Operations Decisions and the influence of Host-Country Institutions: an Exploratory study under the Paraguayan ?Maquila Regime?

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Resumo

Institutions and host-country context matter. However, few studies explore the response of firms with international operations to host-country institutional contexts. Based on that, the purpose of this study is to analyze how can formal institutions shape firm’s decisions. This is an exploratory research about two polar cases of Brazilian textile-apparel firms that expanded their operations to Paraguay under the ?Maquila regime?. It is guided by the institution-based view of international business. Thus, some aspects of the institutional environment were analyzed to explain how the uncertainty can hinder firms to take fast operations decisions; and some mechanisms of control and compliance imposed by institutions can either negatively impact product-related decisions and innovation. Our research contributes to the literature on institutional perspective because it has implications for managerial (e.g. relevance of the institutional environment for internationalization decisions made by managers) and public policy (e.g. internationalization policies).
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Abstract: Institutions and host-country context matter. However, few studies explore the response of firms with international operations to host-country institutional contexts. Based on that, the purpose of this study is to analyze how can formal institutions shape firm’s decisions. This is an exploratory research about two polar cases of Brazilian textile-apparel firms that expanded their operations to Paraguay under the “Maquila regime”. It is guided by the institution-based view of international business. Thus, some aspects of the institutional environment were analyzed to explain how the uncertainty can hinder firms to take fast operations decisions; and some mechanisms of control and compliance imposed by institutions can either negatively impact product-related decisions and innovation. Our research contributes to the literature on institutional perspective because it has implications for managerial (e.g., relevance of the institutional environment for internationalization decisions made by managers) and public policy (e.g., internationalization policies).

Keywords: firm decisions; host-country institutions; formal institutions; institution-based view.

1 Introduction

Firms interact with institutional aspects directly or indirectly when operating abroad. Institutional environments are “a rich constellation of interdependent structures and systems” (Henisz & Swaminathan, 2008, p. 539) and the embedded institutions can differ from the home-country ones, as suggested by Mingo et al. (2018). The host-country institutional framework influences firms’ decisions in multiple ways, leading to greater or lesser uncertainty and facility or difficulty to gaining legitimacy (Ávila et al., 2015). The participation in institutional frameworks exposes firms to multiple institutional and asymmetric pressures (Rabbiosi & Santangel, 2019). Once the host-country institutional context plays a pivotal role in multiple aspects, firms need to grasp their significance and adapt to the diversity of institutional environments they are embedded to (Klopf & Nell, 2018). Institutions and host-country context matter (Klopf & Nell, 2018; Peng, Wang & Jiang, 2008) and the literature has been increasingly recognizing their importance (Dau et al., 2018; Regnér & Edman, 2014). In accordance with Meyer and Peng (2016), institutions can be divided into “formal” and “informal” ones. Both shape and guide the behavior of organizations (North, 1990; Peng, 2002). The former encompasses regulatory regimes, legal frameworks, contracts, property rights and formal agreements (Meyer et al., 2009; North, 1990) and has been traditionally approached in the literature (Dau et al., 2018) due to its relevance.

Based the importance of institutional frameworks the influence of formal institutions in firm’s choices, the research question addressed in this study is: How can formal institutions shape firm’s decisions? Thus, this study aims to analyze how can formal institutions shape firm’s decisions. Our research is carried out through two cases of Brazilian textile-apparel firms that operate under the Paraguayan "Maquila regime". The study is guided by the institution-based view of international strategy proposed by Peng (2002) and assists in filling the gap about interactions between institutions and firm-level strategies. As many studies still ignoring institutional environments, the interactions between institutions and firm-level strategies remain under-researched and not completely understood (Hitt, 2016). Few studies explore the response of firms with international operations to host-country institutional contexts, culminating in many academic calls for that (Regnér & Edman, 2014). Thus, this study unveils the role of formal institutions in shaping operations decisions, helping to bridge the research gap about interactions between institutions and firm-level strategies.
2 Literature Review
To support our analysis, we choose the institution-based view, an integrative perspective for explaining sensitive-to-context phenomena (Meyer & Peng, 2016). Since “no organization can be properly understood apart from its wider social and cultural context” (Scott, 1995, p. 151), we believe such approach favors to comprehend how formal institutions shape firm’s decisions. Coined by Peng (2002), the central proposition of the institution-based view is that firms’ strategies, practices, decisions and outcomes are bounded by country-level institutional factors (Essen et al., 2012). Institutional frameworks are central to the institution-based view (Peng & Heath, 1996) and represent more than background conditions (Napshin & Marchisio, 2017). They are “the set of fundamental political, social and legal ground rules that establishes the basis for production, exchange and distribution” (Davis & North, 1971, p. 6). The way such systems operate, their rules and the reason for rules to exist determine taboos, penalties and rewards mechanisms (Lu et al., 2008). It is expected that “the rules of the game within one institutional framework apply to every firm within its jurisdiction” (Peng et al., 2018a, p. 200). Therefore, institutional frameworks constrain firms’ strategies and choices. The relationship between firms and the institutional environment is dynamic: they wield influence on and impact each other as they both evolve. Strategic choices are an outcome of that interaction, as shown in Figure 1. Institutional frameworks signal which choices are acceptable and supportable for organizations (Peng, 2002), which in turn need to cope with them (Klopf & Nell, 2018). Government plays an active role in institutional design and development (Kim et al., 2010). Any efforts to comprehend firm’s decisions call for understanding the institutional framework where they are embedded in, once decisions are limited by existing ground rules.

