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ARTIGO

DO POLITICS AND ADMINISTRATION AFFECT INNOVATION PERFORMANCE? A COMPARATIVE ANALYSIS OF 'THIRD WAVE' DEMOCRACIES

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Do politics and administration affect innovation performance? A comparative analysis of 'third wave' democracies

Abstract

Does the degree of democracy affect countries' innovation performance? Can a high level of political competition or income inequality affect how NIS achieves positive results? Does bureaucratic capacity reflect on better innovative outcomes? Are corruption and transparency in the public administration influential in improving economies' innovation performance? To address these questions, the paper compares three groups of countries from regions that experienced democratization during the so-called 'third wave' since the mid-1970s, i.e., South and Eastern Europe, Latin America, and East Asia. First, the inquiry employs descriptive data analysis on the independent and dependent variables, the Global Innovation Index (GII) outputs. Then, the paper runs multivariate regression models to test how politics and administrative variables affect the economies' performance. As a result, the hypothesis that politics influence the capacity and accomplishment of countries' innovation was confirmed, although estimates indicate that lowest the democratic level is, the better innovative performance. In the administrative dimension, the hypothesis cannot be fully sustained since the quality of state apparatus was not statistically significant in any model. The results for transparency/corruption were substantial for both the creative outputs and the innovation performance sub-indexes.

Keywords: democracy; state capacity; comparative analysis; emerging economies; innovation performance.

Introduction

Innovation growth, meaning the capacity of a country or region to progressively develop new products, services, processes, or business models put to use, commercially or non-commercially (Edler *et al.*, 2016; Edler & Fagerberg 2017), is seen as an economic driver to prosperity and to improve citizen's welfare (World Bank, 2010; Castellacci & Natera 2016; Cirera & Maloney, 2017; Kattel & Mazzucatto, 2018). As a result, innovation has increasingly part of the public sector's priority agenda to address societal challenges, such as those in the UN's Sustainable Development Goals.

Another consensus resides in the fact that building a national innovation system (NIS) capable to produce and commercialize a flow of innovative technology over the long term as drivers of economic growth and competitiveness (Furman *et al.*, 2002; Castellacci & Natera 2012; 2016) is not a trivial task. A comprehensive understanding of the phenomenon includes key dimensions of analysis, such as the labor market, education system, financial institutions, regulatory structures, and other institutions that shape economic dynamics. The NIS is multidimensional in which innovation capabilities are structured, and the level of accomplishment may be influenced by a variety of other factors, such as historical experience, language, and culture (Lundvall, Chaminade, Vang & Joseph 2009; Lundvall 2016; Iooty, 2019).

In this context, the bulk of the literature focuses on either the effects of innovation on development (Lin 2012; Cimoli, Dosi, Nelson & Stiglitz 2016) or the description of the innovation systems (Lundvall 2010; Edler & Fagerberg 2017) and explanation of their achievement based on economic and technological factors (Lundvall *et al.*, 2009; Castellacci &

Natera, 2012; 2016; Radosevic & Yoruk, 2017). On the other hand, less attention has been paid to the nations' political and administrative characteristics that also can affect their innovation performance.

It seems essential to comprehend why few economies have better results in the innovation field than the majority. Some nations were able to structure a mature governance arrangement with well-functioning institutions, policies, and actors' interactions, while in the majority of countries, the systemic failure prevails. In other words, the situation in which the economy lacks the fundamental building blocks that can support the creation, absorption, use, and dissemination of valuable knowledge through interactive learning (Lundvall *et al.*, 2009). In this sense, despite the well-known potential returns to innovation, developing governments cannot formulate and implement policies properly and build an institutional environment to reach the high-tech or industrial economic development, which is called the innovation paradox (Cirera & Maloney, 2017; Cirera *et al.*, 2020).

Does the degree of democracy impact countries' innovation performance? Can a high level of political competition or income inequality affect how NIS achieves positive results? Does bureaucratic capacity reflect on better innovative outcomes? Are corruption and transparency in the public administration influential in improving economies' innovation performance? To address these questions, the paper compares three groups of countries from regions that experienced democratization during the so-called 'third wave' since the mid-1970s, i.e., South and Eastern Europe, Latin America, and East Asia. Despite this factor that approximates these economies, they have a distinct political environment and administrative capacity and achieve different performances in the innovation field. Thus, the paper aims to reveal how political-administrative features among these countries affect their innovative output levels.

