Operations decisions and the influence of host-country institutions: an exploratory study under the Paraguayan “Maquila regime”
Operations decisions and the influence of host-country institutions:
an exploratory study under the Paraguayan “Maquila regime”

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ABSTRACT

When managing international manufacturing operations, firms are expected to make choices and face trade-offs. They operate within host-country institutional frameworks and are exposed to multiple and asymmetric institutional pressures, which somehow influence their decisions in multiple ways. Therefore, institutional frameworks set “the rules of the game” (North, 1990) and signal which choices are acceptable (Peng, 2002). Based on that, the purpose of this study is to comprehend how companies’ operations decisions are influenced by host-country formal institutions in international manufacturing. This is an exploratory research about two extreme cases of Brazilian textile-apparel companies that expanded their operations to Paraguay under the “Maquila regime”. It is guided by the institution-based view of international business. The study finds that four aspects of the Paraguayan institutional environment (i.e. environment uncertainty, high intervention of the government in business, inadequate number – or even lack – of market intermediaries and complexity and inefficiency of institutional mechanisms) shaped some operations decisions taken in the host country over time. A list of propositions is thus offered and help to synthetize the findings. The research contributes to the literature on global operations management by adding an institutional perspective to it and expanding the field towards an open system and beyond the factories’ walls, as suggested by Spring et al. (2017). It also brings elements for managerial (e.g. importance of the institutional environment for decisions taken by managers) and public policy (e.g. industrial policies and firm competitiveness) implications.

Keywords: operations decisions; host-country institutions; institution-based view; international manufacturing; offshoring.
RESUMO

Ao gerenciar operações internacionais de manufatura, espera-se que as firmas façam escolhas e enfrentem trade-offs. Elas operam dentro das estruturas institucionais do país hospedeiro e estão expostas a múltiplas e assimétricas pressões institucionais, as quais de alguma forma influenciam suas decisões em várias formas. Portanto, as estruturas institucionais definem “as regras do jogo” (North, 1990) e sinalizam quais escolhas são aceitáveis (Peng, 2002). Com base nisso, o objetivo deste estudo é compreender como as decisões de operações das empresas são influenciadas pelas instituições formais do país hospedeiro na manufatura internacional. Trata-se de uma pesquisa exploratória realizada a partir de dois casos extremos de empresas têxteis brasileiras que expandiram suas operações para o Paraguai sob o “regime de Maquila”. Este trabalho é guiado pela visão baseada em instituições de negócios internacionais. O estudo constata que quatro aspectos do ambiente institucional paraguaio (isto é, incerteza ambiental, alta intervenção do governo nos negócios, número inadequado – ou mesmo a falta – de intermediários no mercado e complexidade e ineficiência de mecanismos institucionais) moldam algumas decisões de operações tomadas no país hospedeiro ao longo do tempo. Uma lista de proposições é oferecida e ajuda a sintetizar os resultados. A pesquisa contribui para a literatura em gestão de operações globais ao adicionar uma perspectiva institucional a ela e expandir o campo em direção a um sistema aberto e para além das paredes das fábricas, como sugerido por Spring et al. (2017). O estudo também traz implicações gerenciais (ex.: importância do ambiente institucional para as decisões tomadas pelos gestores) e em políticas públicas (ex.: políticas industriais e competitividade da empresa).

Palavras-chave: decisões de operações; instituições do país hospedeiro; visão baseada em instituições; manufatura internacional; offshoring.
LIST OF FIGURES

Figure 1 – Research problem representation…………………………………………………………21
Figure 2 – Institutions, organizations, and strategic choices………………………………………26
Figure 3 – Research Protocol......................................................................................................46
Figure 4 – Textile-apparel value chain and research emphasis.................................................52
Figure 5 – Selection process of cases......................................................................................53
Figure 6 – General steps taken during documental research...................................................55
Figure 7 – Data collection procedures and sources.................................................................56
Figure 8 – Data analysis main stages......................................................................................62
Figure 9 – Data reduction steps..............................................................................................63
Figure 10 – Procedures for content analysis...........................................................................64
Figure 11 – Coding frame and objectives addressing...............................................................65
Figure 12 – Political instability in Paraguay over the last 20 years...........................................71
Figure 13 – Paraguay x Latin America GDP evolution (2007-2017) in annual %.....................72
Figure 14 – Paraguay net inflows of foreign direct investments - FDI (1980-2017) in US$ million........................................................................................................................................73
Figure 15 – Initial steps for setting up operations under the “Maquila regime” in Paraguay........................................................................................................................................76
Figure 16 – Competitive advantages and disadvantages........................................................82
Figure 17 – Key advantages for a textile-apparel industry in Paraguay under the “Maquila regime”........................................................................................................................................83
Figure 18 – Host-country institutions grouped by their respective roles...............................85
Figure 19 – Institutional framework for companies operating under the “Maquila regime” in Paraguay........................................................................................................................................94
Figure 20 – First level of Company A organizational chart.....................................................97
Figure 21 – Company B’s administrative level chart...............................................................99
Figure 22 – Effect of institutional framework uncertainties on operations’ decisions.............130
LIST OF TABLES

Table 1 – Key concepts presented in the Literature Review ..............................................22
Table 2 – Contributions for the Institution-based view by different Literatures .................24
Table 3 – Examples of formal and informal constraints ......................................................25
Table 4 – Institutions from two viewpoints: sociological and economic ............................28
Table 5 – Regulative pillar factors .......................................................................................29
Table 6 – Emerging economies institutional frameworks characteristics ..........................31
Table 7 – Offshoring x Outsourcing matrix .........................................................................39
Table 8 – Tradeoff areas for companies’ decisions ..............................................................41
Table 9 – Decision categories of manufacturing strategy ...................................................42
Table 10 – Important decisions of every manufacturing operation .....................................43
Table 11 – Structural x Infrastructural categories of decisions over time ............................44
Table 12 – Research strategies design for this study ............................................................47
Table 13 – Roadmap for case study research ......................................................................49
Table 14 – Interview Protocols design ................................................................................56
Table 15 – Interviews conducted over the research ..............................................................58
Table 16 – Research objectives and data collection matching .............................................61
Table 17 – Criteria and corresponding strategies for research quality .................................66
Table 18 – Key events in Paraguay since the “Maquila regime” establishment .....................68
Table 19 – Adding value in Paraguay ..................................................................................77
Table 20 – Key operating rules of the Paraguayan “Maquila regime” .................................78
Table 21 – Host-country institutions influencing operations under the “Maquila regime” ..89
Table 22 – Operations decisions .........................................................................................101
Table 23 – Comparison between emergent sub-categories and seminal literature .............102
Table 24 – People and organization similar decisions .........................................................104
Table 25 – People and organization distinct decisions .........................................................106
Table 26 – Plant decisions ..................................................................................................108
Table 27 – Product-related decisions ..................................................................................111
Table 28 – Production decisions .........................................................................................114
Table 29 – Machinery and equipment decisions .................................................................118
Table 30 – Technology-related decisions ..........................................................................120
Table 31 – Supply and purchasing decisions………………………………………………………122
Table 32 – Inventory decisions……………………………………………………………………123
Table 33 – Compilation of operations decisions…………………………………………………124
Table 34 – Offshoring x Outsourcing matrix applied for case studies………………………128
## LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>AICP</td>
<td>Asociación Industrial de Confeccionistas del Paraguay</td>
</tr>
<tr>
<td>BCP</td>
<td>Banco Central del Paraguay</td>
</tr>
<tr>
<td>CAPEX</td>
<td>Cámara Paraguaya de Exportadores</td>
</tr>
<tr>
<td>CCPB</td>
<td>Cámara de Comercio Paraguay Brasil</td>
</tr>
<tr>
<td>CDAP</td>
<td>Centro de Despachantes de Aduana del Paraguay</td>
</tr>
<tr>
<td>CEMAP</td>
<td>Cámara de Empresas Maquiladoras del Paraguay</td>
</tr>
<tr>
<td>CNCEP</td>
<td>Cámara Nacional de Comercio y Servicios de Paraguay</td>
</tr>
<tr>
<td>CNIME</td>
<td>Consejo Nacional de las Industrias Maquiladoras de Exportación</td>
</tr>
<tr>
<td>DGCE</td>
<td>Dirección General de Comercio Exterior del MIC</td>
</tr>
<tr>
<td>DGVUE</td>
<td>Dirección General del Sistema Ventanilla Única de Exportación</td>
</tr>
<tr>
<td>DINAVISA</td>
<td>Dirección Nacional de Vigilancia Sanitaria</td>
</tr>
<tr>
<td>DNA</td>
<td>Dirección Nacional de Aduanas</td>
</tr>
<tr>
<td>INTN</td>
<td>Instituto Nacional de Tecnología, Normalización y Metrología</td>
</tr>
<tr>
<td>IPS</td>
<td>Instituto de Previsión Social</td>
</tr>
<tr>
<td>MAG</td>
<td>Ministerio de Agricultura y Ganadería</td>
</tr>
<tr>
<td>MDIC</td>
<td>Ministério da Indústria, Comércio Exterior e Serviços do Brasil</td>
</tr>
<tr>
<td>MEC</td>
<td>Ministerio de Educación y Ciencias</td>
</tr>
<tr>
<td>MIC</td>
<td>Ministerio de Industria y Comercio</td>
</tr>
<tr>
<td>MRE</td>
<td>Ministerio de Relaciones Exteriores del Paraguay</td>
</tr>
<tr>
<td>MSPPBS</td>
<td>Ministerio de Salud Pública y Bienestar Social</td>
</tr>
<tr>
<td>MTESS</td>
<td>Ministerio de Trabajo, Empleo y Seguridad Social</td>
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<tr>
<td>Rediex</td>
<td>Red de Inversiones y Exportaciones</td>
</tr>
<tr>
<td>SEAM</td>
<td>Ministerio de Ambiente y Desarrollo Sostenible</td>
</tr>
<tr>
<td>SENACSA</td>
<td>Servicio Nacional de Calidad y Salud Animal</td>
</tr>
<tr>
<td>SET</td>
<td>Subsecretaría de Estado de Tributación del Ministerio de Hacienda</td>
</tr>
<tr>
<td>SINAFOCAL</td>
<td>Sistema Nacional de Formación y Capacitación Laboral</td>
</tr>
<tr>
<td>SNCSNP</td>
<td>Cámara Nacional de Comercio y Servicios del Paraguay</td>
</tr>
<tr>
<td>SNPP</td>
<td>Servicio Nacional de Promoción Profesional</td>
</tr>
<tr>
<td>STP</td>
<td>Secretaría Técnica de Planificación del Desarrollo Económico y Social</td>
</tr>
<tr>
<td>SUACE</td>
<td>Sistema Unificado de Apertura y Cierre de Empresas</td>
</tr>
<tr>
<td>UIP</td>
<td>Unión Industrial Paraguaya</td>
</tr>
<tr>
<td>VUE</td>
<td>Ventanilla Única de Exportación</td>
</tr>
</tbody>
</table>
# TABLE OF CONTENT

1. INTRODUCTION .................................................................................................................. 13
  1.1. Research problem definition ......................................................................................... 14
  1.2. Objectives ...................................................................................................................... 16
    1.2.1. General objective ................................................................................................. 16
    1.2.2. Specific objectives ............................................................................................... 16
  1.3. Justification and relevance .......................................................................................... 16
  1.4. Structure of the study .................................................................................................. 20
2. LITERATURE REVIEW ....................................................................................................... 21
  2.1. The institution-based view ........................................................................................... 22
    2.1.1. Institutions and institutional frameworks in emerging economies (EE) ............. 30
  2.2. Emerging economies (EE) ............................................................................................ 33
    2.2.1. Latin America as a region of EE ......................................................................... 36
  2.3. Offshoring strategy ...................................................................................................... 38
  2.4. Operation decisions ...................................................................................................... 40
3. METHOD ............................................................................................................................. 45
  3.1. Research Protocol ......................................................................................................... 45
  3.2. Research strategies design ............................................................................................ 47
    3.2.1. Case study ............................................................................................................ 48
      3.2.1.1. Cases selection ............................................................................................... 52
    3.2.2. Documental research ............................................................................................ 54
  3.3. Data collection procedures and sources ....................................................................... 55
    3.3.1. Addressing planned objectives through data collected ....................................... 60
  3.4. Data analysis ................................................................................................................ 62
    3.4.1. Procedures for validity, reliability and objectivity ............................................... 66
4. RESULTS: CONTEXT AND INSTITUTIONS .................................................................... 67
  4.1. Context evolution since the “Maquila regime” establishment ....................................... 67
  4.2. Characteristics of the Paraguayan “Maquila regime” .................................................... 74
  4.3. Textile-apparel sector and the “Maquila regime” .......................................................... 80
  4.4. Competitiveness factors for international manufacturing ............................................. 82
  4.5. Institutional framework, institutions and the “Maquila regime” .................................. 83
    4.5.1. Institutions and their roles .................................................................................... 88
5. RESULTS: WITHIN-CASE AND CROSS-CASE ANALYSIS ........................................ 96
  5.1. Company A .................................................................................................................... 96
5.2. Company B .................................................................................................................. 98
5.3. Operations decisions taken by Companies A and B .................................................. 101
5.3.1. People and organization decisions ...................................................................... 103
5.3.2. Plant decisions .................................................................................................... 107
5.3.3. Product decisions ............................................................................................... 109
5.3.4. Production decisions .......................................................................................... 112
5.3.5. Machinery and equipment decisions ................................................................... 116
5.3.6. Technology decisions ........................................................................................ 117
5.3.7. Supply and purchasing decisions ......................................................................... 119
5.3.8. Inventory decisions ............................................................................................ 123
5.4. Operations decisions summary ............................................................................. 124
6. DISCUSSION .................................................................................................................. 127
7. CONCLUSION .............................................................................................................. 144
7.1. Contributions to literature, practice and society ...................................................... 145
7.2. Limitations and Suggestions for future researches ................................................ 147
REFERENCES ............................................................................................................... 148
APPENDIX .................................................................................................................... 165
1. INTRODUCTION

Significant changes in the global competitive landscape over the last century (e.g. globalization of economies and integration of markets) create opportunities and challenges for companies with international operations (Chen, Saarenketo, & Puumalainen, 2018; Paiva & Hexsel, 2005). These changes raised the relevance of countries institutional environments, particularly due to the increasing number of firms operating abroad and the growing importance of emerging economies (Hitt, 2016).