Institutions are the cornerstones of the institution-based view. Peng and Heath (1996) consider they mold history by shaping political, social and economic incentives. The way institutions are built and evolve in each country explains performance discrepancies among firms (Essen et al., 2012) and the differences among countries themselves (Brito & Vasconcelos, 2005). From the economic point of view, Su et al. (2016) point institutions can play two major roles: 1) impact on the functioning of market mechanisms, being essential for market economies functioning; and 2) shape the structure of the market, facilitating or not some developments (industries, products, technologies, etc.). Pressures can be asymmetric and vary in terms of origin, form and objective (Monticelli, Garrido et al., 2018).
For sociologists, institutions affect the legitimacy of behaviors and represent acceptance by the environment. Therefore, firms adapt practices and strategies to comply with the institutional ground rules. Pressures for legitimacy may lead to a convergence of and homogeneous behaviors (imitation) in an organizational field, a process known as isomorphism (DiMaggio &
Powell, 1991; Meyer & Peng, 2016) and driven by coercive, normative and mimetic isomorphic forces (DiMaggio & Powell, 1983).

Institutions can also be classified as “formal” or “informal” and they both interact on multifaceted ways (Dau et al., 2018; Meyer & Peng, 2016). The former refers to formal rules that are intentionally created and enforced, such as laws and regulations, while the latter emerges spontaneously and envelopes customs, norms and cultures (North, 1990; Peng, 2002, 2003). Formal institutions can also represent agents with formal and legal structures, such as industrial bureaus and domestic regulatory organizations (e.g. tax or commercial administration bureaus, state banks, etc.) (He & Wei, 2013). They have either positive (e.g. learning provision, networks, etc.) or negative (e.g. bureaucracy, high taxes, etc.) influences on firms (Monticelli et al., 2017) and rarely change quickly (Hitt, 2016).

According to Scott (1995), institutions can be additionally categorized into three pillars: regulative (rule systems and enforcement mechanisms), normative (legitimate means to pursue valued ends) and cognitive (beliefs and values). They provide distinguished but related bases for legitimacy (Scott, 1995). Examples of regulatory formal institutions provided by Puffer et al. (2016) are: federal government; law enforcement; legal, economic and banking systems; central bank; and capital markets.

For this study, we concentrate on the influence of formal (North’s view) and regulative (Scott’s perspective) institutions, as they are more explicit and theoretically better understood (Chen et al., 2018). The regulative pillar comprises rules and regulations either established by the law or endorsed by public opinion. They potentially encourage certain behaviors and discourage others. Coercive mechanisms are usually imposed by assigned entities to enforce compliance (Rocha & Ávila, 2015). Khanna and Palepu (2006) suggest some institutions can only be set up by governments, and we consider it to be closely related to the regulative ones too.

Institutions are mutable over time and institutional environments are quickly changing, then serving interesting contexts (Lu et al., 2008). Those institutional changes they take place more frequently and are especially profound in emerging economies (EE) (Meyer & Peng, 2016; Peng et al., 2018a), where firms are challenged to overcome institutional prevalent imperfections, high uncertainties and strong ambiguities to have their corporate scope reshaped (Peng et al., 2018a; Peng et al., 2005). Changes in EE (emerging economies) are also strongly motivated by ideology (Rottig, 2016).

The main characteristics of EE institutional environments are instability, information asymmetries, resource scarcities, lack and inefficiency in terms of legal and regulatory systems, ruling of arbitrary policies and existence of personal networks between government and firms (He & Wei, 2013; Hoskisson et al., 2000). In a nutshell: “[...] institutions are often weak, of poor quality and subject to legal, political, governmental, social and cultural, technological and security issues” (Gama et al., 2016, p. 331).

EE generally have poor and weak regulatory environments which generate greater uncertainty (Ávila et al., 2015), less sophisticated institutional frameworks and sometimes inconsistent institutional pressures (Meyer & Peng, 2016). The lack of certain market-supporting institutions leads to the existence of “institutional voids” (Khanna & Palepu, 1997) and reduce the tendency to isomorphism (Meyer & Peng, 2016). When present, firms should redesign their organizational forms (Meyer & Peng, 2016) and ponder decision-making processes to face such “institutional voids”. Consequently, informal institutions can have a more prominent role and EE firms tend to rely not only on formal institutions to work effectively (He & Wei, 2013).