To do so, first, the inquiry employs descriptive data analysis on the independent and mainly on the Global Innovation Index (GII) outputs (Cornell University, Insead & Wipo, 2020). Then, the paper runs multivariate regression models to test how politics and administrative variables affect the economies' performance.

Besides this introduction, the paper has three other sections. The next briefly reviews the theoretical grounds of the NIS literature and presents the research expectations. The third section discusses how the dependent and exploratory variables were measured. In the fourth, empirical results are analyzed and, lastly, conclusions, research limitations, and future agenda are presented.

Democracy, Administrative Capacity and Innovation

The National Innovation System (NIS) literature is openly skeptical, with the government interference restricted to market failure, as the innovation ecosystem is an arrangement of interactions between firms and entrepreneurs with bounded rationality and institutions in constant evolution. In this approach, as public policies and programs are not only an essential part of the engine but inevitably (Mazzucato, 2013; Nelson, 2016), governments must be planned, designed, and implemented innovation initiatives systematically and in a dynamic way (Cirera & Maloney, 2017).

Mature innovation systems rely on the capacity to build an institutional framework for innovation encompassing government and policy coordination, ST&I strategies and national plans, public/private and university/business relations, and promotion of private entrepreneurship (Lundvall *et al.*, 2010). Governments, therefore, are key players at nurturing

the necessary institutions, monitoring the interactive process, and intervening to redress systemic failures where necessary (Word Bank, 2010). In this context, Cirera and Maloney (2017) explore the innovation paradox. In a nutshell, the situation that the greater the market failures to be faced, the variety of missing complementary factors and institutions that increase the complexity of innovation policy. Meanwhile, in most developing countries, governments have weak capabilities to design, implement, and coordinate a robust policy mix to deal with it. It is not restricted to the result of some irrationality on the part of firms and governments. The challenge seems even harder for emerging nations that face the innovation policy dilemma:

> "The greater magnitude of the market failures to be resolved and the multiplicity of missing complementary factors and institutions increase the complexity of innovation policy. At the same time, governments' capabilities to design, implement, and coordinate an effective policy mix to manage it are weaker" (Cirera & Maloney, 2017, p. 112).

There is no simple solution to this governance dilemma in this scenario of high levels of complexity and weak government capabilities to cope with. It is increasing consensus the bounds of importing good practices from abroad; however, it is possible to extract some policy design lessons that may result in successful government interventions. The path is improving the diagnostic, design, and execution capabilities of the government (Cirera & Maloney, 2017; Cirera *et al.*, 2020), focusing on four critical dimensions of sound innovation policymaking: rationale and design of policy; efficacy of implementation; the coherence of policies across the NIS and; policy consistency and predictability over time.

Considering the roles of the public sector and policies to the national systems to comprehend their structure or governance arrangement, deepening the political and administrative effects on the NIS's performance consists of a fertile and promising field of study. In addition, this type of approach is relevant because innovation is a multifaceted process that is not only dependent on epochs but also nations' particularities (Cozzens & Kaplinsky, 2009).

Democracy is one of these factors that have been vastly analyzed as influential in explaining economic growth, development, welfare, etc. (Przeworski, 2000; Haggard & Kaufman, 2008), although the focus on innovation is still scarce. The assumption behind this relation involves the fact that in democratic systems, the information tends to flow freely, leading to a more dynamic interaction of knowledge and learning process, vital to innovation system to prosper (Lundvall, 2010). A vibrant representative democracy seems even more important in the increasing context of collaborative governance. Leaders and entrepreneurs may act in universities, government, and industry networks, as in the triple helix approach, to foster innovation capacity in the economy.

In this sense, Gao *et al.* (2010) tested the effects of democracy on innovation, using the difference-in-differences method on panel data of over one hundred countries, and concluded that there was no direct positive impact. However, as the own authors claim, the finding must be taken with cautions because countries' innovation performance is restrict measured by patent applications, reflecting the fields of industry and technology and also the quality of this data also varies considerably in time and space, as their analysis covers the period of 1964 to 2010.

