TFP) (Hsieh and Klenow 2010). TFP gaps across countries were traditionally conceptualized as poor countries having access to worse technologies. However, in the last decades a number of influential studies have changed the lens through which we look at this evidence. These studies have shown that, even within countries, there are massive differences in productivity across sectors and firms (Banerjee and Duflo 2005; Restuccia and Rogerson 2008; Hsieh and Klenow 2009; McMillan and Rodrik 2014). These differences seem larger in developing countries. While some firms seem to enjoy state-of-the art technologies and managerial practices, other firms exhibit low levels of productivity.

A vibrant literature has followed in organizational economics, macroeconomics, and development to try to understand the nature of this misallocation of resources and its implications

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in the economy as a whole. This literature has mainly focused on regulations, property rights and financial or information frictions as main sources of misallocation (Restuccia and Rogerson 2017).

However, these factors are highly endogenous and political economy is now widely regarded as key to better understanding them, and thus the full dynamics behind structural transformation. We argue that the process of technological change is facilitated, blocked or distorted by political elites under different structural and institutional arrangements. There is a need to investigate the origins and consequences of these political distortions.

In this inception paper we aim to review the literature on the political distortions that can explain these differences in productivity and the prospects for transformation. We plan to identify the limitations of this literature and make a number of suggestions for future research. We first review the literature and discuss the state-of-the-art results on political distortions and their relation to economic outcomes, including various forms of state capture and firm-political connections. We study the prevalence of each type of political distortion and its observed effects on economic outcomes, such as prices, procurement and, consequently, on unobserved outcomes as consumer surplus and welfare.

The distortions we describe need to be evaluated using a plausible normative framework. We provide such as a framework in Benchmark: The Political Economy of Structural Transformation. Normative Theories, using the basic results of a Schumpeterian growth model. The need for a framework stems from the necessity to connect theoretical claims with empirical evidence from many different structural and institutional backgrounds, from the US and Eastern Europe to South America and West Africa.

A canonical result of the Schumpeterian model is that democracy has heterogeneous impacts on growth at various levels of technological development; i.e. "growth is higher in more democratic countries when these are close to the technological frontier, but not when these are far below the frontier" (Aghion, Akcigitz amd Howitt 2013). The inherent tension for the low- and middle-income countries is that they are trapped in an equilibrium with low technology and poor democratic institutions. This does not preclude the possibility of technological change, since two possible institutional paths make technological and structural transformation possible. The first path is characterized by vigorous political competition, political rights, individual freedoms, and free entry of firms into industries (i.e. democracies), and the second path is characterized by settings in which there is virtually no turnover of governments but there exists a strong developmental state (e.g. current China, the Asian Tigers).

While these two paths towards technological change and structural transformation are feasible, we claim that democracies have a comparative advantage in sustaining these processes in the long-run. In light of recent empirical evidence, we argue that democracies are better at allocating public resources for human capital and infrastructure projects, which provide the foundations for structural transformation. Furthermore, in democracies, personal liberties like freedom of movement and a lack of labor coercion enable the free allocation of labor from the rural sector to more productive industries, which facilitate structural transformation. Finally, in a Schumpeterian model, democracy guarantees property rights, by inhibiting expropriation and permitting the entry of new firms, therefore facilitating the creative destruction and innovation that produces economic growth.

Democracies, however, are subject to non-market frictions or political distortions that impact their ability to promote technological change and structural transformation. In Section 3 we argue that one relevant source of political distortions in democracies comes from the electoral process itself. Patronage and clientelism generate unequal access to public goods—such as education and infrastructure—that adversely affect rural development and the overall process of structural transformation (Wantchekon 2003; Colonellii et al. 2020; Xu 2020; Anderson et al. 2015, Beg 2020).

Political distortions, however, should not be understood as being exclusively government driven. In fact, firms might hinder the process of technological change and structural transformation by actively trying to capture state institutions and the political process. In Section 4 we review the literature on political connections to show how they can significantly impact procurement in political contexts as diverse as Lithuania (Baltrunaite, 2020), Russia (Enikopolov and Mityakov 2019) and Brazil (Arvate et al. 2019), affect bureaucratic hiring decisions (Xu 2018) and firm outcomes (Gutiérrez and Philippon, 2018). In extreme cases, a democracy can become so distorted by electoral incentives and political connections that the state is fully captured by private interests in a regime type labeled crony capitalism (Diwan et al. 2020).

While we discuss some theoretical contributions, the main focus of this inception paper is on the empirical literature that uses micro-data to uncover the political distortions and their effects. So far, this has been the part of the literature with the most progress and potential, with evidence from multiple empirical strategies and contexts. However, efforts must be made to establish a coherent theoretical framework that can guide policy interventions. Further research is also needed to find convincing approaches to quantify the implications of these factors for regions or economies. In terms of geographic coverage, this inception paper places greater emphasis on describing literature relevant for low- and middle- income countries.

The paper reviews these different types of political distortions, including a discussion of policy and institutional reforms that can curb distortionary activities—i.e., second-best policies or institutions due to incomplete information about government activities in Section 4. We finish with suggestions for future research in Section 5.

2. Benchmark: The Political Economy of Structural Transformation. Normative Theories

Growth, innovation and institutions

The political economy of structural transformation requires a theory of technological change and its effect on development. As a theoretical benchmark, we explore a form of Schumpeterian growth model that links market structure, innovation, and institutions. The model emphasizes the role of competition, firm dynamics, and cross-firm and cross-sector resource reallocation.

Broadly, a Schumpeterian model is a theoretical framework that formalizes the central role of "creative destruction"—the process by which new innovations replace older technologies—in fostering economic growth. Central to this model is the role of industrial organization in promoting growth, with faster growth being associated with high turnover rates of firms and jobs. Schumpeterian growth further needs a dynamic firm environment, with intense competition and high levels of exit and entry of firms to any given industry (Aghion, Akcigitz amd Howitt 2014).