Particularly, Latin America holds many similarities to EE characteristics. Despite the significant differences in terms of regulatory institutions and institutional development levels across the region (Mingo et al., 2018), the competitive prospect resembles analogous: markets are prone to arbitrary modifications of the “rules of the game” and competition is poorly regulated. Economic and regulatory frameworks are frail. Antitrust regulations are insufficient,
and industries are concentrated. There exists recurring crisis resulting in devaluations. All this imply in adaptation and acceptance to the fact that local institutions shape businesses with unique features (Rottig, 2016), differently from any other place in the world. Insightful elements can be offered by the institution-based view to analyze the impact of EE’ institutional environment on firms (Wu & Chen, 2014). Therefore, this perspective emerges as an alternative to understand organizational phenomena in EE, whose institutional frameworks are different from the relatively stable ones of developed economies (Peng et al., 2008).

3 Method

The aim of this study is to comprehend how formal institutions shape firm’s decisions, which means that context plays an important role. Considering the purpose of this study, we opted for an instrumental case study, which means the research proposal achievement is external to the case itself (Stake, 1998). We intended to explain the phenomenon at first place, not the intrinsic case itself. We assumed the phenomenon under analysis (formal institutions shaping firm’s decisions) can arise in different circumstances and the background set for this study (Paraguayan “Maquila regime”) is one out of many other potential illustrations of that. The context set for this study – Paraguayan “Maquila regime” – is justified by the fact that Paraguay, one of the most dynamic economies in Latin America with an average growth of 5.2 percent from 2008 to 2018 (World Bank, 2020), has launched a national economic development plan to attract maquiladoras – units operating under a preferential tariff regime to transform raw materials in locally-produced goods for the international market (Cámara de Empresas Maquiladoras de Paraguay (CEMAP), 2018; Consejo Nacional de la Industria Maquiladora de Exportación (CNIME), 2018a). By offering aggressive incentives for the installation of manufacturing and assembling lines, Paraguay has been drawing attention of Brazilian firms, which face a different institutional framework and must comply with the regime’s ground rules. The textile-apparel sector was chosen because it is very traditional in many countries, including Brazil and Paraguay, and it is changing fast throughout the world. This industry has been facing many global challenges that question its ability to perform at an efficient level, mostly impacted by globalization of markets and the rise of new competitive landscapes (Puig et al., 2009).

Regarding cases selection, we first specified a group of interest consisted of some Brazilian textile-apparel firms operating under the “Maquila regime” in Paraguay. After, we set the following criteria for cases selection: 1) existence of at least one own manufacturing plant in Paraguay operating under the “Maquila regime”; 2) examples of extreme cases in terms of years of operation. Two firms accepted to join the study: Firm A (operating in Paraguay for more than 10 years and the oldest Brazilian textile-apparel maquiladora in the country) and Firm B (with operation established in early 2017). Therefore, cases selection followed a theoretical sampling and not a convenience sampling, as evidenced before.

Along the research, 29 in-depth interviews were conducted with specialists and within the two selected firms. After a first contact with Brazilian Chambers of Commerce and sectorial associations, it followed a snowball process (specialists indicating other specialists). Interviewees on firms were chosen based on the indication of the CEOs and on the connection of the roles with the “Maquila regime”. Both Brazilian and Paraguayan specialists were interviewed, as well as within the cases. Following Eisenhardt (1989), we reached closure based on data saturation. Thus, qualitative data was obtained through semi-structured interviews, documents and field notes. Figure 2 summarizes the main procedures taken during data collection.
Figure 2: Data collection procedures and sources.

Data was extensively collected (almost 30 hours of interviews, several field notes and around 80 public and private documents) through systematic sets of procedures and aiming to subsequently transform raw data into relevant and valid results. The observations conducted during on-site visits deepened the understandings and enabled the researcher to observe things that the participants were not aware of by themselves (Patton, 2002). Moreover, the documental research was carried out in three phases, as suggested by Godoy (1995): choice of documents; access to chosen documents; and analysis of accessed documents. When achieving the step number three, we advanced the documental analysis following Bardin’s (2011) perspective for content analysis.

We also carried on data triangulations as of data source and data collected. By doing that, we could enrich interpretations, clarify meanings, acquire multidimensional view of similar issues and detect contradictions (Stake, 1998). It enhanced the validation of the findings and convergence of results (Eisenhardt, 1989). In order to support qualitative data coding and analysis, the software Atlas.ti was used, assisting the structuring of data for inferences and interpretations, helping forward the development of findings and propositions.