In this context, many companies can seek international manufacturing diversification. By doing so, they take decisions on locating operations “in foreign jurisdictions that are relatively diverse in terms of legal structures, national cultures, and ways of doing business” (Lampel & Giachetti, 2013, pp. 214). During this process, firms search for locational benefits – access to low-cost labor, specialized resources, cheaper technology, etc. – and can intensify the implementation of offshoring strategies, therefore transforming the global manufacturing landscape into dispersed and fragmentated operations (Brennan et al., 2015).

The scattering of manufacturing increasingly requires new capabilities, skills and responses from companies (Brock & Gavronski, 2013). Simultaneously, international operations are shaped by a range of political, social, and regulatory contexts and stakeholders (Klopf & Nell, 2018). Irrespective of the chosen country and the entry mode, firms interact with institutional aspects directly or indirectly (Monticelli et al., 2018). Institutional environments are “a rich constellation of interdependent structures and systems” (Henisz & Swaminathan, 2008, pg. 539) and the embedded institutions can differ from the home-country ones, as suggested by Mingo, Junkunc and Morales (2018).

The host-country institutional framework influences firms’ decisions in multiple ways, leading to 1) greater or lesser uncertainty; and 2) facility or difficulty to gaining legitimacy (Ávila, Rocha, & Silva, 2015). The complex array of institutions continues to influence the operations after market entry (Hitt, 2016). For Brock and Gavronski (2013), institutions mold not only corporate and business strategies, but the manufacturing and operation decisions too.

Firms participating in institutional frameworks are exposed to multiple institutional and asymmetric pressures (Monticelli et al., 2018; Rabbiosi & Santangel, 2018). They also receive higher societal-level sources of constraints (Klopf & Nell, 2018; Peng, 2002), such as those set by the State and society (Yamakawa, Peng, & Deeds, 2008). Therefore, the idea that companies’ strategies and choices are moderated by the context in which they operate (Meyer et al., 2009)
is enhanced. Once the host-country institutional context plays a pivotal role in multiple aspects (Cai, Boateng, & Guney, 2018; Pattnaik, Choe, & Singh, 2015), companies need to grasp their significance and adapt to the diversity of institutional environments they are embedded to (Jackson & Deeg, 2008; Klopf & Nell, 2018), taking them into consideration in their decision-making processes.

1.1. Research problem definition

As postulated above, institutions and host-country context matter (Eden, 2010; Jackson & Deeg, 2008; Klopf & Nell, 2018; Pattnaik, Choe, & Singh, 2015; Peng, Wang & Jiang, 2008) and the literature has been increasingly recognizing their importance (Dau et al., 2018; Koning, Mertens, & Roosenboom, 2018; Martin, 2014; Regnér & Edman, 2014). The analysis of institutions and their influence subsidizes firms’ strategic decisions, as well national and international policies (Hitt, 2016), given the linkage of institutions to industrial policy and economic development (Monticelli et al., 2018). Thus, the institutional domain brings practical implications for managers and policymakers (Banalieva, Cuervo-Cazurra & Sarathy, 2018; Cai, Boateng & Guney, 2018).

In accordance with Meyer and Peng (2016), institutions can be divided into “formal” and “informal” ones. Both shape and guide the behavior of organizations (Hitt, 2016; North, 1990; Peng, 2002) and the nature of institutions engenders distinct effects on them (Golesorkhi et al., 2019). 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. Besides, the impacts of formal institutions are more explicit and theoretically better understood (Chen, Saarenketo, & Puumalainen, 2018). Thereby, we assume it fits better to the chosen empirical context of this study – the “Maquila regime” in Paraguay.

When managing international manufacturing operations, firms are expected to make choices because they cannot handle everything every time, thus establishing the operations strategy of the plants (Kim, Sting, & Loch, 2014). By making choices, companies face trade-offs (Skinner, 1969) and decisions are taken according to the stage of operation (Wheelwright & Hayes, 1985). Since “subsidiary strategy and operations have replaced [the initial] entry strategies as a primary concern” (Meyer & Peng, 2016, pp. 8) of International Business (IB),
existing operations (i.e. the post-entry stage) and the growth of international production plants become key matters (Meyer & Peng, 2016).

Considering the importance of institutional frameworks and their influence over companies’ competitiveness, the research question addressed in this study is: **How are operations decisions influenced by host-country formal institutions in international manufacturing?** The research is carried out through two extreme cases of Brazilian textile-apparel companies that expanded their operations to Paraguay under the fiscal benefits of Law 1.064/97, known as "Maquila Law". Therefore, the Brazilian firms’ operations decisions are analyzed in terms of the influence employed by Paraguayan (host country) institutions. Our unit of analysis is the firm embedded to institutional framework, what goes with the focus of IB on the study of companies (Peng, 2004; Wilkins, 1997).

Deriving from the research question, we also identify the following questions: What is the Paraguayan “Maquila regime” and in which context does it develop? Which are the Paraguayan institutions embedded to that context? What are the roles of those institutions and how do they relate to each other? What are the operations decisions taken by firms manufacturing in Paraguay? They all help to achieve the general purpose of the study.

Aiming to support the phenomenon investigation, this study is guided by the institution-based view of international strategy proposed by Peng (2002). Rooted in the New-Institutionalism and based on an integrative perspective between economics and sociology, it helps to understand to which magnitude firms are shaped by both institutional mechanisms and institutional frameworks constraints, especially in emerging economies, as in the case of Paraguay. It examines how strategic choices, comprehended herein as the international manufacturing and the operations decisions taken by companies operating abroad, are outcomes of a dynamic interaction between firms and institutions (Peng, 2002; Yamakawa, Peng, & Deeds, 2008). The overall idea of the institution-based view is that strategies are shaped by the institutional framework of the host country (Cai, Boateng, & Guney, 2018).

This study brings contributions both to the Institutional Theory and to Operations Management theory. It extends the use of the institution-based view to the stream of research in International Operations Management, particularly related to the internationalization towards an emerging market, thereby also casting an eye on operations which go beyond the factory’s walls and in fact encompass the external environment. Particularly, this study unveils the role of formal institutions in shaping operations decisions, thus helping to bridge the research gap about interactions between institutions and firm-level strategies.
1.2. Objectives

In order to answer the questions suggested above, we crafted: 1) a general objective indicating the research focus and what is primarily expected to be achieved; and 2) four specific objectives to build upon and assist the general objective. They are all presented below.

1.2.1. General objective

To comprehend how companies’ operations decisions are influenced by host-country formal institutions in international manufacturing.

1.2.2. Specific objectives

- To explore what is the Paraguayan “Maquila regime” and the context in which it develops;
- To identify the Paraguayan formal institutions embedded to that context;
- To understand the roles of those formal institutions and how they relate to each other;
- To investigate and compare the operations decisions taken by firms when manufacturing in Paraguay.

1.3. Justification and relevance

According to Banalieva, Cuervo-Cazurra and Sarathy (2018), there are four perspectives for the relationship between companies and institutions in emerging markets: 1) host country impact on foreign companies; 2) host country impact on domestic firms; 3) home country impact on foreign companies; and 4) home country impact on domestic firms. Given the above-mentioned research focus, we place our study in the first domain. It meets the need for more studies on the dynamic interaction between institutional landscape and companies with international operations (Koning, Mertens, & Roosenboom, 2018), mainly in the context of emerging economies (Zhang et al., 2017).

The emphasis on host country institutional environments has been disseminated in many studies grounded on the institution-based view (Chen, Saarenketo & Puimalainen, 2018). Traditionally, researches on host-country institutions influence over companies’ strategy and
decisions tended to focus on at least one of the following aspects: FDI attraction, location, entry mode, expansion or performance (Banalieva, Cuervo-Cazurra, & Sarathy, 2018; Cai, Boateng, & Guney, 2018; Chen, Saarenketo, & Puumalainen, 2018; Dhanaraj & Beamish, 2009; Jackson & Deeg, 2008; Mingo, Junkunc, & Morales, 2018; Monticelli et al., 2017; Pereira, Gavronski & Martins, 2016; Regnér & Edman, 2014). The impact of institutional distance between home and host countries (Banalieva, Cuervo-Cazurra, & Sarathy, 2018; Hitt, 2016; Jackson & Deeg, 2008), the joint effects of home and host country-level factors on international operations (Klopf & Nell, 2018) and the interplay between home and host country institutions (Cuervo-Cazurra, 2008; Mingo, Junkunc, & Morales, 2018) have been addressed as subjects of interest too.

Evidencing that institutional analysis is a central domain within the IB field (Henisz & Swaminathan, 2008), some remarkable journals, such as the Journal of International Business, have been frequently promoting special issues on the topic. Some examples are: “Informal Institutions and International Business” (2018); “The Role of Financial and Legal Institutions in International Corporate Governance” (2015); and “Institutions and International Business” (2008) (JIBS, 2019). More recently, the International Business Review called for papers on “Emerging Economy Multinational Enterprises and Institutional Evolution” (2019) (IBR, 2019) and the Global Strategy Journal on “Institutions and Entrepreneurship” (GSJ, 2019) too.

The state-of-the-art literature on institutions and firms can be viewed from both home or host country perspectives. In the former, some studies discuss: 1) the impact of national formal and informal institutions on financial performance (Golesorkhi et al., 2019); 2) the effect of formal regulatory institutions in entrepreneurial opportunities or venture’s likelihood of internationalization (Chen, Saarenketo, & Puumalainen, 2018; Young, Welter & Conger, 2018); 3) how institutional factors influence resource decisions (Hung & Tseng, 2017), innovation and firms’ capacity to generate new ideas (Ho et al., 2018) or coopetition strategies (Monticelli, Garrido, & Vasconcellos, 2018); and 4) the reverse influence of companies on institutions, arguing that institutions from emerging economies can change their original behavior and roles and suffer from “institutional dysmorphia” by adopting different responses to pressures (Monticelli et al., 2018).

On the other hand, research on host-country institutions cover: 1) the relationship between informal institutions (e.g. corruption) and subsidiary autonomy (Rabbiosi & Santangel, 2018) or institutional environment and subsidiary configuration (Asmussen, Pedersen, & Dhanaraj, 2009); 2) the influence on mortality of firms (Dhanaraj & Beamish, 2009), corporate social
responsibility activities and adoption (Rathert, 2016; Wiig & Kolstad, 2010) or FDI decisions (Ávila, Rocha, & Silva, 2015; Cai, Boateng, & Guney, 2018); 3) the strategic responses of companies to local idiosyncrasies (Taussig, 2017), weak and precarious environments (Parente et al., 2018), or specific informal institutions, such as the discrimination against rural migrant workers, demonstrating that not all institutions necessarily exert constraints or pressures (Zhang et al., 2017).

Our research question is drawn on some mapped gaps. As many studies still ignoring institutional environments, the interactions between institutions and firm-level strategies remain under-researched and not completely understood (Hitt, 2016; Jackson & Deeg, 2008; Pereira, Gavronski & Martins, 2016; Wiig & Kolstad, 2010; Zhang et al., 2017). This way, few researches explore the response of companies with international operations to host-country institutional contexts, culminating in many academic calls for that (Regnér & Edman, 2014). Previous knowledge on subsidiaries’ strategy and choices is rooted in advanced economies (Wei & Nguyen, 2017), though. There is a scarcity of studies on international operations management (Pereira, Gavronski & Martins, 2016), so it is necessary to expand the manufacturing strategy analysis to a wider range of influences beyond the factory’s walls, such as the institutional ones (e.g. through industrial policies) (Spring et al., 2017).

To our knowledge, just a few studies unveils the influence of the host-country institutional framework in operations decisions, mainly in emerging market empirical fields, what represents a research opportunity. Therefore, our study contributes to bringing external influences and factors that go beyond the exclusive operation for the Operations Management (OM) area researches.

We set the Paraguayan “Maquila regime” and the textile-apparel sector as a background to comprehending how operations decisions are influence by host-country formal institutions for some reasons. The textile production migrated to emerging economies in the 80’s and by 2010, seven out of the ten largest producers were from Asia – China, India, Pakistan, Indonesia, Taiwan, South Korea and Thailand – representing almost 70% of the total production. Over this process, the global manufacturing competitive landscape has been altered. Even though Brazil is the 5th largest producer and the national textile and apparel chain produced close to R$ 137 billion of goods in 2016 (6% of the total value of the Brazilian manufacturing output), the industry has been losing competitiveness to Asian countries (Abit, 2017, 2010; IEMI, 2017). The sector ended up 2018 nearly stagnant (DCI, 2018). National products have been replaced by imports in retail, what is alarming for the supply chain. As a result, national companies have
been reshaping their competitive strategies and the international manufacturing diversification is an alternative.

Paraguay is one of the most dynamic economies in Latin America, with an average growth of 4.6 percent from 2007 to 2017 (World Bank, 2018c). Traditionally notable for a large informal sector and dependency of commodities (CIA, 2018), the country tries to reduce the reliance on commodities global prices fluctuation and make use of internal competitive factors, such as cheap labor costs and abundant hydroelectric energy. For that purpose, the Government 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 (CEMAP, 2018a; CNIME, 2018a). By offering incentives for the installation of manufacturing and assembling operations, Paraguay has been considered an alternative by many Brazilian companies, including the textile-apparel ones and national leaders, all squeezed by high production costs in Brazil and therefore low competitiveness (BBC, 2013; *Exame*, 2017; *Folha de São Paulo*, 2017; Forbes, 2018; *Jornal Hoje – Globo*, 2018; *O Globo*, 2015).

According to the last Brazilian Multinationals Rankings (Barakat *et al*., 2017, 2016), Paraguay is among the top 10 countries with greater presence of Brazilian companies and among the top 3 locations chosen for opening the first subsidiaries and franchises. The first country to host an international operation of a Brazilian company (*Banco do Brasil*) was Paraguay, in 1941. A brief search on the terms “Maquila” and “Paraguay” returned no results on EBSCO Host, JSTOR Business, ProQuest, LexisNexis, Emerald, SAGE Journals and ScienceDirect online academic databases. The first inquiries on such empirical context have been just initiating within the Brazilian academy, as in the case of Casado, Paias and Teodoro (2018), Soeth (2017) and Maciel (2017).

This way, such a mechanism for capturing foreign investments (the Paraguayan “Maquila regime”), the opportunities generated by it to a changing manufacturing sector worldwide (textile-apparel) and the potential to redesign commercial relations in Latin America called our attention, thus justifying the empirical context for this study.