Another political variable commonly used to measure its impact on policy outputs, economic growth, government performance, among others, is political competition. Besley *et al.* (2010) found evidence that lack of political competition in a state is associated with anti-growth policies. In contrast, Pinto and Timmons (2005), focused on the political competition effects on the sources of growth, demonstrated that it impacts the rate of human capital accumulation and productivity change. In the innovation field of study, Paik *et al.* (2017)

showed that political competition could pressure regulators to weigh the public welfare more heavily and undertake measures that facilitate entrepreneurial entry in the ridesharing business. Lastly, Deng, You, and Wang (2019) argue that competition in politics impacts enterprises' optimal level of green technology innovation and indirectly affects it by influencing the optimal investment ratio of environmental governance.

In sum, the core premise is that elected officials facing or expecting to face high political competition levels would have incentives to work harder in the policymaking to build a reputation for her/him or the party to secure votes to continue in office (Besley & Case, 1995). Therefore, the political competition functions as an accountability mechanism, in some sense of how threatened and worried the incumbent party should feel about losing the next election, which tends to influence her or his willingness to build state capacity to design, implement, and coordinate a compelling innovation policy mix.

The third feature that may affect innovation performance is inequality, which is also usually analyzed in the development studies but seldom in the NIS literature (Cozzens, 2008; Tselios, 2011). Despite the common sense that associates wealth and income inequality are restricted as an economic issue, it is worth mentioning that it is a political problem in nature (Piketty, 2013). Nonetheless, there is no consensus regarding this relation, which also depends on how inequality and innovation are measured and the theoretical analysis mechanisms. For instance, if the focus is on household income, high inequality may negatively affect the level of consumption. At the same time, uneven distribution of skilled workers can imply a concentration of firms' innovation capabilities in a country or region (Cozzens & Kaplinsky, 2009). In this context, Tselios (2011), studying the European Union (EU) case, states that given existing levels of income inequality in an increase in a region's inequality favors innovation. In short, this paper will explore if inequality can be good for innovation or inequality may harm innovation.

The second dimension involves aspects of administrative capacity since building an accurate diagnostic of market failures and designing and implementing coherent and effective innovation policy mixes (instruments and funding) in different fronts of the NIS are pivotal to achieve better innovative performance (World Bank, 2010; OECD, 2015; Cirera & Maloney 2017; Kattel & Mazucatto, 2018; Cirera *et al.*, 2020).

In this sense, the quality of the bureaucracy or the bureaucratic capacity stands out as a key factor in this causal mechanism. It worth mentioning that the word bureaucracy has different means, so, in this paper, bureaucracy refers to the state's permanent personnel, namely non-elected government agents, career members or not. It is one of the institutional pillars for the efficient functioning of the democratic system and the enforcement of the rule of law. It enables continuity, coherence, and relevance in policies and reassures greater impartiality and objectivity to a public authority (Stein *et al.*, 2006). On the other hand, its fragility leads to government failures, such as ineffectiveness and misuse of public funds.

In a seminal work, Evans and Rauch (1999) analyze bureaucratic professionalization and the economic growth of 35 developing nations between 1970 and 1990. Results indicate a strong correlation between the capacity of bureaucracy and higher growth rates in Gross Domestic Product (GDP), especially in the so-called Asian Tiger nations and few Latin American countries, e.g., Brazil. The assumption is that public careers grounded in autonomy and meritocratic procedures adopt impersonal and inflexible rules for career admission and advancement. Stability, continued training and adequate wage tend to reflect on a public service capable of designing diagnosis of societal problems and framing policy alternatives to deal with them, with lower chances of rent-seeking, capture, or clientelism (Skocpol, 1985). Regarding the innovation system, Kattel and Mazzucato (2018) support the need for dynamic

administrative capacities relying on public bureaucracy's diversity of expertise and skills to undertake changes from existing and limited support-and-measure approach to lead-and-learn approach of the innovation policymaking.

As the last variable, transparency is also a broad and diversified term, known as a catchword in the economic-political debate (Forssbæck & Oxelheim, 2015). In sum, transparency means the degree of openness, clarity and accessibility, and communication of credible information that governments provide in their decision-making processes and policy outcomes. The rationale is that countries with more transparency tend to be held more accountable, predictable to society and economic agents, and, consequently, generate efficient policies and institutions with positive effects, for instance, on economic growth. Focusing on analyzing the open government data (OGD), Reggi and Dawes (2016) highlighted the expectation that transparency will result in multiple public benefits: economic and social innovation, civic participation, and public-private collaboration; however, it is not always the case. In the same vein, Deogirikar (2014) tested if participation in the Open Government Partnership (OGP) would positively affect countries' innovation (measured by the number of annual patents), but the statistical results refuted the hypothesis. On the contrary, Brown and Martinsson (2017) found that a more transparent information environment is associated with higher levels of R&D investments and patents.