In terms of data analysis procedures, this study was guided by three general assumptions: 1) reduction of data into dimensions, sub-categories and categories to produce meanings; 2) recognition of the relationships among dimensions, sub-categories and categories; 3) presentation of results in systematical and analytical schemes (when possible) to better represent data reduction and the established relationships (Langley & Abdallah, 2011).

When operationalizing data analysis, the designed coding frame aimed to subsidizing the findings related to the study objectives. Starting from quotations extracted in raw data (interviews, notes and documents), codes were created and gave origin to categories, which addressed the objectives.

The procedures were adopted to ensure the quality of the research were based on the following four criteria: 1) internal validity (e.g.: triangulation of data by using primary and secondary sources and multiple strategies and incorporation of original segments of raw data into the presentation of analysis, corroborating findings); 2) external validity (e.g. comparison of
findings with both conflicting and similar literatures and validation of the groupings of institutions and their roles through a second individual meeting with 2 interviewees, chosen because of their distinguished knowledge over the Paraguayan institutional framework; 3) reliability (e.g. planning and execution of all methodological procedures and use and presentation of Interview Protocols); and 4) objectivity – or confirmability (e.g. pre-validation and scrutiny of Interviews Protocols and search for cross-case patterns and exposition of them through condensed data display).

4 Results: Context and Institutions

The “Maquila regime” was established in 1997 in Paraguay by the National Law Nº 1064 and is regulated by the Decree Nº 9585 from 2000 (Paraguay, 1997, 2000). It is orientated to firms that are “totally or partially engaged in carrying out tangible or intangible production processes, combining goods or services of foreign origin imported temporarily, with labor and other national resources, focusing their production to the export markets” (Rediex, 2018). Such institutional framework is important for setting how the regime operates, its rules and penalties mechanisms (Lu et al., 2008).

According to SP2_E, the Paraguayan “Maquila regime” is a tax incentive system that includes intangible goods (services). A single tax of 1% applied on the total value added to the product within Paraguay (CEMAP, 2018; Rediex, 2018) is the greatest incentive for foreign firms. A formal constraint (North, 1990) imposed by the regime is that only up to 10% of the previous year’s production can be authorized to remain in the country (CNIME, 2018a; Rediex, 2018). The remaining must be exported. Economic activities are highly regulated and local institutions establish the conditions for competition and functioning of markets (North, 1990), converging to Su et al. (2016). Therefore, we notice the pivotal role of the State (Peci, 2006). Firms are either approved or not for operating under the “Maquila regime”, so they need to seek legitimacy (Klopf & Nell, 2018). This means that firms are expected to comply with the regime’s ground rules. By doing so, we can assume their behaviors become homogeneous at some extant – i.e. they become isomorphic (DiMaggio & Powell, 1983) – though not instantaneously (Peng et al., 2017).

Contractual mechanisms are part of the “Maquila regime” institutional framework and their absence result to illegitimacy (i.e. disapproval to operate) (DiMaggio & Powell, 1983; North, 1990). The “Maquila Contract” is an example of coercive mechanism imposed by assigned entities (Rocha & Ávila, 2015): it is signed between a firm legally established in Paraguay (“maquiladora” or “contracted firm”) and another located abroad (“head office” or “contracting firm”) (CNIME, 2018a).

For SP2_D, the current legal regulatory framework (e.g. Laws and Decree) legitimates the “Maquila regime” and the intervening institutions ensure all the expected requirements. Any modification must conform the current legal and political systems, which foresee amendments and ratification of the Congress. In other words, SP2_D sustains the existence of supportive institutions within the “Maquila regime” framework contributes to the absence of “institutional voids” (Khanna & Palepu, 1997). If we take it as completely true, then Peng et al. (2018b) argument that weak institutional environments hold extensive institutional voids would be refuted, as the political scenario can still be considered fragile and recently stable in Paraguay. However, it is beyond our purpose to evaluate the existence or not of “institutional voids” in the background set for this study.

In order to illustrate how reliable is that institutional framework, SP2_E indicated that a sole minor alteration has been registered in the regime rules so far. The maximum period for transformation of imported raw materials into final goods and subsequent export was modified from 6 months (with an additional of 6 months) to 12 months (with an additional of 12 months).
SP2_M confirmed it was the only change in law up to now and SP2_D pointed the amendment was requested by *maquiladoras*.

Two implications can be taken out of it: first, institutions and their mechanisms are mutable over time, what is in line with Peng (2003); second, there is dynamic relation between institutions and firms, given that the latter can influence and impact the former (Peng, 2002). The modification also reveals how institutions can be shaped and influenced by firms’ feedbacks. Evidences indicate that Paraguayan institutions within the “Maquila regime” affect transactions, shape market structures and determine transformation costs (Su et al., 2016; North, 1990) to a high extent.