**1.4. Structure of the study**
The next sections are organized as it follows: first, a theoretical review is developed, hence providing theoretical basis for the inquiry. After it, the research method is presented, containing the methodological proceedings carried out. Chapters 4 and 5 bring the empirical results based on primary and secondary data: first, the Paraguayan institutional environment, and then the operations decisions taken by the selected companies (within- and cross-case analysis). Chapter 6 provides a discussion of the results and offers some propositions. The final chapter closes with the study contributions and identifies its limitations and future research opportunities.
2. LITERATURE REVIEW

This study focuses on the operations decisions’ firms take in international manufacturing and the inherent influence of host-country institutions on them. We set a new empirical context (the Paraguayan “Maquila regime”) and the opportunities emerging out of it to a changing sector (Brazilian textile-apparel industries) as the background for the research question. Based on that, it is assumed firms’ strategies and decisions are somehow shaped by host-country formal institutions, which establish the “rules of the game” in a given local context (Meyer et al., 2009; North, 1990). Figure 1 shows that we comprehend firms as embedded to institutional frameworks, and within such embeddedness is that the research problem posited by this study flourishes.

![Figure 1 – Research problem representation. Source: elaborated by the author.](image)

To support our analysis, we choose the institution-based view, an integrative theoretical perspective that is suitable for explaining sensitive-to-context phenomena (Meyer & Peng, 2016). Considering the importance theory assumes for the study development, we vest the institution-based view of a great attention over this section. Throughout its lens we shed light on fundamental concepts such as “institutions” and “institutional framework” (used interchangeably with “institutional environment” in this study). In the aftermath, we review
three other important dimensions for our research: 1) emerging economies (EE); 2) offshoring strategy; and 3) operations decisions. Those driving concepts are compiled in Table 1. It is worth remembering that our unit of analysis is the firm embedded to institutional framework.

<table>
<thead>
<tr>
<th>Key dimension / concept</th>
<th>Origin of contributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Institutions</td>
<td>Economics, Sociology and International Business</td>
</tr>
<tr>
<td>2) Institutional framework / institutional environment</td>
<td>Economics, Sociology and International Business</td>
</tr>
<tr>
<td>3) Emerging economies</td>
<td>International Business</td>
</tr>
<tr>
<td>4) Offshoring strategy</td>
<td>Operations Strategy</td>
</tr>
<tr>
<td>5) Operations decisions</td>
<td>Operations Strategy</td>
</tr>
</tbody>
</table>

Table 1 – Key concepts presented in the Literature Review.
Source: elaborated by the author.

What makes our study helpful is the possibility to understand how decisions are shaped by formal institutions that are intrinsic to the host-country context in international manufacturing. Since “no organization can be properly understood apart from its wider social and cultural context” (Scott, 1995, pp. 151) as well as from its normative practices, we advocate that “organizations exist in and through time” (Peng, Lee & Wang, 2005).

Before deepening into the literature review, we make some introductory remarks. First, we use the terms “firm”, “company” and “organization” interchangeably, as synonyms. Second, we define multinational companies as those which own, control activities and actively manage at least one operation across their home countries (Buckley & Casson, 2002; Fleury, Fleury, & Borini, 2016), regardless of their size. Third, “operations” are the set of all activities related to and that are part of a given production chain, irrespective of a product or service, while “production” corresponds to the manufacturing or assembling of tangible products or delivering of services (Paiva, Carvalho Júnior, & Fensterseifer, 2009).

2.1. The institution-based view

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) and, by considering institutional conditions, it elicits a contextual perspective (Napshin & Marchisio, 2017). Peng has been exploring the interaction between
institutions and organizations since mid-90’s, as well as how institutional environments lead to unique strategy developments (Peng & Heath, 1996).

Traditionally, strategy scholars have mainly focused on industry conditions (external environment) and firm resources (internal environment), what drew competition and resource-based drivers, but it lacked context (Napshin & Marchisio, 2017). “This is not surprising, because (...) [they] arise primarily out of research competition in the United States, (...) a relatively stable, market-based institutional framework” (Peng, Wang & Jiang, 2008, pp. 921). This way, Peng (2002) advocated for the emergence of a new institution-based perspective to be taken into consideration for understanding differences in business strategies, including those of firms from distinct countries and regions. Peng (2002) did not mean to reject the existing outlooks on competition and resources though, but to supplement them. Those three perspectives are not mutually excluding. Indeed, many future studies integrate them, as suggested by Yamakawa, Peng and Deeds (2008).

The institution-based view is rooted in New-Institutionalism, a movement throughout social science pioneered by both economists (North and Williamson) and sociologists (DiMaggio, Powel, Meyer and Scott). Accordingly, there has been a significant interplay between economics and sociology in such approach, once they are complementary to each other (Peng & Heath, 1996; Peng, Wang & Jiang, 2008). “The institution-based view brings together several distinct lines of research with shared interest in the interaction between economic actors and institutional environments at different levels of analysis” (Meyer & Peng, 2016, pp. 9).

Following Peng’s seminal article (2002), this study considers an integrating perspective that encompasses the sociological and economic points of view. Thus, it expands the traditional application of Institutional Theory on International Business studies, given that economical and sociological streams tended to be fragmented and used apart from each other (Rocha & Ávila, 2015). While sociologists focus on the legitimacy role of institutions, economists concentrate on efficiency, arguing that the institutional framework shapes economic activity and provides the rules of the game (Peng, 2002; Peng & Heath, 1996). Table 2 presents a synthesis of some key contributions provided by each field.

Main concepts embedded - Legitimation  - Institutional change  - Regulatory, normative and cognitive pressures  - Isomorphism  - Bounded rationality  - Market structure / efficiency  - Business transaction costs  - Competition

Key contributions for the integrating perspective - Institutions provide legitimacy by shaping the way people think and behave (DiMaggio & Powell, 1991; Scott, 1987).  - Institutional frameworks may influence decisions and determine which norms and behaviors are socialized into a given society (Scott, 1995; DiMaggio & Powell, 1991).  - Institutional frameworks define what can be done and what should not be done (DiMaggio & Powell, 1991).  - Institutions reduce the uncertainty of organizational actions that conform to institutional expectations (Scott, 1995).  - The interaction between institutions and organizations regulate economic activities (North, 1990).  - Institutional frameworks serve as constraints and set the rules of the game for firms to compete (North, 1990).  - Actors [such as firms] act to maximize the utility within the established rules (North, 1990).  - Institutions reduce uncertainty by limiting the individuals and organizations’ choices (North, 1990).  - Institutions suffer from the “here and now”; short run is closer to history than the long run, and history matters (North, 1990).  - Institutions affect transaction costs and institutional environment governs transactions (North, 1990).

Table 2 – Contributions for the Institution-based view by different Literatures.

Institutional frameworks are central to the institution-based view (Peng & Heath, 1996) and they represent more than background conditions (Napshin & Marchisio, 2017). As defined by Davis & North (1971, pp. 6), they are “the set of fundamental political, social and legal ground rules that establishes the basis for production, exchange and distribution”. The way such systems operate, their rules and the reason for rules to exist determine taboos, penalties and rewards mechanisms (Lu, Tsang & Peng, 2008). The State is the primary source in formulating those rules and setting the institutional context (Peci, 2006). Organizations operate within those broader structures (Lammers & Garcia, 2017). It is expected that “the rules of the game within one institutional framework apply to every firm within its jurisdiction” (Peng et al., 2018a, pp. 200). Firms’ strategies, choices and even performance are then constrained by institutional frameworks.
From another point of view, “institutional environment is a very broad umbrella term involving the whole business system in one country” (Zhang et al., 2017, pg. 874) and firms seek legitimacy by participating of it (Klopf & Nell, 2018). The more diverse their interests are, the more complex the legitimation process tends to be. By “legitimacy” we mean a general perception that actions are appropriate, proper or desirable within a system of meanings, norms, values and beliefs (Lu, Tsang & Peng, 2008; Suchman, 1995), i.e. a legal- and socially combined sense of approval.

Institutional environments interact with both individuals and firms (DiMaggio & Powell, 1991; North, 1990; Powell, 1990; Scott, 1987). As detailed in Table 3, they are composed by formal and informal constraints, i.e. conditions under which those individuals and organizations are permitted to take actions (North, 1990). When formal constraints fail, the informal ones provide constancy and predictability (North, 1990) for firms, thus reducing uncertainty (Meyer & Peng, 2016).

<table>
<thead>
<tr>
<th>Formal constraints</th>
<th>Informal constraints</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Mostly formal written elements, such as:</td>
<td>- Mostly cultural and ideological elements, such as:</td>
</tr>
<tr>
<td>• Political rules</td>
<td>• Codes of conduct</td>
</tr>
<tr>
<td>• Economic rules</td>
<td>• Norms of behavior</td>
</tr>
<tr>
<td>• Judicial rules</td>
<td>• Conventions</td>
</tr>
<tr>
<td>• Contracts</td>
<td></td>
</tr>
</tbody>
</table>

Table 3 – Examples of formal and informal constraints.
Source: elaborated by the author based on DiMaggio & Powell (1991); North (1990); Powell (1990).

The relationship between companies 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 2. On the other side, there can be a “coopetitive movement between firms and institutions” (Monticelli, Garrido & Vasconcellos, 2018, pg. 90) too. Institutional frameworks signal which choices are acceptable and supportable for organizations (Peng, 2002), which in turn need to cope with them (Klopf & Nell, 2018).

Therefore, 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. The way societies evolve and make choices over time is also shaped by institutional changes (North, 1990). The interaction between organizations and institutions varies by national contexts (Peng & Heath, 1996) and within the same country (Monticelli et al., 2018), so companies may face different interactions between institutions in host country and home country (Mingo, Junkunc & Morales, 2018).
Different economic and political models emerge through time, in accordance with institutional frameworks’ particularities and as outputs of them; those models are highly sensitive and can be altered according to any institutional restrictions, so they are institution-specific (North, 1990). The way institutions are built and evolve in each country explains not only performance discrepancies among firms (Essen et al., 2012), as well as the differences among countries themselves (Brito & Vasconcelos, 2005). Institutions are the cornerstones of the institution-based view. Peng and Heath (1996) consider they mold history by shaping political, social and economic incentives. North (1990, pp. 3) suggests that institutions are “the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction.” And we complement it with Scott’s definition: “cognitive, normative, and regulative structures and activities that provide stability and meaning to social behavior” (Scott, 1995, pp. 33).

Institutions can impact firms’ competitiveness through subsidies, protectionism or financial incentives (Monticelli, Garrido & Vasconcellos, 2018). This way, institutions surround and influence people and firms’ behavior. Legitimacy is thus granted through regulative, normative and cognitive structures (Lu, Tsang & Peng, 2008). As observed by Rocha and Ávila (2015), many studies on institutions are still held solely based on the economic perspective (market liberalization, financial reforms, privatization, etc.), what is overcame by the integrative proposal of this current study.

From the economic point of view, Su, Peng and Xie (2016) summarizes that 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.). Yet, “the leading question is how [the] rational economic agents act under the constraints imposed by the institutional
framework” (Meyer & Peng, 2016, pp. 9). Pressures can be asymmetric and vary in terms of origin, form and objective (Monticelli et al., 2018).

Whether economists emphasize defined rules and their impact on markets, the sociological perspective focuses on implicit normative and cognitive forces. For sociologists, institutions affect the legitimacy of behaviors and represent acceptance by the environment. This way, 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 a given 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). Institutional isomorphism is generally depicted by long-term processes (Peng et al., 2017).

In short, institutions can promote stability (through property rights laws, taxation policies and monetary policies, for example) and greater or lesser and flexibility (through labor regulations, financial regulations, business regulations, to mention a few) (Young, Welter & Conger, 2018). By imposing control, limits, and rules, institutions tend to be more restrictive than inclusive (Monticelli et al., 2017). Even though they are commonly conceptualized at the national level, they can also be analyzed on supranational, regional, local-municipal or corporate terms too (Dau et al., 2018; Hitt, 2016).

The division into “formal” and “informal” is also applicable for institutions, whose types 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, cost reduction, etc.) or negative (e.g. bureaucracy, imposition of legal barriers, high taxes, etc.) influences on firms (Monticelli et al., 2017) and rarely change quickly (Hitt, 2016). In the absence of formal institutions, the informal ones can fill the gap (Dau et al., 2018; Meyer & Peng, 2016; Orcos, Pérez-Aradros & Blind, 2018; Peng, 2003).

Following Scott’s definition (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 (Peng, 2003; Scott, 1995). Table 4 shows how North’s and Scott’s
dimensions can be correspondent. Examples of regulatory formal institutions provided by Puffer, McCarthy and Jaeger (2016) are: federal government; law enforcement; legal, economic and banking systems; central bank; and capital markets.

<table>
<thead>
<tr>
<th>Degree of formality (North, 1990)</th>
<th>Supportive pillars (Scott, 1995)</th>
<th>Examples</th>
</tr>
</thead>
</table>
| 1) Formal institutions | A) Regulative (coercive) | - Laws / regulations  
- Rules  
- Judicial decisions / sanctions |
| 2) Informal institutions | B) Normative (social) | - Norms  
- Values |
| | C) Cognitive (cultural) | - Ethics  
- Ways individuals interpret the reality |

Table 4 – Institutions from two viewpoints: sociological and economic. Sources: elaborated by the author based on Meyer & Peng (2016); Napshin & Marchisio (2017); Peng et al. (2009, pp. 64); Rocha & Ávila (2015).

For this study, we concentrate on the influence of formal (North’s view) and regulative (Scott’s perspective) institutions, as they intervene in most aspects of social life (Essen et al., 2012) and are more explicit and theoretically better understood (Chen, Saarenketo, & Puumalainen, 2018). We assume it fits better to the empirical context under study, the “Maquila regime” (a regulatory and fiscal framework in Paraguay), rather than informal or cognitive and normative institutions. Our unit of analysis is the firm embedded to institutional framework. Since studies on the influence of institutions and institutional environments can focus on either home-country or host-country aspects (Rocha & Ávila, 2015), we chose the latter. As a result, we aim to comprehend how operations decisions taken by companies in international manufacturing are influenced by host-country formal and regulative institutions.

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). Since Khanna and Palepu (2006) point that some institutions can only be set up by governments, we infer that it fits to most of the regulative ones, because governments set rules and regulations. Government thus play an active role in institutional design and development (Kim, Kim, & Hoskisson, 2010).

Still following Rocha and Ávila (2015), coercive mechanisms shall encompass: 1) the “rules of the game”; and 2) its enforcement, i.e. effective and consistent application (most important). Besides it, regulative institutions can be classified in terms of high or low quality. If a country’s regulative dimension is of higher quality, it is expected that there is respect for
civil rights and business laws and regulations. Coercive mechanisms are supposed to be applied, if necessary, to ensure compliance and protection of rights. Enforcement is reliable. The opposite is applicable for lower-quality regulative structures.