Transparency can be analyzed with corruption, a notorious factor that can affect the economies in both the private and public sectors in various ways. There is no consensus in the literature; while some argue that corruption can boost innovation, others see it as a barrier (Acemoglu & Verdier, 2000; Veracierto, 2008; Prashanth, 2008). In the former view, corruption may increase transaction costs, investment barriers, and uncertainty, which hinder entrepreneurs from engaging in innovative activities and, subsequently, impacting a lower growth for the whole economy. The facilitator's perspective supports that corruption may contribute to innovation by allowing enterprise initiatives to bypass dysfunctional institutional systems, characterized bureaucratic obstacles, inefficient public administrative procedures, and legislation rigidity. Wen *et al.* (2020) investigated this relation, using annual data for 29 OECD countries from 1996–2013, and demonstrated that a nation less corrupted tends to have a better innovation performance (also measured by Patent and Trademark Applications). Nonetheless, the finding fits only for the ones with low corruption levels and high standard anti-corruption policies. In nations with a corrupt government with low bureaucratic quality, the correlation is not significant.

Do politics and administration affect innovation performance?

Model

Various theories and interpretations about how countries' political and administrative features interfere with their innovation systems prevail. According to David Collier (1993, p. 5), "comparison is a fundamental instrument of analysis, as it expands our power of description and plays a central role in the conceptual formation, bringing the focus on suggested similarities and contrasts between cases." The criteria for the nation's selection fit within a homogeneity space that can be considered constant in the analysis (Mahoney & Goertz, 2006; Ragin & Rubinson, 2009). In this sense, the group of countries is from regions that have experienced the democratization processes in the last fifty years. This 'third wave' began in the 1970s in Southern Europe, spilled over to South America and Asia. The '90s resulted in a democratization process of the former communist countries in Eastern Europe (Berg-Schlosser 2009). Moreover, the countries also share that they were all middle-income economies back in

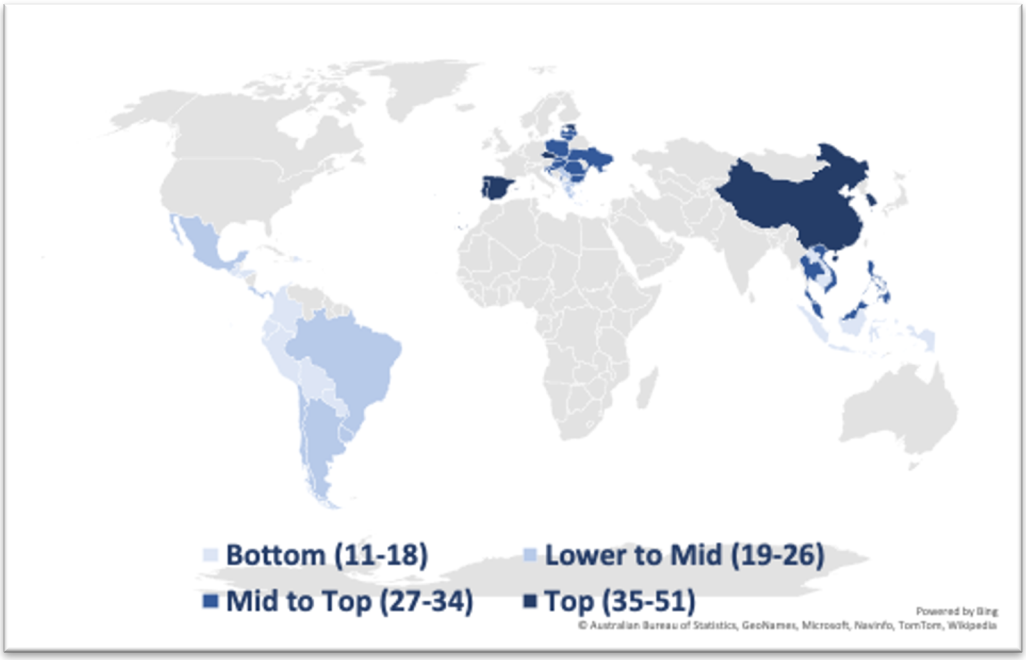
the '70s. However, only a few of them have upgraded to the high-income selective set of nations, which is significantly correlated to the innovative performance of their economy, this research's dependent variable.