As reported by CNIME (2018b), the textile-apparel industry is the second one in terms of exports volume, with a share of 23.5% and behind the auto parts sector (50% of share). Most of those exports are sent to Brazil (Masi, 2017). By November 2018, it was also the runner up in occupation of labor and in new jobs generation. According to the Banco Interamericano de Desarrollo (BID, 2018), the sector is one of those that most sustain the *maquila* growth – from 2012 to 2016, it generated investments of US$ 50 million and 3.300 jobs. In accordance with SP1_D, the textile-apparel *maquiladoras* are complementary to Brazilian industries because Paraguay enhances international competitiveness by offering some important local advantages, such as labor, electricity and capital costs.

Because competitiveness is either strengthened or not by series of institutional conditions, it is important to identify which formal and regulative institutions are embedded to the empirical context under analysis and the constraints they impose. High diversity of institutional conditions (Meyer & Peng, 2016) and varied effects among institutions (Meyer et al., 2009) were perceived. We also noted that not all of them influence *maquiladoras* at the same phase and in the same way; interactions vary within the same country and pressures are asymmetric (Monticelli, Garrido, & Vasconcellos, 2018).

In accord with their roles and stage of influence over firms operating under the “Maquila regime”, we grouped them as it follows: A) those that promote international business and seek for foreign investments in Paraguay, not necessarily through the “Maquila regime”; B) the ones that support and enable the process of starting a business in Paraguay, either on a national or on a local level through municipality – thus confirming that institutions can be multilevel (Dau et al., 2018; Hitt, 2016); C) institutions that intervene on the daily operations of the “Maquila regime” by defining what can be done and what should not be done, therefore proving legitimacy (DiMaggio & Powell, 1983); and D) those that advocate before different government and private entities, seeking for sectorial interests and representation. There can also exist some intersections among them, i.e. institutions with multiple roles.

Group C (and its intersection with D) represents formal and regulative institutions (DiMaggio & Powell, 1983; North, 1990) that influence decisions in the “Maquila regime” and demand adequacy (Rocha & Ávila, 2015) from *maquiladoras*. By setting limits and rules, their impact on economic activities is evident (North, 1990). The most important institutions mapped are:

- **Secretaría Ejecutiva del CNIME** (CNIME, 2018a): ensured by Law Nº 1064 and Decree Nº 9585 (Paraguay, 1997, 2000), it is the only regulatory body specific to the “Maquila regime” and responsible for the implementation of the Maquila Law and its regulations. It manages the online Automated Maquila System (SAM-WEB), where imports and exports are controlled.

- **Dirección Nacional de Aduanas de Paraguay** (DNA, 2018): mentioned in Law Nº 1064 and Decree Nº 9585, it controls entry and exit of people and goods in Paraguay through exclusive power and collect the inflows and outflows taxes. It manages SOFIA, the customs tax system integrated to SAM-WEB.

- **Ventanilla Unica de Exportacion** (VUE, 2018): regulated and legitimated by Decree Nº 7290 of 2006, it is a kind of single export window that integrates people and institutions involved in export processes. Given that all *maquiladoras* are compulsory exporters, they must be
registered in VUE and make use of it. The certificate of origin is also submitted through the platform.

- Dirección General de Comercio Exterior de Paraguay (DGCE, 2018a, 2018b): regulates and controls the issuance of certificates of origin, keeping up to date the database of issued certificates and the list of products commercialized abroad.

- Instituto de Previsión Social de Paraguay (IPS, 2018): responsible for directing and managing the Social Security in Paraguay. IPS contribution helps firms to meet the requirements of the certificate of origin for exports, as salaries and social charges compose the “value added” in national territory.

- Ministerio de Trabajo, Empleo y Seguridad Social de Paraguay (MTESS, 2018): regulates the Labor, Employment and Social Security policies in Paraguay. Maquiladoras must register their employees in MTESS and formalize their workforce to be up to date with labor obligations.

- Instituto Nacional de Tecnología, Normalización y Metrología de Paraguay (INTN, 2018): certifies products, systems and services. Maquiladoras must have production and product lines certified – in the start of operation and every time production is adjusted or new products are developed – to comply with the Maquila Program.

- Secretaría del Ambiente de Paraguay (SEAM, 2018): responsible for issuing environmental license, which is renewable every 2 years, thus implying in preservation and conservation of Paraguayan natural resources.

- Prefectura: in charge of business license issuance, collection of local taxes and registration of industrial patents, which are renewable every 6 months.

- Subsecretaría de Estado de Tributación (SET, 2018): manages all legal provisions regarding taxation in the country. Since maquiladoras pay only a single tax of 1% on the value added to production, SET plays a fundamental role in the exemption of taxes over the manufacturing process.