Some factors to evaluate the regulatory quality of institutional environments are: stability and transparency of government policies, government control of production factors, insurance of contract honor, favorable rules to foreign investments, protection of property rights and efficiency and independence of the Judiciary (Ávila, Rocha, & Silva, 2015). For comprehending the regulative influence of host-country institutions, Rocha and Ávila (2015) suggest some relevant aspects to be analyzed, presented in Table 5. As proposed by Mingo, Junkunc, and Morales (2018), the quality of regulatory institutions is directly related to the probability of foreign investment transactions.

<table>
<thead>
<tr>
<th>Regulative factors</th>
<th>Description</th>
<th>Some variables for factor evaluation</th>
</tr>
</thead>
</table>
| - Government intervention level        | Government's ability to formulate and implement policies and regulations that interfere in the private sector | - Consistency of governmental policies  
- Transparency of governmental policies |
| - Protectionism degree                 | Extension to which the government takes protectionist actions               | - Government control over essential production factors  
- Privileges to state-owned enterprises  
- Existence of local and distinct rules governing foreign investments |
| - Foreign investment restrictions      | Extension to which the government imposes rules that hinder the acquisition and management of companies by foreign investors | - Existence of rules / instances of approval for foreign investments  
- Rules for acquiring local companies  
- Rules for establishment of joint ventures |
| - Protection of property rights        | Instruments for asset owners assuring discretionary power to use it and enjoy the returns it provides | - Adequacy of laws to protect property rights  
- Simplicity of procedures to protect property rights |
| - Legal framework quality              | Quality of the country legal framework, what can facilitate the creation of new ventures and the business management by foreign firms | - Existence of protection mechanisms for contracts honor  
- Labor legislation complexity  
- Ease for expatriating employees |
| - Judicial system                      | Quality of the Judiciary, encouraging respect for the laws and ensuring compliance with them | - Judicial system efficiency  
- Judicial system independence |

Table 5 – Regulative pillar factors.  

The first two represent governmental action. The next two are basically economic-factors (they set of “rules of the game”), whereas the last two are related to legal protection. There is no consensus in the literature, though, on which conditions influence the most (Rocha & Ávila,
2015), so the ones suggested are tentative. Irrespective of the lack of most appropriate factors, pressures lead firms to requirements conformity (Lu, Tsang & Peng, 2008; Peng, 2003). Adequacy then emerges in response to coercive pressures (Rocha & Ávila, 2015). It is not expected that all firms respond to institutional pressures in the same way (Essen et al., 2012). Firms increasingly seek to also take advantage of institutions instead of just complying with them (Su, Peng & Xie, 2016).

That way, some major contributions of the institution-based view are: 1) to bring the institutional roots of context to different business phenomena (Peng et al., 2018a), like international manufacturing; 2) to focus on strategic choices as outcomes of a dynamic interaction between institutions and organizations (Peng, 2002). This theoretical perspective seeks to overcome the previous conception of institutions as ordinary players fading into passiveness by now assuming they directly impact firm’s strategy formulation and implementation, at least to some extent (Peng, Lee & Wang, 2005; Yamakawa, Peng & Deeds, 2008). For Essen et al. (2012), it then brings novelty and empirically validated theoretical underpinnings.

2.1. Institutions and institutional frameworks in emerging economies (EE)

Institutional environments are quickly changing, then serving interesting contexts (Lu, Tsang, & Peng, 2008). Institutional change is a process that: 1) involves multiple stages with different outcomes; 2) is triggered by different events; and 3) has different firms’ responses (Kim, Kim, & Hoskisson, 2010). Fast institutional changes lead to high levels of uncertainty (Wu & Chen, 2014). This calls for resilience on institutions (Peng et al., 2017). Institutions are mutable over time and can be influenced by institutional transitions, leading firms to respond accordingly. “Institutional transitions can be defined as fundamental and comprehensive changes introduced to the formal and informal rules of the game that affect organizations as players” (Peng, 2003, pp. 275).

Those institutional changes matter for firms’ strategic choices. They take place more frequently and are especially profound in EE (Meyer & Peng, 2016; Peng, 2003; Peng et al., 2018a; Zoogah, Peng, & Woldu, 2015), 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, Lee & Wang, 2005). Besides sudden, changes in EE are also strongly motivated by ideology (Rottig, 2016). Institutional transitions can be rapid (e.g.
Eastern Europe post-1989) or gradual (e.g. China) and create beneficial or detrimental contexts. Fast transitions are likely to establish chaos and unpredictability (Peng et al., 2018a).

Countries have contrasting institutional contexts and distinct market inefficiencies (Meyer et al., 2009), leading to differently regulated markets. They all host formal and informal institutions too (Essen et al., 2012). Accordingly, the differences between institutions of emerging and develop countries are noteworthy (Peng, Lee & Wang, 2005; Rottig, 2016). Table 6 compiles some EE institutional frameworks attributes.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies tend to rely more intensively on relationships and networks if formal rules are fragile, developing structures to face uncertainty and institutional idiosyncrasies.</td>
<td>Meyer &amp; Peng (2016).</td>
</tr>
<tr>
<td>Firms can easily benefit from having connections with government officials and intermediaries.</td>
<td>He &amp; Wei (2013).</td>
</tr>
<tr>
<td>Underdeveloped institutions and inefficient local markets.</td>
<td>Taussig (2017).</td>
</tr>
<tr>
<td>Countries with weaker and underdeveloped institutions tend to have worse protection for minority investors.</td>
<td>Li et al. (2018).</td>
</tr>
<tr>
<td>Weak institutional contexts are characterized by lack of information, inadequate number of market intermediaries, low level of public scrutiny and difficulties in accessing certification bodies.</td>
<td>Orcos, Pérez-Aradros, &amp; Blind (2018).</td>
</tr>
<tr>
<td>Institutional environment in emerging economies may cause political hazards, facilitating competitors or local partners to take advantage of foreign firms</td>
<td>Uhlenbruck et al. (2006).</td>
</tr>
<tr>
<td>Existence of many institutional failures, such as poor legal systems, discretionary governmental policies, and inefficient regulation. The combination of all elements poses many challenges specially for small and medium enterprises (SMEs).</td>
<td>Mesquita &amp; Lazzarini (2008).</td>
</tr>
</tbody>
</table>

Table 6 – Emerging economies institutional frameworks characteristics. Source: Elaborated by the author.
In a nutshell, the main characteristics of institutional environments from emerging countries 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 (Cuervo-Cazurra & Genc, 2008; He & Wei, 2013; Hoskisson et al., 2000; Monticelli, Garrido, & Vasconcellos, 2018). They are summarized in the following piece: “in emerging markets […] institutions are often weak, of poor quality and subject to legal, political, governmental, social and cultural, technological and security issues” (Gama et al., 2016, pg. 331).

Thus, the institution-based view emerges as an alternative to understand organizational phenomena in emerging countries, whose institutional frameworks are different from the relatively stable ones of developed economies (Peng, Wang, & Jiang, 2008). Consequently, it contributes to research on emerging economies to the extent that it has become a “dominant perspective underpinning strategy research on EE” (Yamakawa, Peng, & Deeds, 2008, pp. 64).

It is not appropriate to imagine that all EE have their institutions playing the same role over companies. Their diversity of institutional conditions remains high (Meyer & Peng, 2016). Due to disparities in industrialization stages, economic growth, cultural heritages, societies and governmental action, to mention just a few, the pressure and influence of institutions also vary among the different emerging countries (Lu, Tsang, & Peng, 2008). Those countries “show substantial variation in formal and informal institutions” (Meyer et al., 2009, pp. 62) and they are interesting subject of analysis, but researches are concentrated in developed countries (Ávila, Rocha, & Silva, 2015).

EE generally have poor and weak regulatory environments which generate greater uncertainty (Ávila, Rocha, & Silva, 2015), less sophisticated institutional frameworks and sometimes inconsistent institutional pressures (Meyer & Peng, 2016). Weak legal systems and corruption result from weak institutions (Cai, Boateng, & Guney, 2018). The lack of certain market-supporting institutions leads to the existence of “institutional voids” (Khanna & Palepu, 1997), reflecting the institutional deficiencies of formal rules (Puffer, McCarthy, & Jaeger, 2016) and reducing the tendency to isomorphism (Meyer & Peng, 2016). Those “voids” can be filled or lessen by Government support (Su, Peng, & Xie, 2016) or by business groups (Kim, Kim, & Hoskisson, 2010; Peng et al., 2018a), for instance. When present, firms should redesign their organizational forms (Meyer & Peng, 2016) and ponder decision-making processes to face such “institutional voids”.
For Peng et al. (2018), there are extensive institutional voids in weak institutional environments, in contrast to the strong ones. Some examples are: lack of reliable information for consumers, employers and investors; misguided regulations; judicial systems incapable of enforcing contracts; absence of intermediary institutions to facilitate transactions (Rottig, 2016). Given it, informal institutions can have a more prominent role in developing contexts (Dau et al., 2018), but give rise to inappropriate methods, such as bribery or facilitation payments (Li, Yao & Ahlstrom, 2015). In consequence of that all, in EE firms tend to rely not only on formal institutions to work effectively, but to cultivate personal and organizational relationships with government officials and institutions for securing some favors and creating more favorable conditions. Mechanisms such as lobbying are then used (He & Wei, 2013).

Therefore, insightful elements can be offered by the institution-based view relating to the impact of EE’ institutional environment on firms (Wu & Chen, 2014). The central idea of the institution-based view is that institutions matter and should be taken into consideration to explain business strategies and decisions, mainly in emerging countries. Also, it recognizes the context as an important aspect. The role of scholars to investigate how they matter (Peng, Wang & Jiang, 2008), what is in line with our research question.

### 2.2. Emerging economies (EE)

Continuing with the previous debate on EE, we first define them. Composed by low-middle-income countries with rapid and expressive economic growth, but relatively late when compared to developed countries, EE are characterized by weak and turbulent institutional environment, marked by a series of instabilities and political and economic ruptures, and by the implementation of development initiatives based on economic liberalization (Bianchi, 2009; Hoskisson et al., 2000; Welsh, Alon & Falbe, 2006).

EE are constituted by many institutional idiosyncrasies and unique features (Rottig, 2016) and “it is often difficult to correctly assess the future course of action of EE” (Singh, 2012, pg. 405). Although quite heterogeneous among them, they have gained international relevance thanks to the political and economic reforms that have allowed the opening of previously isolated markets. Given that all and the EE’s expressive growth, the literature on EE has proliferated over the last two decades, extending the knowledge on both firms’ strategic choices and institutions (Peng et al., 2018b, Rottig, 2016).
Industries from these EE have suffered and continue to undergo major structural changes, even though EE have evolved in terms of capabilities development, managers profile and factor markets (for merger and acquisitions, for example), to mention just a few (Peng et al., 2018b). The unpredictability and not transparence of many changes still affect economic activity of firms, leading to perceptions of instability, inconsistency and arbitrariness (Rottig, 2016). Companies are vulnerable to volatile legal systems and relatively weak and complex institutional mechanisms in EE (Luo & Tung, 2007, 2018). They are controlled predominantly by either families or the State (Aguilera et al., 2017).

Compared to developed economies, EE firms are generally characterized by a lack of resources and technology (Chitoor et al., 2009). In other words, they seem to be deficient in intangible assets that more traditional companies are not (Hernandez & Guillén, 2018). Some particularities of EE that generally do not exist in develop countries are institutional voids, high importance of informal institutions, institutional pressures by local governments, and institutional change (Rottig, 2016). It makes companies find new ways to implement strategies and fit the institutional environment (Khanna, Palepu, & Sinha, 2005). Due to weaknesses and deficiencies of the institutional context in which they arise, one strategy used is the so-called “social and relational capital” (Ciravegna, Lopez, & Kundu, 2014), relying on personal networks. Hence, network ties play an important role in supporting EE companies’ growth (Peng et al., 2018b).

The context of EE leads companies to “face more uncertainty, higher risks and thus, higher transaction costs” and “have to perform basic functions that are taken for granted in developed markets (such as access to reliable and adequate information, economically sound regulations, efficient judicial systems etc.) themselves (…)” (Rottig, 2016, pg. 5). Consequently, they can be reluctant in entering those countries or expanding operations due to the lack of a clear policy framework, what in turn can result in expropriation or chances of losses (Singh, 2012). They are also exposed to financial vulnerabilities, such as commodity price fluctuation and financial market volatility (Pitterle, Hauser, & Hong, 2015), and can be involved in unregistered and unregulated (but not necessarily illegal) business activities (Li, Yao, & Ahlstrom, 2015). Based on that, political, economic and social adaptations are required (Rottig, 2016).

In the mid-2000s, EE companies began to change from their internal orientation towards an export-oriented growth (Aulakh, Kotabe, & Teenen, 2000). The institutional transitions taking place in EE facilitated the development of all types of firms, including new
multinationals (Peng et al., 2018b). Therefore, those companies have become international from a relatively recent time (Cuervo-Cazurra et al., 2017). In short, they would also use international expansion to overcome the home-country institutional constraints (Luo & Tung, 2018). The emergence of these multinationals questions the patterns of the “North-South” investments flow (Casanova, 2009; Cuervo-Cazurra et al., 2017) and it is expected that EE play a more relevant role in shaping norms and institutions beyond national borders too (Luo & Tung, 2018).

The absence of regulatory and legal institutions does not support breakthrough market-oriented innovations though, and companies from EE tend to start with an imitation strategy (Peng et al., 2018b). When operating abroad, they are inclined to recruit host-country employees for the top management (Luo & Tung, 2018). However, depending on the location, the lack of specialized intermediaries or the existence of unskilled intermediaries can hinder that, leading to either unavailability or not very sophisticated services (Khanna, Palepu, & Sinha, 2005). EE firms are more horizontally and vertically integrated too, providing themselves with what cannot be easily procured in less established and bad-functioning markets (Gammeltoft, 2010). This way, supplier networks become less dense and costlier to build (Pereira, Gavronski, & Martins, 2016).

Compared to multinationals from developed countries, little is known about them yet (Cuervo-Cazurra & Genc, 2008; Madhok & Keyhani, 2012; Peng, Wang, & Jiang, 2008), even though the literature has been recognizing EE multinationals as a new organizational form (Peng et al., 2018b). Most of the studies still comprise a limited number of markets, especially China and India (Hennart, Sheng, & Carrera, 2017; Padilla-Perez & Nogueira, 2016; Ramamurti, 2012). This leads to under-representation of strategies and experiences (Ciravegna, Lopez, & Kundu, 2014; Cuervo-Cazurra, 2016).