Clearly, such a dynamic firm environment is more likely to arise in a democratic political environment. In a Schumpeterian model of economic growth democracy is positively correlated with growth insofar as it "reduces the scope for expropriating successful innovators or for incumbents to prevent new entry [of firms] by using political pressure or bribes: in other words, democracy facilitates creative destruction and thereby encourages innovation" (Aghion, Akcigitz amd Howitt 2014).

However, democracy has heterogeneous effects on growth and "different types of policies or institutions appear to be growth-enhancing at different stages of development". In particular, in more advanced sectors or economies, political rights are conducive to growth, but these rights may not matter or may negatively affect growth in less advanced, non-frontier sectors. This is because creative destruction is more relevant at the technological frontier than below the frontier, where countries can rely on imitation or adaptation in order to grow (Aghion, Akcigitz amd Howitt 2014).

The problem that arises is that of endogeneity: democracy enhances growth when a country is technologically advanced. However, developing countries are often trapped in equilibria with weak or poor democratic institutions and low rates of technological adoption. So how does structural transformation become possible?

Following Acemoglu and Robinson (2000), technological change is possible under different political arrangements. Whenever there is a process of technological change, some groups will try to prevent its adoption because they stand to lose political and economic power as a result of the new technologies. However, only groups that have and maintain political power will be able to block the new technology. Furthermore, only if their political power is at risk (not their economic power) they will find it beneficial to block the new technology: "If agents are economic losers but have no political power, they cannot impede technological progress. If they have and maintain political power (i.e., are not political losers), then they have no incentive to block progress. It is therefore agents who have political power and fear losing it who will have incentives to block" (Acemoglu and Robinson 2000).

This political explanation of technological change is directly related to the historical evidence on structural transformation. Consider the case of 19^{th} century landed aristocracy in Europe. As a consequence of the Industrial Revolution, they were unequivocally economic losers. While this aristocracy controlled political power in all states, they only "opposed the rise of manufacturing in countries where their political power was threatened, such as Russia and Austria-Hungary, but not in societies where they could maintain their political power, such as in Britain and Germany" (Acemoglu and Robinson 2000).

It is worth spelling out again the assumptions of the political economy explanation of technological change. Elites block technological innovations because these innovations may erode their political power and increase the likelihood that they will be replaced. In other words, elites are likely to block development when the political stakes are higher. Therefore, under two conditions elites are unlikely to block development: when either a) there exists a high degree of political competition and hence elites are not powerful enough, or b) elites are highly entrenched and unlikely to be replaced anyway. Hence, there may be a non-monotonic relationship between the degree of economic power of elites and the likelihood of adopting new technologies.

As stated above, structural transformation has occurred in the cases of limited democracies or plain autocracies (e.g. in Western Europe between the 15th and 19th centuries, Japan in the second half of the 19th century or the East Asian Tigers in the 80s and 90s or more recently China and Vietnam). This could be due to the fact these regimes, like democracies, have a Weberian limited rational state with strong bureaucratic norms and legal procedures. The main difference is that non-democracies rely on a strong coercive state to push for structural transformation rather than on market mechanisms.

As Acemoglu et al. (2015) argue, "many nondemocratic agrarian societies historically use explicit and implicit limits on migration out of the rural sector, together with labor repression, to keep wages low and redistribute income from the population to the politically powerful landed elites." These distortions on the allocation of labor were suppressed with the arrival of democracy in its distinct forms (enfranchisement, unionization, etc.).

Finally, and as argued in the Schumpeterian model, in the long-run democracies provide a superior institutional framework for economic growth at the technological frontier. While non-democracies can promote structural transformation and technological change by imitation and adoption and the protection of key industries and companies by the state, to keep growing at the frontier they need to create market conditions that enable free entry and exit of firms, which can better happen in a democracy since, as argued above, innovations do not only destroy the economic rents of incumbent producers, they also threaten the power of incumbent political leaders (Aghion, Akcigitz amd Howitt 2013; Acemoglu and Robinson 2006).

In this inception paper we focus on technological change under democracies. That is, a political system with a high degree of competition and rotation of politicians, protection of property rights and individual freedoms. In line with the relevant literature, we argue that democracies have a comparative advantage in leading the process of structural transformation compared to autocracies. This is because: 1) Democracies have are better equipped to provide the fundamentals or preconditions for technological change. These preconditions include public investments in infrastructure and human capital (we further explore this reason below); 2) Democracies historically facilitate the free movement of labor and better allocate this factor of production across the economy (see above for how non-democracies hinder labor mobility); and 3) Democracy "institutionalizes uncertainty" so political incumbents cannot block the entry of new firms, therefore stopping the process of creative destruction. An electoral democracy promotes innovation not only by leveling the playing field for entrepreneurs, but also by reducing the threat of expropriation of successful innovators and protecting start-ups from being driven out of the market by politically connected firms (Acemoglu and Robinson, 2006). For all these reasons, Acemoglu et al (2015) find a positive effect of democracy on structural transformation.

While we have explored the last two points in this subsection, we now turn to a review of the literature showing how democracies are efficient in providing public investments.

Public Investment

There is a growing literature suggesting that democratic elections can and have induced politicians to compete for votes by providing basic services. For instance, Harding (2015) uses microdata from 27 African countries to show that, conditional on the level of urbanization, democratic elections are positively correlated with access to primary education and negatively correlated with infant mortality rates, particularly in rural areas. He also provides evidence from elections in Ghana, suggesting that voters are responsive to the provision of infrastructure, particularly roads.

Burgess et al. (2014) provides strong evidence in support of the view that democracy is more efficient and less discriminatory in infrastructure investment. They use data on road construction and expenditures for post-independence Kenya (1963–2011) and investigate the extent to which there was ethnic favoritism in the investment in roads. They find that, under autocracy, districts dominated by the President's ethnic group receive twice as much investment on roads as other districts. Interestingly, they find no evidence of favoritism during democratic periods.