- Asociación Industrial de Confeccionistas de Paraguay (AICP, 2018a, 2018b, 2018c): authorizes the certificates of origin for textile-apparel firms, intervening in the control of exports (goods, production processes and commercial invoices).

- Unión Industrial Paraguaya (UIP, 2018): along with SNCSP and CAPEX, it is authorized to issue certificates of origin for exports by DGCE.

It can be assumed from the above that institutions can have positive influences on firms too (Monticelli et al., 2017), as in the case of temporary suspension of taxes and duties and centralization of exports procedures in a single window. Besides, institutions somehow contribute for a convergence of behaviors by setting expectations (Scott, 1995) and which choices they support (Peng, 2002). This leads firms to become more isomorphic over time (DiMaggio & Powell, 1983, Meyer & Peng, 2016), once maquiladoras rely on cooperation with the institutions (Klopf & Nell, 2018) to cultivate the fiscal benefits of the “Maquila regime”.

In conclusion, we notice firms manage multiple restrictions of host-country institutions and keep a dynamic relationship with them. This suggests a complex institutional framework under the “Maquila regime”, especially when considering an EE like Paraguay, whose “Institutions” dimension ranks 115 out of 141 countries in the Global Competitiveness Report 2019 (World Economic Forum, 2019).

5 Results: Within-Case and Cross-Case Analysis

Firm A operates in Ciudad del Este, Paraguay, close to the Brazilian border and under the “Maquila regime” since 2008. It produces curtains and microfiber blankets for exports to Brazil. The Paraguayan unit has around 160 employees and focuses on product lines with high costs to manufacture in the home country due to import taxes – products with more expensive fabrics (greater added value). The first level of the organizational chart is composed by a President
(CEO), a Vice-President (Production Manager) and three other managers (Imports & Exports, Administrative & Shipping and Finance & Human Resources).

Firm B is situated at Limpio, near the capital Asunción and started to operate under the “Maquila regime” in 2017. The plant has 40 employees and is in charge of a new line of products that used to be totally imported. The firm expects to convert the Paraguayan unit into its international distribution center. The mix of products is mainly composed by ropes (eco-friendly and professional ones), kits and slings, slacklines and multipurpose tarpaulins. The decision level of the organizational chart is composed by an Executive Officer (CEO), a Production Manager and an Administrative Manager.

Apart from the location decision, firms also make other choices after starting to operate in Paraguay. Those decisions emerged during the interviews were grouped in 8 categories, as it follows: A) people and organization; B) plant; C) product; D) production; E) machinery and equipment; F) technology; G) supply and purchasing; and H) inventory. As an outcome of today's competitive economy, we observe the decision level facing more complex and integrate choices.

Some examples of the influence of formal institutions on firm’s decisions are found across categories. For instance, in people and organization, it is noticed that both firms adopted internal rules of procedure approved by MTESS to direct specific labor issues (e.g.: working days, wage system, overtime work rules, activities allowed during working hours, legal and voluntary benefits). Regarding products, everything that is manufactured under the “Maquila regime” is submitted to the evaluation and registration of CNIME, the watchdog of the Maquila Program, and INTN, for technical conformity. Therefore, firms’ product-related decisions are dependent upon the approval of those institutions. Firm B reminds it is not necessary to comply with such kind of requirements in the home country.

When it comes to machinery and equipment, decisions are somehow affected by institutions when imports are given a temporary admission and they can remain in Paraguay for the time established in the Maquila Program. This represents an incentive for maquiladoras to buy and renew their machinery and even expand production. Because of the lack of specialized suppliers in Paraguay, maintenance and replacement of machinery parts and equipment due to tear and accumulated wear can even be a challenge. Both Firms A and B reported some difficulties in that, what favors imports. This picture implies in resilience and dependence of other supply chains.

Due to the “Maquila regime”, both firms are expected to have their production and inventory tracked by the Government’s managerial systems, such as SAM-WEB (the online Automated Maquila System managed by CNIME) and SOFIA (the DNA customs tax system). Besides them, there still are VUE (for exports procedures) and MARANGATU (the tax payment system of SET). Despite of their mandatory use, those systems and inputs of information can be handled by outsourced Custom Brokers, which are contracted for import and export proceedings and to issue the certificate of origin. In any case, the adoption of all those systems involves coordination and resources allocation.

In terms of inventory decisions, firms face two constraints in the “Maquila regime”: first, they have a maximum period (12 months with an extension of 12 months) for transforming imported raw materials into final goods and exporting them. This somehow calls for a good management of both raw materials and finished goods inventories, different from the home country (Brazil), where they do not deal with that.