The international location decisions of EE companies are one of the most important (Conti, Parente, & Vasconcelos, 2016). Investments can be directed to either developed, generally through aggressive mergers and acquisitions, or emerging economies (Luo & Tung, 2018). In the latter, firms can seek efficiency at reducing production costs and one possible strategy is to invest on neighboring countries with lower wages and labor costs, what is mainly pursued by the manufacturing sector (Padilla-Perez & Nogueira, 2016). Hence, we assume there is room for offshoring strategies in the international expansion of EE companies. Offshoring is still contemporary because of the “challenges for the firm of maintaining competitive advantage in the face of pressures to reduce costs and shift production” (Doh, 2005, pp. 696). Despite the
changes in exchange rates, EE remain with lower costs of production than developed countries (Grosse, 2016).

2.2.1. Latin America as a region of EE

Latin America is paradoxical – it faces serious challenges at the same time it offers many business opportunities. Some of the most noticeable characteristics of the region are: abundant natural resources, vulnerable institutional context, presence of institutional voids, weak market infrastructure, existence of high levels of corruption, macroeconomic and political volatility, large mass of customers at the bottom of the pyramid, high intervention of the State and informality, to mention just a few (Vassolo, de Castro, & Gomez-Mejia, 2011). Therefore, we notice many similarities to EE characteristics.

Despite the significant differences across the region in terms of regulatory institutions and institutional development levels (Mingo, Junkunc, & Morales, 2018), some issues remain the same. First, the dependency of international commodity prices is high and directly impacts economic growth (Pitterle, Haufler, & Hong, 2015). Second, Latin American firms tend to be family-owned and multi-sectorial (Grosse, 2016), with partial or total participation of the State in the capital of firms from extractive sectors (Casanova, 2009). Third, capital constraints (e.g. funding, credit, inadequate access to long-term capital) represent a central obstacle for firms’ development and internationalization (Casanova, 2009; Finchelstein, 2017). Fourth, many firms, especially the small and medium-sized manufacturing ones, are confronted with barriers to exporting and suffer from the inadequacy of promotion policies (Tesfom & Lutz, 2006).

The competitive prospect of Latin America most closely resembles that one of EE: 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. In response, firms tend to use lobbying activities, which are less transparent than in DE (Casanova, 2009; Vassolo, de Castro & Gomez-Mejia, 2011). For Crespi and Zuniga (2012), one of the most important challenges of the region is the lack of innovative systems for improving firms’ productivity, what would result in better economic performance of Latin America’s countries.

According to Monticelli et al. (2018), Latin American firms have the following common motivations for international markets, despite the home-country turbulent environments:
promotion of brands globally; access to low-cost research and development; business models’ improvements; access to know-how and expertise and market leadership. Casanova (2009, pg. 18) remembers the existence of efficiency-seeking incentives too, which go “beyond low-cost input factors and (...) includes motives related to the efficiencies of vertical integration of production and service lines of business.” For this author, the Latin American manufacturing sector reflects the search of international efficiencies through access to relatively cheap labor, giving rise to many “maquila branch-plants” over the region. In short, Conti, Parente, and Vasconcelos (2016) depict the internationalization motives into push factors (origin in the limitations of the home country) and pull factors (origin in the opportunities provided by the host country).

The rise of multilatinas, or Latin American multinationals, was amid four predominant regional characteristics: political uncertainty, violence, pro-market reforms and reversals, and geographic isolation. They demonstrate that foreign industrial leadership is possible, and that home-country supposed disadvantages can be used as competitive advantages. Benefited from the consolidation of economic-liberal reforms and the development of previously restricted markets, multilatinas are either motivated by international learning (application of the home-country knowledge to international markets) or to escape from the home-country adverse conditions (Cuervo-Cazurra, 2016). They are present in strategic sectors of the economy, such as banking, aviation and energy (Ciravegna, Lopez, & Kundu, 2014; Cuervo-Cazurra, 2016).

The internationalization path is followed by micro, small and medium companies from Latin America too. According to Padilla-Perez and Nogueira (2016), they generally have one subsidiary on average, mostly located within the region. The investments abroad are even more recent, contrasting to multilatinas emergence in the early 2000s (Casanova, 2009). Padilla-Perez and Nogueira (2016) found that international expansion is driven by situational opportunities too, such as serving an important client or local partner.

Inevitably, Latin America remains a turbulent place for business. If, at one hand, this represents an opportunity for local expansion of multilatinas and for small and medium-sized companies, on the other firms are still under direct influence of economic and political crises and ambiguous policies (Aguilera et al., 2017; Casanova, 2009). This requires adaptation and acceptance to the fact that local institutions shape businesses with unique features (Rottig, 2016), differently from any other place in the world.
2.3. Offshoring strategy

Global operations are intensified by multinational companies, which have transformed the manufacturing landscape and the design of international networks. Internationalized companies sought to integrate some location benefits into their operations, such as access to low-cost labor or specialized resources. Besides the traditional considerations of cost and quality, however, new dimensions of international markets evaluation have been emerging and consider country-level factors: local laws, regulations, infrastructure and institutions (Brennan et al., 2015).

For firms with operations abroad, the importance of diversifying international manufacturing is notable, and companies seek foreign jurisdictions to locate their production facilities considering that each country represents a mix of opportunities and threats (Lampel & Giachetti, 2013), based on its political, economic, social, legal and cultural contexts and structures. Aiming to gain competitive advantage, some important variables to be taken into account are accessibility, site costs, basic services, industrialization, taxes and incentives and host government cooperation. Emerging markets are a frequent destination: they have accessibility to certain natural resources and reduced site costs, for example, but at the same time they are troubled by varying government policies and poor infrastructure (Prasad & Babbar, 2000).

One possible strategy employed by firms when managing manufacturing operations overseas is offshoring, whose three main drivers are: 1) comparative costs of labor, 2) cost cutting and 3) improved information flow (Kumar & Wilson, 2009). Paiva, Carvalho Júnior, and Fensterseifer (2009) indicate that this decision says a lot about the level of coordination desired between the subsidiary (foreign factory) and the head office.

In his seminal paper on the strategic role of plants abroad, Ferdows (1997) stresses that offshore factories’ main purpose is to gain access to low wages and other factors of low-cost production. They are settled to generate specific items at a low cost and to further export them to be finished elsewhere or for sale. Thus, offshoring strategies entail low levels of technical investments and managerial resources, kept at the minimum required for the production not to stop. It is not expected from such a factory to be innovative.

Consequently, engineering and product development do not frequently occur at the factory, and local managers tend to act in accordance with the head office decisions in terms of suppliers and prices. Managers tend to follow instructions and methods, while they rely on
others to provide new processes and technologies. In terms of organizational structure and functions, support areas staff (e.g. Accounting, Finance and Human Resources) in the home country provide the necessary data to managers ensure the factory’s proper functioning. Outbound logistics, for example, are not expected to be under the responsibility of the plant’s management either (Ferdows, 1997).

Due to the emphasis on the assembly line (Paiva, Carvalho Júnior & Fensterseifer, 2009), two of the main challenges for companies that install offshore factories abroad are: to ensure the quality of the product remains the same, and to make efficient control of a variety of attributes (e.g. lead times, inventory and intellectual property). Cost savings bring trade-offs that are permanently balanced by companies (Kumar & Wilson, 2009).

Although companies still launch offshoring strategies chiefly to cost reduction, Lewin and Peeters (2006) found that other reasons for firms installing manufacturing plants overseas are “growth strategy”, “competitive pressure” and “access to qualified personnel”. They were cited by at least 70% of a survey’s participants, while “cutting costs” is prevailing with almost 100% of the answers. Growth motivation, indeed, has been rapidly creeping on cost efficiency.

Additionally, offshoring is also comprehended as a process of sourcing and coordinating tasks and business functions across national borders, what means “business functions supporting home-based and global operations are sourced from a location outside the home country” (Manning, Massini, & Lewin, 2008, pp. 39). The relocated tasks and production can be at a foreign site (subsidiary) of the same company (in-house offshoring) or at a separate company located abroad that serves as a third-party provider (Garner, 2004; Lewin, Massini, & Peeters, 2008). Table 7 illustrates these possibilities based on the organization of economic activities across firms and countries.

<table>
<thead>
<tr>
<th>Offshoring</th>
<th>Outsourcing</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td></td>
<td>YES</td>
</tr>
<tr>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td></td>
<td>YES</td>
</tr>
</tbody>
</table>

Table 7 – Offshoring x Outsourcing matrix

Lewin and Peeters (2006) indicate that the most recent wave of offshoring included more innovation and product development than it was conceived by the traditional literature, evolving
to a broader notion of general services and support roles beyond manufacturing- and production-related functions. A recent trend is the offshoring of business services (Lewin, Massini, & Peeters, 2008), for example.

In this context, Farrell (2006) highlights the most important motivations for services offshoring decisions are cost (of labor, infrastructure, real estate and corporate taxes), availability of skills, environment (government support, business and living environment and accessibility), market potential, risk profile and quality of infrastructure. Garner (2004) sums up those factors into three categories: economic, technological, and regulatory. Additionally, education level and cultural similarity are also significant drivers for offshoring location choices (Bunyaratavej, Hahn, & Doh, 2007).

While it advances, offshoring raises many questions for both policymakers and general public because it can supposedly affect employment and jobs creation, local competition, sectorial dynamics, legislation and living standards (Garner, 2004). However, it has become a frequent business practice for many companies and reducing labor costs is no longer the only decision driver, once accessing highly skilled talent has emerged as a new and important component (Manning, Massini, & Lewin, 2008).

Regardless of its benefits and risks, which are inherent to any choice companies make, offshoring is a strong driver that shapes the configuration of global manufacturing nowadays – and tends to continue unabated (Brennan et al., 2015), even though its results are considered dubious for some authors (Nassimbeni, 2003) and there is a recent re-shoring (or back-shoring) flow taking place in some regions.

2.4. Operation decisions

Firms are expected to make choices, since they cannot handle everything every time. They have to decide certain aspects that are essential for their business models, such as what kind of products/services to deliver, to whom and how. Decision-takers, including operations executives (OE), play an active role over decision-making processes (Demeester, De Meyer, & Grahovac, 2014). As an outcome of today's competitive economy, managers face multiple conflicting goals, what turns manufacturing decision-making processes more complex and dynamic, at the same time it leads to many organizational conflicts (Ehie, 2010). The particular decisions regarding competitive priorities and the operation's strategic orientation set the operations strategy of a firm (Kim, Sting & Loch, 2014). Manufacturing decisions also drive
operational capabilities, which can represent sources of competitive advantages, therefore influencing on company performance (Ehie, 2010).

In the seminal article showing how manufacturing and corporate strategies are linked, Skinner (1969) developed the notion of trade-offs. He posited that their existence is intrinsic to designing and operating a production system, so firms’ operations decisions are guided by those trade-offs. Based on their activities, companies constantly make choices in five tradeoff areas (Skinner, 1969). Table 8 brings a more detailed explanation over each category of decision.

<table>
<thead>
<tr>
<th>Category (tradeoff area)</th>
<th>Examples of decisions (x alternatives)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Plant and equipment</td>
<td>Span of process (make or buy); plant size (one big plant or several smaller ones); plant location (near markets or near materials); investment decisions (invest on building or equipment or inventories on research); choice of equipment (general-purpose or special-purpose); kind of tooling (temporary, minimum tooling or production tooling).</td>
</tr>
<tr>
<td>2) Production planning and control</td>
<td>Frequency of inventory taking (few or many breaks); inventory size (high or lower); degree of inventory control (in greater detail or in lesser detail); what to control (designed to minimize machine downtime or labor cost or time in process); quality control (high reliability and quality or low costs); use of standards (formal or informal or none).</td>
</tr>
<tr>
<td>3) Labor and staffing</td>
<td>Job specialization (highly specialized x not highly specialized); supervision (technically trained first-line supervisors or non-technically trained first-line supervisors); wage system (many jobs grades or few jobs grades; incentive wages or hourly wages); supervision (close x loose); industrial engineers (many or few).</td>
</tr>
<tr>
<td>4) Product design / Engineering</td>
<td>Size of product line (many customers specials or few specials or none); design stability (frozen design or many engineering change orders); technological risk (new processes unproved or follow-the-leader policy); engineering (complete package design or design-as-you-go approach); use of manufacturing engineering (few or many manufacturing engineers).</td>
</tr>
<tr>
<td>5) Organization and management</td>
<td>Kind of organization (functional or product focus or geographical or other); executive use of time (high involvement in investment or production planning or cost control or quality control or other activities); degree of risk assumed (decisions based on much or little information); use of staff (large or small staff); executive style (much or little involvement in detail, authoritarian or non-directive style, much or little contact with organization).</td>
</tr>
</tbody>
</table>

Table 8 – Tradeoff areas for companies’ decisions.


Some years later, Wheelwright, a Skinner’s follower, expanded the categories of decisions and strengthened the manufacturing strategy importance. He also emphasized that patters of decisions shall be congruent to a defined strategy – strategy definition is based on
choices. Some aspects not captured by Skinner (e.g. suppliers) were included. According to him, companies’ choices impact at least four dimensions: price, quality, dependability and flexibility. Decisions can change over time and their variety may be complementary and mutually supportive (Wheelwright, 1984).

Because of the diversity of choices, Wheelwright (1984) group them into eight major categories of an organizing framework: 1) capacity, 2) facilities, 3) technology, 4) vertical integration, 5) workforce, 6) quality, 7) production planning and materials control, and 8) organization. They intend to determine both the structure and the capabilities of any manufacturing organization, and those decisions originate the strengths and weaknesses of any organization. Table 9 contemplates and details them all.

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples of decisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Capacity</td>
<td>Amount, timing, type.</td>
</tr>
<tr>
<td>2) Facilities</td>
<td>Size, location, focus.</td>
</tr>
<tr>
<td>3) Technology</td>
<td>Equipment, automation, connectedness.</td>
</tr>
<tr>
<td>4) Vertical integration</td>
<td>Direction, extent, balance.</td>
</tr>
<tr>
<td>5) Workforce</td>
<td>Skill level, pay, security.</td>
</tr>
<tr>
<td>6) Quality</td>
<td>Defect prevention, monitoring, intervention.</td>
</tr>
<tr>
<td>7) Production planning/materials control</td>
<td>Computerization, centralization, decision rules.</td>
</tr>
<tr>
<td>8) Organization</td>
<td>Structure, reporting levels, support groups.</td>
</tr>
</tbody>
</table>


Wheelwright’s conceptualization lacks more details on the definition of each category: only a few are developed throughout the study – the “technology” category is an example of explicit delineation. However, another contribution of Wheelwright (1984) is to understand the categories of decisions based on their nature. Thus, the first four are considered structural because of their long-term range, the trouble in reversing them once they are already in place, and the tendency to demand large capital investments. Yet, the last four are viewed as tactical given their encompassing on ongoing decisions, need to be linked to operating aspects and propensity not to require substantial capital investment.