Therefore, the countries analyzed are comparable because they are part of the third wave and once shared the same economic level. Nonetheless, nowadays, they have different political and administrative features that theoretically can explain the innovation heterogeneity of their NIS. To portrait innovative performance (**inov_perf**), the inquiry uses the global innovation index (GII), specifically the sub-indexes that measure the NIS outputs.[i], meaning the results from the innovation activities (above) within the economy and also the two indicators of the following pillars (Cornell University, Insead & Wipo, 2020):

a. *Knowledge and technology outputs:* covering variables that are results of inventions and innovations (knowledge creation, knowledge impact and, knowledge diffusion);
b. *Creative outputs:* to encompass the NIS's dimension of creativity, the pillar has three sub-pillars: intangible assets, creative goods and services and, online creativity.

How the selected countries performed in 2020 in the innovation dimension is displayed in the distribution of Figure 1. For illustration purposes, the four groups were divided based on ½ of the sample standard deviation. Undoubtedly, the heterogeneity among the economies is the rule, and the regional cohort does not seem to be a consistent factor to explain these different patterns.

Figure 1 – The GII Output index distribution (2020)



Source: Global innovation index (Cornell University, Insead & Wipo, 2020).

The top innovators are composed of nations from Europe (Portugal, Spain, Estonia and the Czech Republic), the so-called Asian Tigers (Hong Kong, Singapore and Korea), plus China.[ii]. The second group of countries (*Mid to Top*) are also from these two regions; most of

them are ex-communist regimes in Eastern Europe. The next (*Lower to Mid*) are mainly from Latin America and the Balkans, especially those from the former Yugoslavia.[iii]. Finally, the ones at the bottom in this ranking are spread over the planet, despite the majority comes from LA.[iv], there are also European (Albania) and Asian (Cambodia, Lao, and Indonesia) that share the poor performances.

Drawing from the theoretical discussion of the previous section, now the inquiry presents the five variables to be considered as explanatory factors of economies' innovative results: i) democratization degree; ii) political competition; iii) income inequality; iv) bureaucratic capacity; v) transparency and corruption level. The next step is to present and describe how they are measured.

Notorious, democracy is a complex and multidimensional concept that may be analyzed and assessed from different perspectives. One well-known indicator is the democracy index (**democ**) from the Polity V project that involves the presence of institutions and procedures through which citizens can express effective preferences about alternative policies and leaders; the existence of institutionalized constraints on the exercise of power by the executive and the guarantee of civil liberties to all citizens in their daily lives and acts of political participation (Marshall & Elzinga-Marshall, 2017). The countries average scores vary from 0 (authoritarian) to 10 (free democracy) in the last three decades, from 1991 to 2018. The higher the democracy index, the more prone is the national innovation system to prosper.

Regarding political competition, the research uses electoral competition (**elect_comp**) from the Polity V project. This variable assesses the features of the Chief executive's selection processes in parliamentary or presidential elections, including the three dimensions: recruitment regulation, competitiveness, and openness. The index also varies from 1 to 10, and the average score covers the period of 1991 to 2018.

Inequality is also a concept that can be defined and operationalized in a variety of ways. However, due to the need for comparability among several countries and a considerable range of years, the Gini Index (**inc_ineq**) is chosen. This traditional indicator measures the extent to which the distribution of income within an economy deviates from a perfectly equal distribution, varying from 0 (perfect equality) to 100 (perfect inequality)[v]. The variable covers the average of countries indexes available from 1979 to 2015.

In the administrative dimension, the first condition, bureaucracy quality (**bur_qual**), consists of the extent to which the public service is professionalized, merit-based, and impersonal. To materialize this variable, the paper selects the professionalism index of the *QoG Expert Survey* dataset, based on a survey of experts on public administration around the world, covering more than 100 countries (Nistotskaya *et al.*, 2021). The variable varies from 0 to 1.

Finally, to cope with countries' transparency and corruption, the Corruption Perceptions Index (**corrupt**) is employed. This variable, published by transparency international since 1995, ranks over a hundred nations by their perceived levels of public sector corruption, grounded in expert assessments and opinion surveys. The scores vary from 0 (highly corrupt) to 100 (very clean)[vi].