Second, the inventory is closely monitored and tracked by the Government through a virtual control for imports and exports in SAM-WEB. Differences between real and virtual inventories are not accepted and the firm is subject to penalties. Therefore, a close eye is kept on this issue and firms even implement extra mechanisms of inventory controls for the subsidiaries. Eventual occurrences can have origin in production disbalance or product registration – products
registered at CNIME with no accurate consumption of raw materials and inputs and whose inspection of INTN has failed to detect. That is why firms are closely watched by both CNIME and INTN.

6 Discussion

Given the operations decisions taken by Firms A and B in Paraguay, we noticed some aspects of the institutional environment shaping choices over time. We briefly analyze those influences according to two dimensions: environment uncertainty and high intervention of the government in business.

The lack of confidence in Paraguay and the high levels of uncertainty over the country’s institutional framework in 2008 made Firm A to start the operations with minimum investments in production, technology and machinery. As institutional changes tend to be more profound in EE (Peng et al., 2018a), firms can be reluctant in investing or even expanding operations in those countries (Singh, 2012). The firm opted for handmade products, few machinery and equipment and lack of automatization. Production management was primitive too, and balancing, review and control did not virtually exist. CP1_C points prudential actions in the beginning of the operation:

Because it was a company that was just betting on the situation in Paraguay. We did not know if it was going to work out or not, so then we first produced in a small shed, [being guided by the following though] ‘let's make it here, let's see what it is like, let's test if it's really worth [first] to come here [in definitive] or not’ (CP1_C, free translation).

Along the following years, Firm A took incremental decisions as it perceived lower risks for random modifications of the “rules of the game”. Differently, Firm B met a more stable context in 2015, with positive political and economic prospects. It found lower uncertainties compared to 2008 and it decided to: 1) migrate a whole assembly line from home country and 2) inaugurate its own inhouse weaving in Paraguay. This represented greater resources allocation and coordination and automatization efforts. Thus, Firm B made distinct initial choices from Firm A.

By capturing the differences in the speed in which production and machinery and equipment decisions were taken by both firms and comparing them to the host-country environment instability, we propose a 2 x 2 framework (Figure 3). By assuming that the Paraguayan context and formal institutions were of greater uncertainties in 2008 compared to 2015, we place Firm A and Firm B in opposite quadrants.

Figure 3: Effect of institutional framework uncertainties on operations’ decisions.
Source: elaborated by the author.
To confirm the more optimistic outlook, it was during 2015 that Firm A decided to start an expansion plan in Paraguay, which ended up in the inauguration of a plant in 2018. Thus, we noticed that Firm A has accelerated its decision-making process as it gained more confidence on local institutions and became part of local networks. In brief: the same firm speed up decisions according to the extent of stability it perceived for business. Therefore, we assume the position of a firm in the proposed framework is mutable and evolves over time, like institutions do (Peng, 2002), being shaped by institutional changes (North, 1990).

The above discussion and the 2 x 2 framework lead to the following proposition:

**Proposition 1:** uncertain institutional environments can hinder firms to take fast operations decisions. High uncertainties and strong ambiguities shape firms’ strategic choices, markedly in EE (Peng et al., 2018a; Peng, Lee, & Wang, 2005). Regardless of higher or lower propensity in taking risks, what is very particular from each firm’s top management, we argue that institutional instability can cause prevention, delay or even interruption of a varied range of decisions taken by firms, such as expansion investments, increase in productivity, automatization and rhythm of production, to mention just a few.

As supported by the literature, intervening formal institutions can shape transactions and consequently the structure of the market and its functioning (Su et al., 2016; North, 1990). Interferences can orientate the legitimacy of actions and consequently represent acceptance by the environment (Meyer & Peng, 2016). Regulations, controls, limits and rules are generally imposed by assigned entities and serve to enforce compliance (Rocha & Ávila, 2015). And the “Maquila regime” itself is a clear example of high intervention of the government in business: whereas maquiladoras are benefitted from aggressive tax incentives, they face rules, monitoring, controls, sanctions and even punishments, if necessary.

We observe a high degree of interventionism in development of new products, inventory management, imports and exports, and issuance of the certificate of origin. For instance, since all products manufactured under the “Maquila regime” must be approved by CNIME and certified by INTN; the certification process takes place every time a single adaptation on products is done – e.g. color, size, weight, form. These requirements are corroborated by a specialist:

SP2_L: “Many times the models are changed, or a model evolves. In other words, we ask CNIME for an extension of a model, we put it, we show the model, it disassembles, and the components are shown, and it is again certified with INTN. It [INTN] certifies that (...) we are well suited to the rules.” (free translation)

Because firms depend on INTN evaluation and approval, new products release can take greater time to market depending on the institution availability. And time to market is an important driver for textile-apparel industries. This can hinder innovation too. Additionally, keeping product information records updated and in conformity with CNIME database demands organization and control, especially for firms with great variety of products or lines of products. The requirements of conformity and the crossover of information among previously certified similar products can lead to greater approval time by INTN. In consequence of the above reasoning, we propose that:

**Proposition 2:** mechanisms of conformity and control imposed by intervening formal institutions can negatively affect product time-to-market and innovation.