Wheelwright and Hayes (1985) also enhances the idea that any manufacturing operations embodies an array of important decisions and that they are related to the stage a manufacturing is. In this sense, Wheelwright’s (1984) patterns of decisions are taken back to origin a new set of decisions, this time composed by nine categories. Some of them were kept exactly the same,
while others had been reformulated. The structural ones were maintained, with a slight change in one category. The previous “Production planning/materials control” was disintegrated and their attributes incorporated to other categories. Wheelwright and Hayes’ list of decision categories is presented in Table 10.

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples of decisions</th>
<th>Comparison to Wheelwright’s (1984)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Capacity</td>
<td>Amount, timing, type.</td>
<td>Kept the same.</td>
</tr>
<tr>
<td>2) Facilities</td>
<td>Size, location, specialization.</td>
<td>Kept the same.</td>
</tr>
<tr>
<td>3) Equipment and process technologies</td>
<td>Scale, flexibility, interconnectedness.</td>
<td>Change of name (previous: “Technology”). Addition of a process dimension to it.</td>
</tr>
<tr>
<td>4) Vertical integration</td>
<td>Direction, extent, balance.</td>
<td>Kept the same.</td>
</tr>
<tr>
<td>5) Vendors</td>
<td>Number, structure, relationship.</td>
<td>Change of name (previous: “Vertical integration”). Addition of a more relational dimension to it.</td>
</tr>
<tr>
<td>6) New products</td>
<td>Hand-off, start-up, modification.</td>
<td>New category (seems that it was not covered by any category before).</td>
</tr>
<tr>
<td>7) Human resources</td>
<td>Selection &amp; training, compensation, security.</td>
<td>Change of name (previous: “Workforce”). Addition of a more tactical dimension to it.</td>
</tr>
<tr>
<td>8) Quality</td>
<td>Definition, role, responsibility.</td>
<td>Kept the same but it added more managerial choices.</td>
</tr>
<tr>
<td>9) Systems</td>
<td>Organization, schedules, control.</td>
<td>Change of name (previous: “Organization”). Addition of a more integrative dimension to it.</td>
</tr>
</tbody>
</table>

Table 10 – Important decisions of every manufacturing operation.  
Source: elaborated by the author based on Wheelwright & Hayes (1985).

Looking for patterns of manufacturing choices, Wheelwright and Hayes (1985) also proposed decisions to be grouped into two fundamental categories: 1) the structure-related (capacity, facilities, equipment and process technologies, and vertical integration and sourcing) and 2) the infrastructural ones (resources allocation and capital systems, organization, quality management, workforce policies, human resources systems and information systems architecture). For Miller and Roth (1994), those patterns of choice must be congruent with the manufacturing task. On the other hand, Ward, McCreery, and Anand (2007) criticized the fragmented way in which infrastructural and structural manufacturing decisions have been covered by the literature. For them, it makes the connection between decisions and the whole business strategy more difficult.
As anticipated by Choudhari, Adil, and Ananthakumar (2012), structural and infrastructural categories of decisions are rearranged by various authors. In common, all of them are grounded in seminal manufacturing works, such as Skinner (1969), Wheelwright (1984) and Wheelwright and Hayes (1985). Comparing to contemporary researches, we note that the idea of structure versus infrastructure remains present. Table 11 compares seminal categories with the ones later developed. We note that no substantial categories’ changes emerge over time, except for differences in grouping and naming.

<table>
<thead>
<tr>
<th>Structural decisions</th>
<th>Infrastructural decisions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production planning and control; Labor and staffing; Product design / Engineering; and Organization and management.</td>
</tr>
<tr>
<td>2) Wheelwright and Hayes (1985)</td>
<td>Capacity; Facilities; Technology; and Vertical integration.</td>
</tr>
<tr>
<td></td>
<td>Workforce; Quality; Production planning / materials control; and Organization.</td>
</tr>
<tr>
<td>3) Miltenburg (2005)</td>
<td>Facilities; Process technology; and Sourcing (Suppliers and Vertical integration).</td>
</tr>
<tr>
<td></td>
<td>Production planning and control; Organization structure and control; and Human resources.</td>
</tr>
<tr>
<td>4) Slack and Lewis (2009)</td>
<td>Capacity (includes Facilities); Supply networks; and Process technologies.</td>
</tr>
<tr>
<td></td>
<td>Development and Organizations.</td>
</tr>
</tbody>
</table>

Table 11 – Structural x Infrastructural categories of decisions over time.
Source: elaborated by the author based on Choudhari, Adil and Ananthakumar (2012).

Choudhari, Adil, and Ananthakumar (2012) remember that decisions taken may influence other decisions too. Additionally, the manufacturing strategy has broadened and some dimensions that were not even mentioned in the 1970s and 1980s are now relevant, such as sustainability and supply chains (more precisely, supply risk and supply chain resilience). Hence, contemporary operations decisions encompass those aspects and the unit of analysis has been progressively expanding to the supply network besides the firm (Spring et al., 2017).

Even though the seminal categories of Skinner (1969), Wheelwright (1984) and Wheelwright and Hayes (1985) guided future studies, they were thought in relatively stable contexts, with little or no intervention of the State and few or no sudden ruptures. For those authors, it did not make sense to explore how instable institutional frameworks of EE, for instance, could constrain the operations decisions a company take. This way, we address this opportunity in this study, expanding the manufacturing strategy analysis.
3. METHOD

This section introduces the methodological proceedings carried out during the research. We start with an overview of qualitative methods and justify why they fit to this study, also presenting the Research Protocol with the most important decisions. Then, we define the research strategies and demonstrate the cases selection criteria. It follows with data gathering procedures and a table indicating how the objectives were directed in terms of research strategy and data collection choices. Subsequently, we bring forth data analysis procedures. To close, we evidence how both internal and external validities, besides reliability and confirmability, were addressed over the study.

The purpose of this study is to comprehend how companies’ operations decisions are influenced by host country institutions in international manufacturing. This means that context plays an important role as it shapes firms’ strategies and choices. Given the importance of contextual understandings for it, we use a qualitative approach to analyze the events, elements and the meaning of such phenomena, unfolding the social processes related to it (Van Maanen, 1979). As pointed out by Guba and Lincoln (1994), some advantages of qualitative methods are: 1) they provide contextual information; 2) qualitative data contribute with rich insights of the human behavior; 3) theory carried out to an inquiry by a researcher is brought closer to the insider view of the studied phenomena; 4) qualitative data helps to avoid the inapplicability of general data to individual cases, i.e., generalizations (even though statistically meaningful) that do not fit to cases’ particularities; and 5) inquirer and phenomenon can interact at any extent.

Throughout qualitative studies, researchers can comprehend the context in which decisions are taken by people and their motivations, as well as their trade-offs. Questions embedded to qualitative inquiries are: “Why is this happening?” and “How has it come to happen this way?”. Consequently, qualitative methods are recommended for exploratory researches, as the one proposed here. They make possible to shed some light on either: 1) recent or not fully understood phenomena (Myers, 2013); or 2) new empirical contexts where well-known research objects or phenomena advance or migrate to.

3.1. Research Protocol

For assessing the reliability of the qualitative research and to systematically expose the main steps taken over it, Figure 3 shows our Research Protocol.
**Figure 3 – Research Protocol.**

Source: elaborated by the author.
By following three general domains – substantive (related to the object; in blue), conceptual (concepts and dimensions; in green), and methodological (technics and procedures; in orange) – our Research Protocol demonstrates the research planning and execution. It started with the research problem and research question, while the theoretical foundations were established. After setting the theoretical lens and key dimensions, it followed the methodological strategies and procedures described over this Chapter. Findings are thus described in two Results Chapters, and some propositions are suggested in the Discussion Chapter.

3.2. Research strategies design

According to Yin (2008), every sort of empirical research adopts an implicit (or even explicit) research design. Among the array of qualitative research strategies, we choose case study as the main and documental research as auxiliary. Whereas the former mostly involves data collection at primary sources, the latter corresponds to data collection at mainly secondary sources. The various available strategies are not mutually exclusive (Yin, 2008). A summary of our initial choices is demonstrated on Table 12.

<table>
<thead>
<tr>
<th>Role in the study</th>
<th>Case study</th>
<th>Documental research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central (to address the research question)</td>
<td>Auxiliary (to provide contextual grounding for the study)</td>
<td></td>
</tr>
<tr>
<td>Type of data sources asked for</td>
<td>Mainly primary</td>
<td>Mainly secondary</td>
</tr>
<tr>
<td>Main data collection techniques</td>
<td>Interviews; Field notes (from Observation); Firms’ documents (private documents); and Firms’ websites.</td>
<td>Reports; Published articles on newspaper databases; Published articles on magazine databases; Web content (Government and Associations websites); Public documents (Laws and Decrees); Public videos; and Public and Private presentations.</td>
</tr>
</tbody>
</table>

Table 12 – Research strategies design for this study.
Source: elaborated by the author.

According to Eisenhardt and Graebner (2007), case studies are rich and empirical descriptions of recent events from which there can be a development of theory inductively, with especial emphasis on the real-world context where complex social phenomena take place. It is also adequate for studies in which the inquirer has little or no control over events (Eisenhardt, 1989; Yin, 2008) and “when the focus is on a contemporary phenomenon within some real-life context” (Yin, 2008, pg. 1).
Documental research comprises the examination and analysis of data collected by other people and previously existing to a given research (Donnellan & Lucas, 2013). It is consisted of public and/or private documents, available in printed or digital forms, such as reports, newspapers, official or personal records, correspondence, emails and/or letters (Creswell, 2013). For Yin (2008), it is one of the major research strategies. An advantage of documental research is the non-reactive nature of documents, once the information contained therein remains the same after long periods of time (Godoy, 1995). Thus far, both strategies fit to our research problem and direct to answering the research question.

3.2.1. Case study

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). Therefore, we intended to explain the phenomenon at first place, not the intrinsic case itself. We assumed the phenomenon under analysis (operations decisions being influenced by host country institutions) can take place in different backgrounds (not only with Brazilian textile-apparel companies and in Paraguay’s “Maquila regime”).

One of the most disseminated case study approaches is offered by Eisenhardt (1989). Showing similarities to the process of a quantitative inquiry design, she proposes 8 steps that guided this study. Table 13 presents the case study research roadmap. The process portrayed below was deeply linked to empirical evidences. The propositions that emerged out of the cases analysis are assumed to be: 1) further replicated by other studies with greater number of cases, taking to wider generalizability; and 2) tested quantitatively in future opportunities. The purpose in this study was to test theory, rather than developing new theory. This resulted in some adjustments on the original roadmap proposed by Eisenhardt (1989), which was clearly oriented to building theory from case study research. However, such a choice did not lead this research to a lack of rigor. The methodological rigor maintenance was indeed settled by following systematic procedures, as the ones presented below and detailed before the end of this Chapter.
<table>
<thead>
<tr>
<th>Step #</th>
<th>Activity(ies)</th>
<th>Reason(s)</th>
<th>Considerations taken by the author</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1) Getting started</td>
<td>#1a) Formulation of a research question. #1b) Prior selection of dimensions related to the phenomenon studied and some references to the extant literature, but without being strict.</td>
<td>#1a) To establish well-defined focus for collecting specific kinds of data systematically. #1b) To shape the initial design of the research and to orientate some procedures of data collection (e.g. interview protocol).</td>
<td>#1a) and #1b) Since they are tentative in qualitative inquiries, it was considered they could have been shifted during the research and data collection. However, they have not changed. #1b) Extant literature review is a means to a future end and not an end by itself. By this reason, data collection and data analysis did not follow any predetermined propositions that could bias or limit the findings (flexibility).</td>
</tr>
<tr>
<td>#2) Selecting cases</td>
<td>#2a) Specification of a group of interest. #2a) Theoretical sampling, not random.</td>
<td>#2a) To set some entities from which the research case can be drawn. #2b) To select case(s) by theoretical reasons, not statistical purposes.</td>
<td>#2a) Groups of interest definition may facilitate the answering of the research question. It was addressed through a list of Brazilian textile-apparel companies operating under the Paraguayan “Maquila regime” and obtained within AICP list and CNIME reports. #2b) Random selection is neither necessary nor even preferable. Two extreme cases were selected and provide examples of different operation timings in Paraguay.</td>
</tr>
<tr>
<td>#3) Crafting Instruments and Protocols</td>
<td>#3a) Multiple data collection methods. #3b) Combination of data types (association of primary and secondary sources in this study). #3c) Use of multiple investigators (considered in this study when possible).</td>
<td>#3a) and #3b) Data triangulation provides stronger substantiation of theoretical dimensions and findings, as well as synergistic evidences. #3c) To enhance creativity by divergent perspectives in the study and to strengthen confidence in the findings.</td>
<td>#3a) and #3b) Instruments and protocols shall be explicitly presented in the study and offered for the readers confirmation. It was done over this Method Chapter with the inclusion of the Interviews Protocols (Appendix) and the Research Protocol, for example. #3c) Not always possible due to time or money constraints. However, it was achieved by pre-validating the Interviews Protocols with 4 researchers (3 senior professors and a Phd student); and in the initial visits and interviews with Company A (when two researchers conducted the process together) too.</td>
</tr>
</tbody>
</table>
(continuation of Table 13)

<table>
<thead>
<tr>
<th>#4) Entering the Field</th>
<th>#4a) Overlap of data analysis with data collection.</th>
<th>#4a) To give the researcher a head-start in analysis and to speed it, revealing necessary adjustments to data collection.</th>
<th>#4a) Field notes (running commentaries involving observation and analysis) are important procedures for this overlap. They were taken both during field visits and the interviews with specialists and within the companies. Additionally, the analysis of the results of the first round of interviews (with specialists) enabled some adjustments in the Interview Protocol for the second round (within the companies) – through the identification of the most relevant institutions that existed in the context under investigation, for example.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#4b) Flexible and opportunistic data collection.</td>
<td>#4b) To let researchers free for adjustments during the data collection process, such as addition of questions to an interview protocol or inclusion of a new data source, for example.</td>
<td>#4b) Modifications can be important for taking advantage of emergent themes or cases, but they raise the question of legitimacy at the same time. Since the Interviews Protocols were pre-validated by 4 researchers and the Research Protocol was approved by a Qualification Board, no substantial adjustments in the data collection procedures were necessary.</td>
</tr>
<tr>
<td>#5) Analyzing Data</td>
<td>#5a) Within-case analysis.</td>
<td>#5a) To write up case descriptions and to become familiar with a stand-alone entity.</td>
<td>#5a) Even though within-case analysis are often simply poor descriptions, they are important to the generation of insights and to better comprehend each case individually. In this study, within-case analysis was included as part of the Results Chapter and assisted to cope with the avalanche of data.</td>
</tr>
<tr>
<td></td>
<td>#5b) Cross-case analysis.</td>
<td>#5b) To look beyond single entities by finding evidence through multiple lenses.</td>
<td>#5b) Cross-case search for patterns makes possible to look at data though divergent ways and establish some relationship among cases. This way, the tactics used in this research corresponded to selecting sub-categories and dimensions across cases, for then identifying similarities and differences among them. Sub-categories and dimensions were compared to the literature review and considered as of the research problem too.</td>
</tr>
</tbody>
</table>
#6) Shaping Propositions

<table>
<thead>
<tr>
<th>#6a) Sub-categories and dimensions comparison across cases by iterative process.</th>
</tr>
</thead>
<tbody>
<tr>
<td>#6b) Verification process for “why” relationships.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>#6a) To tabulate multiple evidences that indicate how well or poor the categories and dimensions fit each case. Also, to compare the emergent data with theory.</th>
</tr>
</thead>
<tbody>
<tr>
<td>#6b) Relationships between sub-categories and dimensions can be confirmed, revised, disconfirmed or even thrown out by case evidences. They are relevant to underline the dynamics of relationship.</td>
</tr>
</tbody>
</table>

#6a) Sub-categories emerge from the analysis process itself instead of being previously established. The accumulation of evidences from diverse sources is important and helps to enhance sub-categories definition and validity. Since qualitative evidences are difficult to collapse, many researchers rely on tables and summaries, what was followed by this author too.