Besides these political and administrative variables, the regression models also include as control a dummy variable **euro**, for those countries that are part of the European Union, and the **hum_cap**, the GII index of Human capital and research, which measures the level and standard of education and research activity (Cornell University, Insead & Wipo 2020). Table 1 displays the independent variables' descriptive statistics:

Table 1 – Independent Variables' Descriptive Statistics

Variable	Mean	Standard deviation	Min	Max
democ	7.3	2.7	0	10
elect_comp	9	1.5	2.6	10
inc_ineq	40.5	9.4	25.3	56.3
bur_qual	0.54	0.12	0.34	0.86
corrupt	54	14.7	20.8	85
cap_hum	33	12.34	10.8	65.2

Source: Author's own elaboration.

In short, to analyze the effects of countries' political-administrative features on their levels of innovation performance, multivariate regression models empirically test this possible correlation for the GII sub-index of outputs and its two sub-pillars (KTO and CO). Therefore, the basic statistic model is defined as follows:

$$Innovation\ Performance_i = \beta_0 + \beta_1\, Democracy_i + \beta_2\, Political\ Competition_i + \beta_3\, Income\ Inequality_i + \beta_4\, Bureaucracy\ Quality_i + \beta_5\, Corruption_i + \beta_6\, Human\ Capital\ \&\ Research_i + \beta_7\, Euro + u_i$$

Discussion

The models' results, from Ordinary Least Square regression (OLS) using cross-sectional data, have interesting findings in different ways. Table 1 presents the estimated coefficients, standard errors in parentheses, and the models' coefficients of determination for all three dependent variables.

Table 1 – Regression Models

	Knowledge and technology outputs (a)	Creative Outputs (b)	Innovation Performance Outputs (c)
democ	-1.21*	-1.46*	-1.40**
	(.63)	(.67)	(.52)
pol_comp	1.5	1.56	1.6*
	(.10)	(.10)	(.83)
inc_ineq	-0.51**	-1.53**	-0.34**
	(.21)	(.22)	(.17)
bur_qual	8.7	-19.6	-5.02
	(15.5)	(16.4)	(.03)
corrupt	.03	0.37**	0.20**
	(.11)	(.12)	(.09)
cap_hum	.53***	.45**	.48***
	(.13)	(.13)	(.11)
euro	-2.2	0.5	-0.95
	(4.2)	(4.2)	(3.45)
Constant	19.1	8.13	14
	(12.3)	(13.0)	(10.2)
N	46	46	46
Adjusted R^2	.69	.59	.77

Source: Author's own elaboration.

Note: Standard errors in parentheses * p<0.05, ** p<0.01, *** p<0.001.

Importantly, due also to the large sample, T-test and F-test are valid asymptotically. Although some variables are not statistically significant, overall, the significance of the regressions is confirmed (Wooldridge, 2006). After the regression, a check for multicollinearity was carried out and the results proved that the degree of collinearity among the independent variables is not worrisome. Initially, the coefficients of determination (R^2) in all models are relatively expressive, considering that the independent variables together explain from 59% to 77% of the economies' innovation performance. Secondly, it is also noticeable that more than half of the independent variables affect the performance indexes, however, with different patterns and intensity.

Democracy supposedly allows information flow, the key to the dynamic interaction of knowledge and learning process collaborative, and promote collaborative environment positive to foster innovation system to prosper. However, surprisingly, the regression estimates indicate the contrary in all three models. The lowest the democratic level is the better innovative performance the country has, which converges with the Gao *et al.* (2010) findings. On the other hand, political competition goes in a different direction regarding the effects on the sub-index of outputs (model c). In this sense, the result suggests that increasing the level of electoral competition in the political system may influence the politicians to focus on building state capacity for an effective innovation policy mix, as the literature indicates (Besley & Case, 1995).

The third political variable, income inequality, also shows coefficients with statistically significant in all three models. Although there is no consensus in the field if the countries degree

of inequality can benefit or harm the innovation performance (Cozzens & Kaplinsky, 2009; Tselios, 2011), the regression model indicates the latter correlation. In other words, the higher the income inequality in the economy, the worse it tends to be its achievement in terms of knowledge creation, impact and diffusion, and intangible assets, creative goods and services, and online creativity.