These results are consistent with Adler and Kondo (2020), who use the timing of China's highway network construction and political leadership cycles to document the extent of favoritism in highway construction. They find that the birthplaces of top party officials tend to be placed closer to the actual constructed network than the counterfactual “optimal” network. They also find that these distortions made road construction 1.76 percent more costly and lead to a 0.2 percent welfare loss. Hardin and Stasavage (2013) and Kramer and Posner (2018) provide evidence for similar patterns in education investments in Africa.

The pareto superior allocation of resources of public investment under democracies relative to non-democracies is critical for structural transformation. Public investment generate the preconditions for transformation, insofar as it generates a demand for migration and better skilled jobs through the accumulation of human capital. In addition, roads facilitate the integration of rural agricultural markets. These factors may provide incentives farmers to move away from subsistence agriculture and toward more productive sectors.

Political distortions as a barrier of technological change

While our benchmark normative theory contends that democracy has relative advantages over autocracy in setting the stage for structural transformation, there are deviations from this benchmark that may lead to a less efficient allocation of resources rather than enable structural transformation and improve overall welfare. We call these deviations *political distortions.*

Political distortions have two different origins. The first comes from pressures within democracies themselves. As incumbents seek to retain power, they might allocate resources in ways that deviate from the efficient or programmatic redistribution. For instance, they could allocate public investments in infrastructure to co-ethnic communities. Further, they could reward political loyalties with public sector jobs, resulting in patronage. Finally, they could discretionally allocate state resources to social programs that mostly benefit their followers.

The second origin of distortion is political connections between firms and state officials or politicians. Political connections create an uneven playing field between firms. Connected firms have easier access to credit, favorable regulation, or advantages in getting procurement contracts. In the next two sections we explore the literature on each type of political distortion.

3. Electoral incentives and misallocation of public investments

It is well established that public investment in infrastructure (e.g. roads and energy) is an important driver of growth and structural transformation (Perez-Sebastian and Steibuks 2017). However, electoral incentives might lead to the misallocation of investment as infrastructure spending might be driven by clientelist appeals. Glaeser and Ponzetto (2017) assess whether politics affect efficiency in transportation projects. They find that infrastructure projects whose costs are hard for voters to identify are underbuilt. Thus, the level of information of voters, and the way such information is acquired and processed, determines the development of projects. For the US, the increasingly density of educated voters has led to a decrease in mega-projects and pork expenditures.

Infrastructure projects also depend on government preferences and political accountability. Governments have a tendency to spend on social development rather than infrastructure, despite the latter ranking highly on voters demands and having a higher priority in terms of fostering development and equalizing individuals' incomes. Khemani (2002) finds that in India the vast majority of citizens list water or infrastructure among their top priorities. However, other expenses including those on education have more prominence in government budgeting. There are two key reasons behind this tendence: first, there is uncertainty regarding whether infrastructure projects will yield desired electoral returns; second, the gestation duration of projects is longer and may extend beyond a politician's tenure in office. This seems particularly true in countries with weak state capacity, weak systems of checks and balances, and low political competition (Keefer and Knack, 2007; Saez and Sinha, 2009). In Sub-Saharan Africa, for example, political factors are important predictors of the location of roads as well as investments in road maintenance (Blimpo, Harding and Wantchekon, 2013). In short, efficient infrastructure investments can be achieved with more responsive governments, more informed voters and stronger bureaucratic capacity.

Closely tied to the idea of misallocation is who owns the factors of production. Land is the primary productive asset in an agricultural economy, and land distribution is typically determined by historical and colonial institutions. However, land owners continue to be the economic and political elite even in recent times. Monopoly over productive assets allows elites to perpetuate their electoral victories, often relying on their control over resources to provide economic benefits to the poor. For instance, landowners in Chile conceded rents to workers in return for votes (Baland and Robinson 2008). This interlinkage of political motives and economic dependency of the poor on elites may result in an inefficient usage of productive inputs themselves. In Beg (2020), landowning politicians increase sharecropping in response to clientelist incentives---sharecropping tenancy has direct implications for efficiency (Burchardi et al. 2019). Thus, the contractual choices of landowners with political incentives may compromise agricultural productivity, which is a precedent for TFP growth and structural transformation (Gollin 2010). Similarly, land is used as a political tool in Dower and Pfutze (2015) where political incumbents have discretionary power over land in the absence of formal titles and use this power to suppress voters. This implies a political motive to keeping property rights insecure and upholding elites' control over land, with direct implications for investment incentives, factor allocation, and productivity.

Political clientelism may also inadvertently cause the misallocation of labor and investment. Several papers argue that political patrons offer insurance to clients who are vulnerable and value income protection (Anderson Francois and Kotwal 2015, Beg 2020, Bobonis et al. 2017). Workers who can migrate to urban areas or non-agricultural sectors, pivotal drivers of structural change, may be deterred from doing so at the expense of losing access to the clientelist network. This access to clientelist rents may also act as a resource curse and impede investment in human capital and persistence of the Dual Economy (Lewis, 1979).

4. Political Connections: An Uneven Playing Field

As argued in the normative theory, a Schumpeterian model of innovation-led growth needs a market in which firms exit the market by being displaced by more productive firms. These productivity differences across firms, or within specific industries should be driven exclusively by technological differences, putting a premium on innovation.

However, it is unlikely that this frictionless market is a good representation of the reality of low- and middle-income countries. In those countries, inefficient firms survive by different mechanisms, often through political means. Governments artificially create monopolies or protect firms by giving them privileged access to credit, favorable regulation, or advantages in getting procurement contracts. This creates an uneven playing field, in which unproductive firms do not exit and innovative firms cannot thrive. These inequities across firms may hinder the process of structural transformation as both existing and new sectors and firms do not have the ability to grow and become a motor of the development process.

We argue that this privileged access to the state is driven by political connections. In this section we review this literature. First, we show that political connections are valuable for firms because they increase their returns. Second, we discuss how firms obtain political connections and who benefits from this. Third, we discuss the channels through which politically connected firms are favored by policymakers. Fourth, we review how households or individuals may also benefit from having political connections.