#6b) Qualitative data can provide a good understanding of the dynamics of such relationship. They help to uncover the theoretical reasons for relationships to exist (or not) and to internal validity. The propositions offered by this study were based on the consistency of relationships among codes, dimensions and sub-categories and within and across cases. It was also displayed the evidences coupled with them.

#7) Enfolding Literature

<table>
<thead>
<tr>
<th>#7a) Comparison with similar literature.</th>
</tr>
</thead>
<tbody>
<tr>
<td>#7b) Comparison with conflicting literature.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>#7a) To tie the existing literature similarities related to the phenomenon to those emergent findings.</th>
</tr>
</thead>
<tbody>
<tr>
<td>#7b) To avoid lack of confidence in the findings by ignoring conflicts. The use of conflicting results is an opportunity to advance theory.</td>
</tr>
</tbody>
</table>

#7a) and #7b) Examining a broad range of literature is important for enhancing the confidence of findings (internal validity and reliability) and to establish linkages between emergent data and existing literature. It was considered in this study and addressed over the Results and Discussion Chapters.

#8) Reaching Closure

<table>
<thead>
<tr>
<th>#8a) Reach of theoretical saturation (when possible).</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>#8a) To stop adding cases, collecting data or comparing existent literature and emergent data when marginal improvements are small.</th>
</tr>
</thead>
</table>

| #8a) At the point that incremental learning is minimum, data collection, cases addition or theory and data comparison may end. Closure can also be motivated by (or combined with) time and money constraints. The final product may be concepts, conceptual framework or propositions. This study followed these recommendations and reached closure based on saturation. A set of propositions was consequently offered. |

Table 13 – Roadmap for case study research.
Source: elaborated and adapted by the author based on Eisenhardt (1989).
3.2.1.1. Cases selection

Once the selection process is a critical aspect of case study (Eisenhardt, 1989), we took some prudential actions. First, as suggested by Eisenhardt (1989), we specified a group of interest consisted of some Brazilian textile-apparel companies operating under the “Maquila regime” in Paraguay. It stemmed from an AICP list of associated companies released on its website and to which other non-associated companies identified in monthly reports distributed by CNIME were added. By doing so, we took the perspective of raw materials and inputs manufacturing (supply chain) to consider a company as belonging to the textile-apparel sector, regardless of its final market (retail distribution channel). Figure 4 shows how the textile-apparel chain is long and comprehends many interdependent links (Mendes Junior, 2017).

![Textile-apparel value chain and research emphasis.](source)

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, Marques & Ghauri, 2009). It encompasses complex and multiple coordination systems across different entities – countries, companies and factories (Clarke-Sather & Cobb, 2019). The industry is among the most representative consumer goods and the most labor-intensive ones; textile and apparel supply chains are long, complex, lengthy and spread over different parts of the world, with many activities being outsourced (Franco, 2017; Guarnieri & Trojan, 2019; Ruan & Zhang, 2014). This is a sector characterized by offshoring too. From 2000 to 2016, the
consumption of textile fibers increased 21.8% in the world and textile and apparel global production more than doubled, reaching an average annual growth rate of 5% during that period (IEMI, 2017).

After designing a group of interest, the next step was to set the following criteria for cases selection: 1) existence of at least one own manufacturing plant in Paraguay and operation under the “Maquila regime”; 2) examples of extreme cases in terms of years of operation in such a context. Following some initial contacts, two companies accepted to participate in the study: Company A, which has been operating in Paraguay for more than 10 years and is the oldest Brazilian textile-apparel maquiladora in Paraguay, and Company B, whose operation was established in the beginning of 2017. This way, companies’ willingness to share information and author’s access to decision maker were important attributes too. Figure 5 summarizes the main steps taken up to cases definition.

![Figure 5 – Selection process of cases.](source: elaborated by the author.)

Official invitation letters were sent to the companies selected and that accepted to participate in the research, as showed in Appendix 1. The initial contacts were facilitated by academic networking and were important to reduce the barriers of entrance (Hoepfl, 1997). Aiming to confirm access and to check the willingness for sharing information, the author visited Company A factory in Paraguay previously on December 4th, 2017. The visit lasted around 2 hours and resulted in a first talk with the company’s CEO, an important step towards a better understanding of the motivations to operate in Paraguay and how the plant was established. For Company B, two calls were done on May 2018. In both, the study was explained to the company’s CEO, who had recently finished a Professional Master’s Program
and corroborated the possibility to contribute to the research based on Company B recent experience in Paraguay. A list of initial questions was then sent for his consideration and helped to better comprehend the business management and some characteristics of the plant in Paraguay. All initial approaches generated notes which were incorporated into this research. For Company A’s visit, notes were taken by two different researchers, who exchanged perceptions afterwards.

As evidenced above, it was applied theoretical sampling in the selection of the cases. We understood that cases should be elected based on theoretical features, not by a random process, so we did not adopt convenience sampling. Following Eisenhardt (1989), theoretical sampling leads to a greater replication or extension of the emergent sub-categories and dimensions to a broad range of studies. This way, we consider that both Companies A and B cases help to inform the research question, in accordance with Creswell (2013).

3.2.2. Documental research

As affirmed by Godoy (1995), documents are valuable sources of data for many types of qualitative studies. For Yin (2008), documentary information is a relevant source of evidence for every case study. Documental research can also be used as a complementary technique, validating and deepening data obtained through interviews, questionnaires and observation. It is a much-employed strategy for triangulation of data (Godoy, 1995; Yin, 2008) and may not be regarded as replacements for other data sources (Coffey, 2014). However, it is different from a bibliometric research, since it is characterized by the search for information in documents that have not received any scientific treatment yet (Sá-Silva, De Almeida, & Guindani, 2015).

Considering that “documents provide a mechanism and vehicle for understanding and making sense of social and organization practices” (Coffey, 2014, pg. 367), we followed the three phases suggested by Godoy (1995) for documental research, as represented in Figure 6. Documents were selected not by a random process but according to their potential contribution for providing background information and addressing answers to the general and specific research questions. They also assisted to set the contextual characteristics in which firms take operations decisions, besides complementing and contrasting data from the case study (triangulation).
When achieving Godoy’s (1995) step number three, we advanced the documental analysis following Bardin’s (2011) perspective for content analysis, as suggested by Godoy (1995). The procedures of data analysis are described subsequently, in a specific section of this Chapter. In conformity with Rocha & Ávila (2015), we gave special attention for those documents widely recognized by the literature as important sources of regulatory data at country-level. They are: The Global Competitiveness Report of the World Economic Forum and the Index of Economic Freedom of the Heritage Foundation.

3.3. Data collection procedures and sources

Qualitative data obtained through collection procedures (interviews, documents and field notes, to mention a few) helps researchers to understand people, their motivation and actions, all shaped by the broader context they are part of (Myers, 2013). Aiming to depict the social world into facts and based on the match between data and research question, we collected data from the cases by making use of three techniques: interviews, observation and documental analysis. Contextual and background information were obtained through interviews with specialists and documental research. Figure 7 summarizes the main steps taken during data collection.

Regarding interviews, this study opted for semi-structured ones with an interview guide approach, which meant topics and questions designed and outlined in advance, and the sequence of questions being adapted by the interviewer in the course of the interviews (Patton, 2002). Semi-structured qualitative interviewing is ideal for case studies (Patton, 2002). Such a format made it possible to collect somewhat systematic data, facilitating subsequent coding and categorization.
As highlighted by Hoepfl (1997), interview guides were important to ensure good use of timing and to make interviews more focused. The Interview Protocols were submitted to the scrutiny of 4 researchers (3 senior university professors and a Phd student), pre-tested among colleagues and are available at Appendix 2. Table 14 lists the distinct Interview Protocols used and bring more details on them.

<table>
<thead>
<tr>
<th>Interview Protocol type</th>
<th>Purpose(s)</th>
<th>Objectives addressed</th>
<th>Main supportive literature for questions design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type A (within the company)</td>
<td>First, to identify the main operations decisions taken by firms operating under the “Maquila regime”. Second, to understand how those decisions are influenced by host country formal institutions identified over the previous interviews.</td>
<td>GO, SO3 and SO4</td>
<td>DiMaggio &amp; Powell, 1991; He &amp; Wei, 2013; Lu, Tsang &amp; Peng, 2008; North, 1990; Peng, 2002; Scott, 1987; Skinner, 1969; Wang &amp; Jiang, 2008; Wheelwright, 1984; Wheelwright &amp; Hayes, 1985.</td>
</tr>
<tr>
<td>Type C (with Brazilian sectorial specialists)</td>
<td>First, to understand how the Brazilian textile sector is described in terms of competitiveness. Second, if possible, to get some insights about Paraguay and the “Maquila regime”.</td>
<td>SO1</td>
<td>No specific literature. Interviews aimed sectorial and contextual understandings.</td>
</tr>
</tbody>
</table>
In common, all the Interview Protocols were organized with an introductory session, sequence of questions and closing session. Blank spaces could be filled in with inputs, feedbacks and nonverbal elements (expressions, gestures, etc.) that eventually called the interviewer attention, favoring notes and running commentaries. Most of the questions were deductive and open, thus enabling the emergence of multiple categories and sub-categories of data. During companies’ interviews only, it was also applied some activities within the interviewees and according to the contribution given by them. Those exercises comprehended: 1) ranking of some institutions according to the degree of relationship the company had with them; 2) indication, from a list of institutions, of which influenced the company’s day-to-day operation, and whether such an impact was either positive or negative; 3) drawing the company’s production chain in Paraguay; and 4) pointing the competitiveness factors associated with the Paraguayan plant.

All the work mentioned above contributed to data gathering and templates can be consulted at Appendix 3. They were important for confronting verbal elements emerging out of the interviews with written outputs. The activities involving institutions (ranking and indication of impact) were particularly decisive for shedding some light on institutions that had been forgotten by the interviewees when they were asked about their relationship with them. Similarly, the production chain drawing assisted the author to understand each company’s value chain and the division of responsibilities between head office and the Paraguayan unit.

We conducted 29 in-depth interviews with specialists and within the two selected companies, as presented in Table 15. We first contacted Brazilian Chambers of Commerce and sectorial associations to ask for recommendations of specialists, and then it followed a snowball process (specialists indicating other specialists). Interviewees on companies were chosen based on the indication of the CEOs and guided by their functions within the “Maquila regime” institutional framework.
<table>
<thead>
<tr>
<th>Interview #</th>
<th>Type</th>
<th>Interviewee code</th>
<th>Position</th>
<th>Nationality</th>
<th>Organization</th>
<th>Duration</th>
<th>Date</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Company</td>
<td>CP1_A</td>
<td>President and CEO</td>
<td>Brazilian</td>
<td>Company A</td>
<td>00:51</td>
<td>25/10/2017</td>
<td>Virtual</td>
</tr>
<tr>
<td>2</td>
<td>Company</td>
<td>CP1_A</td>
<td>President and CEO</td>
<td>Brazilian</td>
<td>Company A</td>
<td>01:03</td>
<td>04/12/2017</td>
<td>On-site</td>
</tr>
<tr>
<td>3</td>
<td>Specialist</td>
<td>SP1_A</td>
<td>General Manager</td>
<td>Paraguayan</td>
<td>AICP</td>
<td>00:49</td>
<td>01/06/2018</td>
<td>Virtual</td>
</tr>
<tr>
<td>4</td>
<td>Specialist</td>
<td>SP2_A</td>
<td>President</td>
<td>Brazilian</td>
<td>Brazil-Paraguay Chamber of Commerce</td>
<td>00:54</td>
<td>01/06/2018</td>
<td>Virtual</td>
</tr>
<tr>
<td>5</td>
<td>Specialist</td>
<td>SP1_B</td>
<td>Technology, Norms and Regulations Manager</td>
<td>Brazilian</td>
<td>Abit</td>
<td>01:06</td>
<td>06/06/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>6</td>
<td>Specialist</td>
<td>SP1_C</td>
<td>Entrepreneur and Board Member</td>
<td>Brazilian</td>
<td>Abit</td>
<td>00:58</td>
<td>06/06/2018</td>
<td>Virtual</td>
</tr>
<tr>
<td>7</td>
<td>Specialist</td>
<td>SP2_B</td>
<td>Partner Director</td>
<td>Paraguayan</td>
<td>Probusiness Consulting</td>
<td>00:34</td>
<td>07/06/2018</td>
<td>Virtual</td>
</tr>
<tr>
<td>8</td>
<td>Specialist</td>
<td>SP2_C</td>
<td>Consultant and Professor</td>
<td>Brazilian</td>
<td>Univale</td>
<td>01:26</td>
<td>07/06/2018</td>
<td>Virtual</td>
</tr>
<tr>
<td>9</td>
<td>Specialist</td>
<td>SP2_D</td>
<td>Commercial Attaché</td>
<td>Paraguayan</td>
<td>Rediex</td>
<td>01:49</td>
<td>08/06/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>10</td>
<td>Specialist</td>
<td>SP1_D</td>
<td>Chief Economist</td>
<td>Brazilian</td>
<td>Abit</td>
<td>00:58</td>
<td>12/06/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>11</td>
<td>Specialist</td>
<td>SP1_E</td>
<td>Qualification Manager</td>
<td>Paraguayan</td>
<td>AICP</td>
<td>01:09</td>
<td>13/06/2018</td>
<td>Virtual</td>
</tr>
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<td>12</td>
<td>Specialist</td>
<td>SP2_E</td>
<td>Executive Secretary</td>
<td>Paraguayan</td>
<td>CNIME</td>
<td>00:52</td>
<td>15/06/2018</td>
<td>Virtual</td>
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<tr>
<td>13</td>
<td>Specialist</td>
<td>SP2_F</td>
<td>Vice-President</td>
<td>Brazilian</td>
<td>Paraguay-Brazil Chamber of Commerce</td>
<td>00:48</td>
<td>18/06/2018</td>
<td>Virtual</td>
</tr>
<tr>
<td>14</td>
<td>Specialist</td>
<td>SP2_G</td>
<td>Owner-partner</td>
<td>Brazilian</td>
<td>Roit Paraguay Consulting</td>
<td>01:17</td>
<td>10/08/2018</td>
<td>Virtual</td>
</tr>
<tr>
<td>15</td>
<td>Specialist</td>
<td>SP2_H</td>
<td>Partner and Consultant</td>
<td>Paraguayan</td>
<td>MB Maquila</td>
<td>00:40</td>
<td>11/08/2018</td>
<td>Virtual</td>
</tr>
</tbody>
</table>
(continuation of Table 15)