Products registration can be an especially onerous task in the beginning of operations (since the whole manufacturing portfolio may be certified), as in the situation of Firm B. Likewise, the learning curve for firms that do not deal with such a similar mechanism in their home countries can be particularly high, so does the perceived unfavorable condition. In turn, the certification process can negatively impact marketing strategies, create competitive disadvantages and even discourage innovation through firms located in Paraguay. The situation reported by CP2_A illustrates that:
INTN is a hindrance to us because sometimes I have urgency, I want to register a product and process it within them [INTN], and it takes, sometimes it lasts 15 to 30 days for them to allow a new product to invoice. So that is the first point. Also, there is an existing product and I have only changed its color – I am going to use another color – the structure is all the same, but I must register it, and this [registration process] takes time. So, I am going to put number 1 here just for you to know that this is an issue for me. (CP2_A, free translation).

This example demonstrates that institutions can be more restrictive than inclusive, what comes along the results found by Monticelli et al. (2017). It also shows how formal institutions can facilitate or discourage some market developments, directly shaping its functioning (North, 1990; Su et al., 2016). Therefore, firms’ strategic choices (e.g. evolution of products, launch of new products or collections, innovation in products, etc.) are shaped by the dynamic interaction with institutions (Peng, 2002).

In general terms, we noted that formal institutions are perceived differently by both firms, varying to different extents between them. Firm A seems to accept better the local requirements as part of “the game” (North, 1990). Results suggest that Firm A has become somehow isomorphic to that institutional framework, acting homogeneously with other maquiladoras and following institutional expectations (Meyer & Peng, 2016).

On the other side, Firm B still feels the difference between compliance mechanisms in host and home countries. Results indicate that formal institutions somehow have been constraining the firm to make accommodations on internal controls in product, production and inventory management. Consequently, they are not perceived as beneficial for the firm. We can infer that Firm B has not been completed adapted to local rules, as they differ from the experience the firm has in the home country. Being not used to local rules does not mean non-compliance, though.

Relying on the prior reasoning, we add to the previous propositions the following:

**Proposition 3:** firms’ perception about regulations set by formal institutions can change over time. This proposition relates the perception of local regulatory pressures in host-country environments to the duration of operations and suggests that evaluation can change over time, succeeding quick changes in institutional environments and the mutability of institutions (Lu et al., 2008). Following to this reasoning, uncertain environment and high intervention of institutions in business could be potentially perceived with greater intensity by maquiladoras at the beginning of their operations.

### 7 Concluding Remarks

We consider both firms distinct experiences in the “Maquila regime” institutional environment important for understanding the influence of formal institutions on their decisions. Some aspects of the institutional environment were analyzed according to two dimensions: environment uncertainty and high intervention of the government in business.

Based on that, we developed some propositions to illustrate how the aforementioned elements influenced the different decisions. We observed that: 1) uncertainty can hinder firms to take fast operations decisions; and 2) some mechanisms of control and compliance imposed by institutions can either negatively impact product-related decisions and innovation. Results also suggest that the operation time can influence the perception a firm has on local regulations set by formal institutions. While Firm A seems to have become isomorphic to that institutional framework, Firm B has not been completed adapted to local rules.
First, by employing the institution-based view of international strategy proposed by Peng (2002), this study contributes to the expansion of the theory to different organizational phenomena. Second, it identifies some competitive criteria and relates decision making under the influence of formal institutions. In doing so, it offers a matrix that could be used for future studies and some propositions to be tested in other sectors (or even cross-sector) and contexts. In terms of managerial contributions, this study stresses the importance of the institutional environment for managerial decisions. More specifically, this research adds knowledge for managers operating under the “Maquila regime” and those interested in investing in Paraguay. Regarding social implications, it represents an opportunity for policymakers to evaluate the influence institutions have on business and elaborate policies accordingly.

As any other research, this study presents some limitations that can represent opportunities for future researches. First, the limited number of cases restricts the potential for generalization of the main findings. Second, by focusing on the host-country institutional environment, we ignore the effect of home-country institutions on firms’ decisions. In consequence of that, the institutional distance between home and host countries is not explored. Third, it focuses on one single background and does not provide a comparative analysis among different institutional frameworks.

At the end of this study, other avenues of the investigation appeared. By comparing either the institutional environment of both home and host countries or the Paraguayan “Maquila regime” with other similar frameworks existing in Latin America, future researches can enhance the understanding of the institutional influences on operations decisions and provide a valuable comparison between the institutional difference between (or among) countries. Moreover, a cross-sectorial study within the Paraguayan “Maquila regime” is also welcome, which can benefit from this research and expand results to other segments and with greater number of cases.

References