Finally, we present a discussion on the "highest stage" of political connections. This is what the literature refers as *crony capitalism*. While political connections could distort a single market or industry, crony capitalism is characterized by a systematic capture of the overall state structure by private interests. In this section we show that while the literature highlights that capture is common in autocracies, democracies can also be affected by cronyism to various degrees.

The Value of Corporate Political Connections

Firms seek connections with the government because these connections are valuable. For instance, a public contract could provide steady income for long periods of time. In general, this relationship between firms and government is normal and needed for development (e.g., building of infrastructure). The problem arises when the sole value of the firm is the political connection itself and not comparative advantages relative to other firms.

A challenge that this research has faced is how to isolate how much of the value of the firm is driven by political connections. We may observe that a company receives a public contract and we suspect that the contract was awarded due to political connections. However, the value of the political connection is not equivalent to the value of the contract, as the price of the contract conflates both payment of the service given the company's productivity and the value of the political connections.

Political economists have devised creative strategies to estimate the value of political connections. The pioneering work by Fisman (2001) set the tone for what we could call a *leader centric* estimation of the value of political connections. The intuition of this empirical strategy consists in locating a political leader with documented ties to private firms, and then identifying an exogenous shock that threatens the political position of such a leader—for instance, a health problem. The difference between the profits or returns of companies that were tied to the political leader as compared to those that were not following this shock can approximate the value of the political connection.

An advantage of this design is that it can and has been replicated with various political leaders in different contexts. Fisman (2001), estimates the value of political connections in Indonesia in the late 90s from firms linked directly to president Suharto and his cronies and estimates that 23% of their value was due to their connections to Suharto. Fisman et al. (2012) evaluated the returns of connections to the USA vice-president Dick Cheney, who had connections to a number of firms in the oil sector. In contrast with the Indonesia study, Fisman et al. (2012) do not find abnormal returns of firms connected to Cheney upon the arrival of negative news about his health. However, other studies in the US context do find abnormal returns of connected firms. Acemoglu et al. (2016) estimate the value of connections to Secretary of Treasury Tim Geithner. Rumors about his upcoming appointment increased the stock value of firms connected to him by 12%, while rumors that his nomination was in trouble decreased the value of those firms. The authors argue that firms' political connections during turbulent times (at the beginning of a large financial crisis) may have been particular valuable for firms.

These leader-centric empirical strategies could be relaxed to cover any politician with a connection to a firm regardless of the periods and settings. Faccio, Masulis and McConnell (2006) do this by simultaneously estimating the value of corporate political connections for 47 different countries. They examined over twenty-thousand publicly traded firms and classified them as politically connected if a board member or large shareholder was a national-level politician. Their results indicate that corporate connections to political power are quite prevalent: 35 out of 47 countries have at least one politically connected firm; with 3% of publicly listed firms are politically connected, representing 7.72% of the world's stock market capitalization.

Recent literature has improved these measures of politically connected firm performance. This is important because short-term fluctuations in stock market value of firms may reflect investors' perceptions rather than changes in the structural profitability of firms (Baker and Wurgler 2013). Akcigit, Baslandze and Lotti (2018) and Brugués, Brugués, and Giambra (2020) use firm-level administrative data on returns, profitability and investments to document differing firm performance among connected firms.

However clever these studies are, they are likely just approximations of the value of political connections. It is likely for instance that the profits made by the connection surpass the losses when the connection is at risk or over. Moreover, these approaches rely on the embodiment of the political connection in an actual person. Firms, however, might prefer to translate this connection into an institutional framework in order to have a greater certainty that in the future the privileges resulting from the political connection remain essentially untouched. One method to institutionalize a connection is through lobbying to get favorable regulation (see Dal Bó 2006 and Bombardini and Trebbi 2019 for literature reviews). One last key difference is that favorable legislation or regulation tends to benefit a sector or set of firms. In contrast the literature on political connections has focused on how some specific firms get advantages, oftentimes through non-legal means, at the expense of direct competitors.

A more subtle way in which political connections are valuable for firms is in its position relative to other companies within the same industry. For instance, Akcigit, Baslandze and Lotti (2018), use administrative data on the universe of Italian firms and workers and find that, while only 4.5% of firms seem to have political connections, connected firms tend to be large. In fact, they constitute one third of total employment. These companies have a higher probability of survival, have higher employment and revenue growth, but are less innovative. The fact that connected firms have lower levels of innovation is consistent with previous research that indicates that firm-level TFP growth is lower in sectors more influenced by political connections (García-Santana et al. 2020). Moreover, this is all connected with the stylized facts of the Schumpeterian models. Non-market frictions like political connections favor the survival of inefficient firms, therefore causing innovation and growth to lag behind.

Finally, a more recent set of papers has examined the effects of democratization on the value of firms connected to the out-going dictator. They have used administrative panel data on firms to trace the evolution of firm performance across regimes (González, Prem and Urzúa 2020; Hallward-Driemeier, Kochanova and Rijkers 2020). These studies find that previously connected firms experience important declines in productivity. Guidolin and La Ferrara (2007) suggests that the end of war can also alter the abnormal returns of previously connected firms. They provide evidence from the end of war in Angola by examining the abnormal returns of firms that had previous mining concessions

How Do Some Firms Obtain Political Connections?

While political connections prove valuable to firms, only a subset of all firms manages to get privileged access to the state. Further, it is various actors within the firm and the state that bind the political connection together. In their work, Akcigit, Baslandze and Lotti (2018) use administrative data on the universe of firms and their employees and finding matches to the universe of politicians in Italy. With this approach the authors were able to assess connections to regional and local executive and legislative governments. Other studies have tried to identify connections, to the state by examining connections of firm leaders to the universe of bureaucrats in countries like Ecuador (Brugués, Brugués, and Giambra 2020).

Most of the work reviewed so far does not tell us how do firms get connected to political power. These studies typically conceptualize the set of individuals serving on the board of the firm or in other leadership positions as given. Whether a firm is connected to political power or not depends on whether the firm's leaders or their acquaintances are politicians or bureaucrats. However, who serves in the board of firms is an endogenous choice. Hence, whether the firm is connected or not is highly endogenous.