In the administrative dimension, the assumption that sustains the analysis relies on the expected relation between greater state capacity, especially regarding designing and implementing policy mixes (instruments and funding) to nurture a dynamic NIS, and to accomplish innovative standard (World Bank, 2010; OECD, 2015; Cirera & Maloney 2017; Cirera et al. 2020). However, the empirical results do not entirely confirm this premise. First, the quality of the bureaucracy's coefficients was not statistically significant in any model, which indicates that dynamic administrative capacities are irrelevant to performance, putting in perspective the literature (Kattel & Mazucatto, 2018).

Transparency and corruption, nevertheless, do not share the same theoretical convergence as the previous variables. Despite the normative assumption related to these factors, scholars diverge about the benefits of a high degree of public transparency and low level of corruption on innovation (Veracierto, 2008; Deogirikar; 2014; Reggi and Dawes, 2016; Brown and Martinsson, 2017; Wen *et al.*, 2020). As the independent variable used involves these two features, based on the regression model estimates, it is possible to confirm that countries more transparent and clean tend to produce more creative assets and, then, to better perform in the innovation field.

Finally, the control variables also have distinct estimates. While the nations' level and standard of education and research activity, as expected, show positive and statistically significant effects on innovation outputs, being part of the European Union does not seem to matter in any regression model.

Final Remarks

The primary purpose of this paper was to advance the analysis of why some economies were able to overcome structural barriers to innovation growth. The bulk of the literature has emphasized efforts to describe of the innovation systems (Lundvall 2010; Edler & Fagerberg 2017) and to explain their achievement grounded in economic and technological influential factors (Lundvall *et al.*, 2009; Castellacci & Natera, 2012; 2016; Radosevic & Yoruk, 2017). Nonetheless, less attention has given to the investigation of countries' political and administrative features that notoriously affect how policies are designed and formulating and, consequently, influences the nations' innovation performance (Lundvall, 2010; World Bank, 2010; Cirera & Maloney, 2017; Cirera *et al*., 2020; Cornell University, Insead & Wipo, 2020).

In order to deepen the assumption that politics and public administration also matter, the inquiry selected a group of countries with different institutional characteristics and levels of innovation results. On the other hand, they converge in some sense as they are from regions that experienced the democratization process during the so-called 'third wave' since the mid-1970s, i.e., South and Eastern Europe, Latin America and East Asia. Besides, before the 'third wave', they all were mid-income economies, although some have upgraded since then.

To do so, the paper employed multivariate regression models to test how politics and administrative variables affect the economies' innovative performance. As a result, the degree of democracy negatively affects the NIS outputs in the political dimension, which is unexpected due to the normative assumption that democracy is the best development path. Political

competition and inequality are influential factors as well. The former showed positive effects on the GII's index of outputs, while the latter's estimates indicate that income concentration can be a barrier to innovation growth. Overall, the hypothesis that politics influence the capacity and accomplishment of countries' innovation was confirmed.

In the administrative dimension, the positive correlation between bureaucratic capacity or transparency and low level of corruption with greater performance in the innovation field cannot be fully sustained. While the quality of state apparatus was not statistically significant in any model, the results for transparency/corruption were substantial for both the creative outputs and the innovation performance sub-indexes.

In sum, the paper brought original and intriguing findings to the debates of innovation, public administration and political economy. Nevertheless, due to the complexity of this type of cross-nation comparison, the results must be analyzed as preliminary. To advance on this research, focused on understanding the paths some countries have paved to innovation growth and development, the studies can amplify the number of observations (nations) in the comparative analyzes. It may include other variables to test other possible explanations and employ different and complementary methodological approaches, such as qualitative comparative analysis (QCA) and in-depth case studies.

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[i] For detailed information regarding the GII conceptual framework and data sources, see https://www.globalinnovationindex.org/gii-2020-report.

[ii] The Global Innovation Index does not include Taiwan as a sovereign nation but as China's province (Cornell University, Insead & Wipo, 2020).

[iii] Bosnia and Herzegovina was omitted because it has more than one polity within a single country (Marshall & Elzinga-Marshall, 2017).

[iv] Nicaragua and Venezuela are not included in the research since they are not part of the Global innovation index.

[v] https://ourworldindata.org/income-inequality.

[vi] https://www.transparency.org/en/