One strand of the literature that has gotten a step closer to endogenizing the presence of political connections is the one that has identified connections through campaign contributions. Firms that have donated to a particular candidate are classified as politically connected to him/her once that candidate wins the election (Jayachandran 2006; Baltrunaite 2020). This methodology has the additional advantage of enabling the identification of the effects of firms *becoming* politically connected by exploiting close elections. Boas, Hidalgo and Richardson (2014) and Arvate, Barbosa and Fuzitani (2016) exploit this approach in the context of legislative elections in Brazil and find that firms that contributed to candidates that barely won a seat in the legislature obtain more procurement contracts relative to firms that contributed to candidates that barely lost. Ferguson and Voth (2008) follow a similar approach and classify firms connected to the Nazi party if those firms had supported the party or Hitler financially or through serving on advising committees. The authors find substantial outperformance in stock market returns of firms connected to the Nazis once the Nazis took power in 1933.

Other studies have exploited time variation on whether a firm gets connected by examining whether firms' leaders obtain a position in the public sector (Barbosa and Straub 2020; Brugué, Brugués and Giambra 2020).

Mechanisms Through which Connected Firms Get Advantages

Once a political connection is made, the government may start favoring firms in a variety of ways. The literature has provided empirical evidence on a number of channels through which politically connected firms are favored by policymakers. Broadly speaking there are three: (1) through finance; (2) through favorable regulation and (3) through the allocation of government contracts. As we indicate in the theory section, these political distortions may reduce market competition, limit technological innovation and hence hinder structural transformation.

First, numerous papers have documented that politically connected firms obtain advantageous access to finance. For instance, Khwaja and Mian (2005) find that politically connected firms in Pakistan get greater access to credit from public banks. Claessens, Feijen and Laeven (2008) also find that firms that give greater campaign contributions obtain greater access to credit from state-controlled banks. Boubakri, Cosset and Saffar (2012) exploit time variation on the timing of establishing a political connection and find that firms increase their indebtedness after establishing a political connection. Faccio, Masulis and McConnell (2006) find that politically connected firms are more likely to receive corporate bailouts from government.

A second set of papers has documented that connected firms obtain preferential policies from the executive government in the form of lower taxation, greater access to import licensees, easier enforcement of licensing requirements, energy subsidies, and trade protection, among others (Mobarak and Purbasari 2006; Rijkers, Freund and Nucifora 2014; Diwan, Keefer and Schiffbauer 2020). We might group these policies together under a concept of "regulatory capture".

Stigler (1971) challenged the idea that regulation exists solely to advance the overall public interest and posited instead that regulation serves primarily the interest of a given industry. He hypothesizes that agents in every industry or occupation with sufficient political power will seek to influence the state to control market entry (via tariffs, harsh regulation of competitors that produce substitutes/complements, and price-fixing). He proposes a "demand" scheme for regulation, which captures the way public resources could be used to improve the status and market power of industries and occupations.

This form of regulatory capture has been documented empirically by political economists. For instance, Mobarak and Purbasari (2006) find that firms connected to Suharto in Indonesia were favored by easing access to import licenses of intermediate inputs, while immediate competitors were given much fewer licenses.

A third set of papers has studied preferential allocation of procurement contracts among politically connected firms. Public procurement represents a large fraction of public spending in most countries. The allocation of large procurement contract to connected firms may be an important avenue through which some firms are given an advantage. Goldman, Rocholl and So (2013) exploit the change in control of the US House and Senate in 1994 to show that firms connected to the winning party experienced increases in the quantity of procurement contracts granted, while the opposite happened to firms connected to the losing party.

While this is suggestive of firms obtaining rewards from their campaign contributions, the effects could also be confounded by unobserved differences between firms connected to either party. Boas, Hidalgo and Richardson (2014) and Schoenherr (2019) find substantial increases in procurement contracts to firms that donated to a politician that wins in close elections. The effects seem stronger for certain parties, suggesting that the treatment effects may be heterogeneous by the type of political connection. Baltrunaite (2020) examines procurement data from Lithuania and finds that firms that have made campaign contributions are more likely to win procurement contracts. Interestingly, the effect disappears after 2012, when a law banning campaign contributions came in effect. Brugués, Brugués, and Giambra (2020) implement an event study that shows that the probability of firms being awarded a contract increases by 3 percentage points after the owner or their siblings obtain a public sector job.

The allocation of government contracts on the basis of political connections also have consequences for the equilibria in the whole industry. Ferraz, Finan and Szerman (2016) show that the acquisition of procurement contracts has substantial positive effects on firm growth. Granting contracts to politically inefficient connected firms may give them a boost to their economic activity, at the expense of opportunities for competitors and other potential entrants. Again, this is all detrimental within a model of innovation-led growth in which market mechanisms should drive out inefficient firms.

Lastly, it might be that policies thought to bring about political accountability may result in the creation of political connections that hinder the efficient allocation of procurement. Overall, the accountability literature suggests that removing term limits and allowing for longer tenures leads to an increase in the competence of politicians (Dal Bo et al, 2017) and an increase in politicians' productivity (Hall and Fouirnaies, 2018), all of which should lead to more efficient procurement bids. Paradoxically, Coviello and Gagliarducci (2017) find that longer tenure for local level politicians in Italy leads to an increase in the connections made with local firms. As a result, we observe a reduction in the number of bidders per auctions, higher procurement costs and an increase in the likelihood that the same firm that won an auction wins future bids.

Moreover, distortions seem sticky in practice. We can imagine a setting in which political uncertainty—such as high political competition—might be damaging to firms that are politically connected with the incumbent. Canen, Ch and Wantchekon (2020) shows that in such cases firms substitute towards other forms of capture in order to maintain the same level of distortions in place. Specifically, more direct forms of capture—i.e., forms that do not rely on intermediaries such as politicians to achieve the desired distortions but focus on capturing the agents in charge of policymaking, mostly bureaucrats—act as insurance for the firm, guaranteeing that distortions are kept in place. Importantly, typical policies thought to reduce state capture, such as improved bureaucrat selection, have no effect on citizen's welfare given firms' capacity to substitute to other forms of capture. It is only through improving the selection of politicians through accountability reforms, reelection incentives or grassroot movements intended to counter the influence of firms on politicians that state capture can be subdued. We will return to this in Section 5.

Political Connections at the individual or household level

So far in this section we have focused on the advantages that firms obtain from acquiring connections to political power. However, individuals or households can also get substantial benefits from having political connections.

For instance, Goldstein and Udry (2008) find that individuals with political connections are more likely to leave their land fallow in rural Ghana. In this context, leaving the land fallow is a productive investment associated with large increases in agricultural productivity in subsequent seasons. However, due to insecurity in property rights few individuals leave land uncultivated. To address the possible confounders associated with having political connections, the authors exploit within household heterogeneity in political connections (i.e., they exploit cases where the wife is a relative of village leaders, while the husband is not or vice versa). This evidence suggests that property rights are differentially enforced depending on whether individuals have political power or not.

In the Italian context, Gagliarducci and Manacorda (2020) find that family members of politicians improve their job prospects in private sector firms. They are more likely to be hired and promoted once their relative enters office. Their estimates suggest that at least 0.4 percent of private sector employment in Italy is influenced by political connections.

These results suggest that individuals and households that have political connections benefit in terms of employment and more favorable enforcement of property rights. The two papers mentioned above highlight distortions in the allocation of labor in the presence of political connections. Just as in the case of clientelism and patronage, favoritism in property rights enforcement may lead to underinvestment and a lower rate of technological adoption by most farmers, hence to the persistence of subsistence agriculture which ultimately may hinder growth and the process of structural transformation.

The costs of political connections

As we have shown above, political connections distort the path of innovation-led growth that would promote structural transformation by permitting the survival of relatively unproductive firms in the market, even to the point of forming monopolies. All these studies have strived to quantify just how much of a burden this market inefficiencies represents, in terms of welfare loss.

Going back to the paper by Brugués, Brugués, and Giambra (2020), the authors develop a model to quantify the welfare costs. Their estimates indicate that the welfare loss can be up to 8% of the overall procurement budget. This loss is accounted by two main sources. First, the public sector pays higher prices for their goods and, second, awards contracts to less productive firms. On the same line, Baltrunaite (2020) estimates that the over-cost due to firm-favoritism in Lithuania is of the order of 1% of GDP.

Using another strategy, one that relies on monitoring of firms, Colonnelli and Prem (2020) examine the effects on firm activity of the randomized audit program in Brazil. They find that 3 years after municipalities have been audited there is a 1% increase in firm activity. The new businesses created seem to have high quality managers and not political connections. Their estimates are consistent with corruption representing a 5 to 23% tax rate in the economic activity.

While these studies indicate that political influence over economic activity has substantial costs, it is possible that the actual negative effects are much larger. The presence of political connections may generate general equilibrium effects that are typically not captured by microeconomic studies. For instance, the cost of political distortions may be much larger when considering the number and type of firms that do not exist because political entry barriers prevented their creation.

Huneeus and Kim (2019) is one of the few studies that aimed to estimate these general equilibrium effects. They develop a model to estimate the effects of the distortions induced by lobbying on firm size in the USA. They estimate that the aggregate cost of lobbying is 11% of US aggregate productivity. This cost can be decomposed in two sources. The first source corresponds to misallocation of resources across existing firms. The second source corresponds to entry barriers of competitors. This indirect or general equilibrium effect accounts for 35% of the total welfare cost.

Beyond economic costs, political influence in private sector activities can also have a number of additional welfare costs. Fisman and Wang (2015) find that workers' fatalities are higher in politically connected firms in China. Cingano and Pinotti (2013) document that political influence in the allocation of procurement contracts reduces public good provision by 20%. Klor, Saiegh and Satyanath (2020) show that labor union members at firms connected to the Argentinian military dictatorship were more likely to experience repression by the regime. Connected firms had a 300% higher number of labor union members that disappeared during the military regime. These are only some of the potential non-pecuniary costs associated with an uneven playing field of firms.

Crony Capitalism and Elite Capture

Arguably, up until this point we have presented the origins and consequences of political connections in certain sectors or industries.

Undoubtedly there is variance in the prevalence of political connections. The extreme case is where political connections are "structural". These situations have been refereed as systems of *crony capitalism*. Economic and political systems that are characterized by cronyism do not have a few firms that exert undue influence over the policymaking process. Instead, the relationship with political power shapes to a great extent most economic activities in the country and reduced number of firms or individuals hold a disproportionate amount of influence over political decisions and policies.

The term *crony capitalism* defines political and economic systems where economic activity is heavily influenced by political power. The type of firms that are active, the type of resources and inputs they use, and the type of investments they undertake heavily depends on the political connections of the firms. In this type of systems there are not only "a few bad apples", as the majority of firms rely on some sort of connections and firms with no access to power are limited in number or non-existent.

There is substantial anecdotal evidence that suggests that economic activity is heavily intertwined with politics. Some examples are Owen (2004), World Bank (2009), Heydeman (2014) and Musachio, Farias and Lazzarini (2014). Oftentimes autocratic or hybrid regimes have been characterized as crony systems. For instance, there is evidence suggesting that connectedness to the Mubarak regime was a prerequisite for firms in Egypt to operate (Kienle 2004; Sfakianakis 2004; Acemoglu, Hassan and Tahoun 2018). Similar systems were also in place in Tunisia, Syria, Libya, Yemen, and Algeria (Tlemcani 1999; Alley 2010; Haddad 2012).

An important example of crony capitalism is the case of China. A recent study by Bai, Hsieh, and Song (2020) describe how the private sector and government are inextricably intertwined. Having political connections to local governments is almost a pre-requisite for firms to thrive in China. To conduct this study the authors visited a southern city in China for some weeks in 2013.

The city had seven vice-mayors, all of who spent most of their time promoting a number of private firms (30 firms on average per vice-mayor). This was despite the fact that their official duties had nothing to do with business development: some of them were supposed to be in charge of education or health policies in the local government. Neither local governments, nor firms, typically try to hide the strength of their political connections.

Other observers of the way in which business is conducted in developing countries indicate that business activities are conducted on the basis of "deals" rather than on the basis of the application of clear rules and regulations. Hallward-Driemeier and Pritchett (2015) compare the Doing Business Dataset, which has data on regulatory burden, with the evidence from the World Bank Enterprise Surveys, which is a firm-level survey that captures actual delays experienced by firms. Their results indicate that there is a large variance in the time it takes to complete a given procedure even within countries. Furthermore, they show that the variance is larger when examining the actual delays (based on firm-level surveys) than when examining official delays based on official regulation.

This evidence suggests that the playing field is highly uneven in most developing countries. Compliance with rules and procedures seems to be massively different across firms. Some firms seem to manage to speed up the process, while others suffer long delays on their activities. The authors argue that most of the economic activity in developing countries is conducted on the basis of "deals" rather than on "procedures".

Despite the large set of suggestive evidence and qualitative reports, we have limited information regarding how widespread "crony capitalism" is around the world. Faccio (2006) was one of the first studies that aimed at providing a quantitative assessment to the extent of crony capitalism. In her study, she shows that 35 out 47 countries studied had at least one politically connected firm. However, this is far from providing the full picture since only national-politics connections are examined, and only for publicly listed firms.

A related configuration of political power that is potentially detrimental to economic activity is *elite capture*. Societies where a minority of the population has a disproportionate amount of influence over politics have been associated with corruption, inefficient economic policies and inequality. The degree of influence over politics is sometimes exercised directly, for instance, when ruling politicians are part of the elite. In other contexts, the degree of influence is indirect, for instance, by capturing or exerting pressure over non-elite politicians to shape policies on the interest of the elite.

The literature on elite capture has been to a great extent descriptive or theoretical (Acemoglu and Robinson 2008). Well-identified empirical studies are still limited in number. One important factor that has hindered the evolution of this literature is the difficulty in defining who belongs to *the elite*. While in certain settings the identity of elites is well understood and observable---for instance in the case of large landowners or a particular caste or ethnicity--- in many other cases, their identity is more fluid and harder to pin down.

Perhaps for this reason, the early literature focused on the study of the settings where historians and social scientists reached certain level of consensus on the identity of elites and the presence of elite capture. The initial literature focused on large landowners, who controlled politics and economic resources during large portions of the history of Latin America and other parts of the world (Galor, Moav and Vollrath 2009; Baland and Robinson 2008).

A more recent literature has also studied elites whose power emanates from other sources, such as cultural or ethnicity-based elites (Anderson Francois and Kotwal 2015), membership to politically powerful families or dynasties (Dal Bó, Dal Bó and Snyder 2009; Ferraz ,Finan and Martinez-Bravo 2020), access to the state and patronage (Bai and Jia 2016), links to non-democratic regimes (Martinez-Bravo, Mukherjee and Stegmann 2017), and economic-elites (Acemoglu and Robinson 2006; Gilens and Page 2014).[2]

This more recent set of studies indicates that elites come in different forms and flavors. It is difficult to find characterizations of their identity and source of power that apply to multiple settings. They tend to be highly case-specific and even in specific settings definitions are not always clear-cut. Individuals with the same identity and position may be characterized as elite or not depending on the level of undue influence that they exert over the policymaking process. For instance, consider a mayor in a small village in Indonesia. Is that individual part of an elite? If that individual has been elected through free and fair local elections and represents the interest of their constituents, she may not be characterized as being part of an elite. However, if she engages in patronage, vote buying, controls a number of corporations and/or shapes policies to benefit a narrow and powerful group in society, we may want to classify her as belonging to an elite.

Finding better definitions of who are "the elite" and of measuring the "de facto" power of individuals are important challenges that future literature needs to address. We return to these issues when we discuss future paths for research.

Intuitional and Policy Reforms

In this subsection we provide a brief survey of the literature on policy and institutional reforms that could limit political distortions. We cover recent papers on participatory democracy and electoral accountability aimed at promoting programmatic redistribution as well as on legal reforms aimed at controlling state capture.

[2] In autocratic contexts, some studies identify the "elites" as those in the inner-circle of the dictator and those that have government responsibilities. See for instance Mahdavi and Ishiyama (2020).

Regarding electoral incentives for programmatic redistribution, a key concern is: how can non-corrupt candidates running on growth promoting policies win elections? In other words, how can “outsider’ candidates who reject political distortions and promote close to first-best policies and institutions win office? Fujiwara and Wantchekon (2014), Moctezuma et al. (2010) and Wantchekon and Guardado (2020) provide evidence suggesting that deliberative campaigns, that is, campaigns which include open discussion and debate of policies, are effective in improving support programmatic candidates in Benin and Philippines.

In the same vein, Bidwell and Casey (2020) find that public debate involving competing candidates can make voters more knowledgeable about policies and induce candidates to provide public goods. Brierly et al. (2019) find that debates make voters less polarized, more policy-oriented and less inclined to vote on the basis of ethnic identities.

On the electoral incentives to vote out corrupt politicians, Ferraz and Finan (2011) show that after providing voters with information on audit reports prior to municipal elections in Brazil, corrupt politicians are at least 7% less likely to be elected.

Banning or regulating corporate campaign donations can reduce political corruption and state capture. Baltrunaite (2020) compares the probabilities of winning a procurement auction between firms in Lithuania, some of which have made political donations in the past. After the passing of a reform banning corporate contributions, the success probability of donors fell.

As for institutional reform to control regulatory capture, Laffont and Tirole (1993) provide a framework for the regulation of industries with a few powerful firms. They devised a new theory for oligopolistic markets in situations of asymmetric information and show how well-designed production contracts can help overcome information asymmetries when monopoly costs and the choice of production techniques are not known by the regulators. They also recommended drawing long-term contracts (rather than short term ones) as these are more effective at revealing the true costs of the firm, while incentivizing it to reduce its costs. Short term contracts, on the other hand, could discourage firms as they worry that efforts towards reducing costs could result in more stringent demands in the next contract. Finally, Laffont and Tirole also highlighted risks of collusion between the regulator and firms and put forward a number of proposals for anti-trust legislation.

5. Direction for Future Research

This paper draws from several literatures on the role of competition, regulation, and efficient redistribution in promoting growth. Establishing a formal model for efficient distribution and optimal institutional design to promote the provision of public goods, with a greater focus on the role of democracy, should be a priority for future research.

One strategy to achieve this goal would be to compare observed distributions against an optimal, counter-factual distribution of public good provision or other public spending. This strategy, of comparing an observed network against a counter-factual optimal network, is increasingly common in the trade and transportation network infrastructure. Developing a model for a socially optimal allocation, or a range of such allocations, to compare against observed allocations could allow for a better understanding of the role of institutions in shaping distributions. This method could potentially be extended to institution building as well. Such a model could draw lessons from the market design literature, as well as normative theories of regulation and institutions grounded in economic models.

Other avenues for future research include the impact of transparency, and the way policies promoting transparency are designed, and subsequent impacts on growth, innovation, and institutions. Corruption may occur because of a lack of transparency, and increasing transparency can increase public mobilization against corruption and other wasteful expenditures. Political entrepreneurs may represent the public interest in favor of transparency, and play a role in designing pro-transparency policies. Other means of increasing transparency, such as by the digitization of transactions, may also have effects on institutions that are worthy of further research.

The political economy of rural development, and the development of rural political institutions and the relationship between these institutions and growth, may also be a fruitful avenue for research in this area. Prior literature has often assumed something of a semi-feudal political system in rural areas, but with migration and democratization these models may no longer match current conditions. Social transformation, the adoption of new technologies, and the creation of improved institutions in rural areas may be driven by transfers between regions and across sectors of the economy. Observing how institution building occurs in rural areas may enable a better understanding of how the technological, productivity-improving transformations can occur in rural areas. The sources of political leadership at the federal and local levels, such as their background among an urban elite or from rural areas, may impact the types of institutions that form in rural areas.

Furthermore, a fruitful avenue for future research is the measurement of political connections and crony capitalism and their effects on economic activity. The increasing availability of administrative data on firms, employees, politicians, and bureaucrats enables the development of more comprehensive measures of political influence in the economy. Identifying the ways in which these influences affect firm-level economic activity through profitability, investments, innovation, and the allocation of talent might also a fruitful avenue for future research. The macroeconomic literature that has examined the recent increases in mark-ups can also be linked to a more quantitative evidence on the extent of crony capitalism. (Loecker and Eeckhout 2020).

One important aspect that needs to be considered much more carefully in the literature is the presence of general equilibrium effects. The productivity wedges across existing firms may be small when compared with the productivity wedges between existing firms and those that do not exist but would absent entry barriers generated by the absence of political connections.

Much more evidence is also needed on broader welfare costs of the influence of political power on economic activity. The fact that employment, inputs, and other resources are allocated on the basis of connections rather than on the basis of merit or latent productivity can have profound implications for individuals' attitudes, such as their aspirations, levels of trust in the political and economic system, and their political preferences. These attitudes can also feedback and alter the process of allocation of talent and investments in human capital, which are key for structural transformation.

Another important question is how to differentiate between crony capitalism and healthy industrial policy. As pointed out by Aiginger and Rodrik (2020), the industrial policy of the 21st century is more likely to be characterized by sustained collaborations between private sector firms and governments rather than preferential access to credit or export quotas. New sectors that are likely to shape economic activity in the future, such as artificial intelligence, are being developed in close collaboration with the public sector (Beraja, Yang and Yuchtman 2020). Are new forms of public-private partnerships a potential vector for an increasingly uneven playing field across firms? Alternatively, we could think that such partnerships are established under some rules and regulations that prevent undue competition with other competitors or with potential entrants.

In order to continue to make progress in the literature on crony capitalism and elite capture, scholars need to find better definitions of elites and ways to measure *de facto* power of key individuals in society. Both aspects, measurement and definition, are closely connected. As the identity of elites is more fluid, without progress in measurement *de facto* power, it will be hard to find convincing definitions based on observable traits of potential elite members.

Another area that requires further work is what policies or institutions can mitigate or alter equilibria characterized by elite capture and crony capitalism. For instance, Bai, Hsieh and Song (2020) argue that the competition across local governments in China mitigates the potential negative effects of politicians favoring certain firms. However, well-identified empirical evidence on whether inter-jurisdiction competition could mitigate the negative effects of crony capitalism is still lacking. More generally, we have little evidence on how political or judicial institutions could mediate the effects of these practices on economic activity. Other factors such as social norms or bureaucratic capacity could also be important mediating factors.

Regarding policies to mitigate elite capture, the evidence is also slim and must be strengthened. Trying to implement reforms that block powerful elites from economic rents has oftentimes proved to be risky business. A number of historical cases have shown that this type of reform can lead to political instability and turnover in government, even by violent means. Profound institutional reforms, such as democratization, may be an alternative way of limiting the power of elites (Acemoglu et al. 2015). However, the details in the implementation of these reforms are important (See Martinez-Bravo, Mukherjee and Stegmann (2017) An alternative approach is to promote competition among elites (see Acemoglu Reed and Robinson 2014; Ferraz, Finan and Martinez-Bravo 2020). However, while these strategies may be helpful for mitigating some of the short-run negative effects of elite capture, it is still an open question whether they will facilitate or hinder the reform of the system towards a non-elite capture equilibrium.

6. Conclusion

In this inception paper we argue that democracy provides several advantages for structural transformation and growth. Political competition drives innovation and technological change, while accountability pressures may induce politicians to invest in infrastructure and human capital and hence create the conditions for equitable growth. However, this democratic advantage is threatened by a wide range of political distortions such as patronage politics, state capture, and crony capitalism. A major priority of future research must be to model and measure these distortions and their impact on growth and provide evidence for the design of institutional and policy remedies.

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