<table>
<thead>
<tr>
<th></th>
<th>Specialist</th>
<th>Position/Title</th>
<th>Nationality</th>
<th>Organization</th>
<th>Interview Time</th>
<th>Date</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Specialist</td>
<td>First Secretary</td>
<td>Brazilian</td>
<td>Brazilian Embassy in Asunción</td>
<td>00:50</td>
<td>16/08/2018</td>
<td>Virtual</td>
</tr>
<tr>
<td>17</td>
<td>Specialist</td>
<td>Commercial Attaché</td>
<td>Paraguayan</td>
<td>Rediex</td>
<td>01:27</td>
<td>23/08/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>18</td>
<td>Company</td>
<td>Presidente and CEO / Finance and Human Resources Manager</td>
<td>Brazilian / Paraguayan</td>
<td>Company A</td>
<td>01:01</td>
<td>30/08/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>19</td>
<td>Company</td>
<td>Vice-President and Production Manager</td>
<td>Brazilian</td>
<td>Company A</td>
<td>02:01</td>
<td>30/08/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>20</td>
<td>Company</td>
<td>Importation and Exportation Manager</td>
<td>Paraguayan</td>
<td>Company A</td>
<td>00:15</td>
<td>30/08/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>21</td>
<td>Specialist</td>
<td>Researcher Member</td>
<td>Paraguayan</td>
<td>CADEP</td>
<td>01:18</td>
<td>07/09/2018</td>
<td>Virtual</td>
</tr>
<tr>
<td>22</td>
<td>Specialist</td>
<td>Partner Manager</td>
<td>Brazilian</td>
<td>Probusiness Consulting</td>
<td>01:01</td>
<td>10/09/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>23</td>
<td>Company</td>
<td>Executive Officer and CEO</td>
<td>Brazilian</td>
<td>Company B</td>
<td>01:10</td>
<td>11/09/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>24</td>
<td>Company</td>
<td>Administrative Manager</td>
<td>Paraguayan</td>
<td>Company B</td>
<td>00:19</td>
<td>11/09/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>25</td>
<td>Company</td>
<td>Production Manager</td>
<td>Brazilian</td>
<td>Company B</td>
<td>01:15</td>
<td>11/09/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>26</td>
<td>Specialist</td>
<td>Executive Secretary</td>
<td>Paraguayan</td>
<td>CNIME</td>
<td>00:28</td>
<td>12/09/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>27</td>
<td>Specialist</td>
<td>General Manager</td>
<td>Paraguayan</td>
<td>Global Sourcing Consulting</td>
<td>01:09</td>
<td>12/09/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>28</td>
<td>Specialist</td>
<td>Director</td>
<td>Paraguayan</td>
<td>M360 Consulting</td>
<td>01:00</td>
<td>13/09/2018</td>
<td>On-site</td>
</tr>
<tr>
<td>29</td>
<td>Specialist</td>
<td>Foreign Trade Manager</td>
<td>Paraguayan</td>
<td>AICP</td>
<td>01:01</td>
<td>14/09/2018</td>
<td>On-site</td>
</tr>
</tbody>
</table>

Table 15 – Interviews conducted over the research.
Source: elaborated by the author.
It can be noticed that both Brazilian and Paraguayan specialists were interviewed, as well as within the cases. Following Eisenhardt (1989), we reached closure based on data saturation. All interviews were recorded under consent of interviewees and by mobile phone apps, and they were transcribed by the author. Most of the interviews were conducted in Portuguese, even though some were in Spanish. For the latter, transcriptions were reviewed by a native-speaker professional.

In the first round of interviews (with specialists), there were accounted 21 interviews and 19 interviewees. For validation of some groupings of institutions and their roles on the “Maquila regime” regulations, which emerged on the previous interviews themselves, the author returned to 2 interviewees individually and had a second meeting with them. They were chosen by their contributions to the research and distinguished knowledge over the Paraguayan institutional framework and “Maquila regime”. The second round of interviews (within the companies) was composed by 8 interviews and 7 interviewees. The CEO of Company A was considered interviewed more than 1 time because the initial talks were accounted accordingly, since some important decision-making processes of the company emerged at that time. The company’s interviewees were selected based on their administrative and decisive roles.

The observations conducted during companies’ on-site visits deepened the understandings and enabled the researcher to observe things that the participants were not aware of by themselves (Hoepfl, 1997; Patton, 2002). The strategy adopted consisted of limited interaction: the researcher intervened in the observation process only when further clarification was requested. This was essential to earn interviewees’ confidence. All observations generated field notes that were also transcribed and used for data analysis.

We carried on data source and collected data triangulations. To strengthen them, there have been used around 80 public and private documents, either originated from the home or host countries, such as reports, websites, news, laws and decrees, videos, presentations, and so on. By triangulating data, we could obtain a bigger picture (Myers, 2013) of the background set for the research, the local context and companies’ operations in Paraguay. The benefits of data and source triangulation were: identification of different realities, enrichment of interpretations, clarification of meanings, provision of multidimensional view of similar issues and detection of contradictions (Stake, 1998). Also, it enhanced the validation of the findings and convergence of results (Eisenhardt, 1989; Yin, 2008).
3.3.1. Addressing planned objectives through data collected

Yin (2008) highlights the importance of logic links between data collected and initial questions of an inquiry. Based on the outlined research strategies design, Table 16 presents how general and specific objectives of this study were addressed by means of data collection procedures. The combination of primary and secondary sources was important for making the contextual ground for the phenomena and triangulating information. This way, we established a chronological sequence of achieved outcomes that were only possible because of data sources access and collection procedures choices.

<table>
<thead>
<tr>
<th>General (GO) and Specific (SO) objectives</th>
<th>Data Source type</th>
<th>Collection Procedures</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO1: to explore what is the Paraguayan “Maquila regime” and the context in which it develops.</td>
<td>1. Primary (to a less extent). 2. Secondary (to a high extent).</td>
<td>1. Interviews with Brazilian and Paraguayan specialists. 2. Documental research and analysis.</td>
<td>- Description of the Paraguayan “Maquila regime” characteristics. - Timeline with key events traced over time and that shaped the empirical context. - Table with competitive advantages and disadvantages to operate in Paraguay.</td>
</tr>
<tr>
<td>SO2: to identify the Paraguayan formal institutions embedded to that context.</td>
<td>1. Primary (to a high extent). 2. Secondary (to a less extent).</td>
<td>1. Interviews with Brazilian and Paraguayan specialists. 2. Documental research and analysis.</td>
<td>- List and grouping of existing institutions in such institutional context.</td>
</tr>
<tr>
<td>SO3: to understand the roles of those formal institutions and how they relate to each other.</td>
<td>1. Primary (to a less extent). 2. Secondary (to a high extent).</td>
<td>1. Interviews with Brazilian and Paraguayan specialists. 2. Documental research and analysis.</td>
<td>- Table with formal institutions with regulatory roles in Paraguay and over the “Maquila regime” and their corresponding roles and relationships.</td>
</tr>
<tr>
<td>SO4: to investigate and compare the operations decisions taken by firms when manufacturing in Paraguay.</td>
<td>1. Primary (to a high extent).</td>
<td>1a. Interviews within the companies. 1b/2. Firm’s documental research and analysis. 1c. On-site observation and notes.</td>
<td>- Within-case analysis. - Cross-case analysis with a list of operations decisions that emerged during data collection, their dimensions and how they evolved over time.</td>
</tr>
<tr>
<td>GO: to comprehend how companies’ operations decisions are influenced by host-country formal institutions in international manufacturing</td>
<td>1. Primary sources (to a high extent). 2. Secondary sources (to a less extent).</td>
<td>1a. Interviews with Brazilian and Paraguayan specialists. 1b. Interviews within the companies. 1c/2. Firms and general documental research and analysis. 1d. On-site observation and notes.</td>
<td>- Several findings related to research question and addressed by a list of propositions.</td>
</tr>
</tbody>
</table>

Table 16 – Research objectives and data collection matching. Source: elaborated by the author.
3.4. Data analysis

By gathering data for this inquiry, we sought to achieve both broad and deep information for a rich data accumulation. We extensively collected data (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. Figure 8 indicates that data analysis was conducted along two main stages and illustrates the dynamic process between data analysis and data collection, as suggested by Eisenhardt (1989). We evidenced the outcomes in red-dotted boxes.

<table>
<thead>
<tr>
<th>Stage #1</th>
<th>Stage #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semi-structured interviews with Brazilian and Paraguayan specialists (1st round)</td>
<td>Semi-structured interviews within the cases selected for the study (2nd round) and application of activities</td>
</tr>
<tr>
<td>Documental research and analysis based on specialists suggestions</td>
<td>Observation and field notes taken during on-site plant visits</td>
</tr>
<tr>
<td>1st round of data analysis based on interviews with specialists and documents recommended by them</td>
<td>Companies’ documental research and analysis (websites, reports, media articles, videos, etc.)</td>
</tr>
</tbody>
</table>
| - Answers for SO1, SO2 and SO3  
- Companies Interview Protocol adjustments | 2nd round of data analysis based on interviews within the cases, field notes and firms’ documents |
| - Answers for SO4 and GO  
- Further support for SO2 and SO3 findings of Stage 1  
- Within-case, Cross-case and Propositions |

Figure 8 – Data analysis main stages.  
Source: elaborated by the author.

For 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) since dimensions, sub-categories and categories could stand alone, an additional step was to recognize the relationships among them all; 3) to better represent data reduction and the established relationships, the results presentation privileged systematical and analytical schemes, when possible (Langley, 2011; Miles & Huberman, 1994). Figure 9 exemplifies how data reduction was conducted from coding to the creation of categories.
It can be observed that drawing meaning was based on processes of expansion (codes giving birth to properties and properties to dimensions) and aggregation (condensing of dimensions into sub-categories and sub-categories into categories). For that purpose, we observed Miles and Huberman (1994) recommendations, aiming to 1) seeing “what matches what”, 2) integrate diverse pieces of data, 3) sharpen understanding, 4) connect things and their relationships more abstractly, and 5) systematically assemble a coherent understanding of data. Note that we opted for using only “dimension” instead of “property and dimension” over data analysis, what facilitates the comprehension.

We followed Bardin (2011) for content analysis and examined data in three steps: 1) pre-analysis (organization and tabulation of data); 2) material exploration (reading, coding and categorization of data); and 3) treatment of results and interpretation (transformation of raw material into meaningful and valid results), all in line with Bardin (2011). As suggested by Coffey (2014), the interpretation of documents (in the broad sense) was an active process that enabled their logical understanding and sense making. Figure 10 describes how we organized content analysis regardless of the research strategy (case study and documental research) or type of data sources (primary or secondary).

Given that coding is a key activity (Bardin, 2011), the qualitative data analysis software Atlas.ti was chosen to support this process. It assisted the structuring of data for inferences and interpretations, helping forward the development of findings and propositions. For codification
and categorization, some contributions of Langley (2011) were also helpful, such as 1) summarizing interviews and meetings; 2) building chronologies of events; 3) grouping data by theme (code generation); and 4) associating codes to text segments, allowing the identification of themes and ideas.

![Diagram of Procedures for Content Analysis](image)

Figure 10 – Procedures for content analysis.
Source: elaborated by the author based on Bardin (2011).

We also infer from figure 10 that content analysis can help reducing the amount of materials, what consequently allows the researcher to focus on the aspects that are closely related to the research question (Schreier, 2014). After shaping the findings and propositions, comparisons with similar and conflicting literature were carried out (Eisenhardt, 1989), what enhances confidence and validity and establishes linkages between emergent results and existing literature.

Considering that content analysis involves an array of methodological instruments and techniques that can be systematically used for describing the meaning of qualitative data, but without being inflexible (Schreier, 2014), figure 11 summarizes our coding frame and demonstrates how data analysis operationalization meets the general and specific objectives of this study. Note that just the most representative codes (in terms of quotation number, not excluding overlaps) were displayed, even though many others subsidized the findings related to each objective. Additionally, dotted lines indicate that sub-categories compose a given category, as exemplified by multiple sub-categories of decisions and the category “Operation decisions in international manufacturing”.
Figure 11 – Coding frame and objectives addressing.
Source: elaborated by the author.
By analyzing data, we bring forward the findings of such process in the next two Chapters; propositions are gathered in sequence, in the Discussion of Results Chapter. In general terms, results are thus displayed starting from the broadest (Paraguayan institutional environment) to the most specific (companies’ operations decisions). We opted this strategy expecting it to facilitate the comprehension of results.

### 3.4.1. Procedures for validity, reliability and objectivity

Aiming to address and guarantee the quality of the research, Table 17 shows some strategies that were adopted to cope with the 4 selected criteria for this study: 1) internal validity; 2) external validity; 3) reliability; and 4) objectivity (confirmability).

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Strategy(ies) adopted</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) Internal validity</td>
<td>- A1) Triangulation of data by using primary and secondary sources and multiple strategies (case study and documental research).</td>
</tr>
<tr>
<td></td>
<td>- A2) Incorporation of original segments of raw data into the presentation of analysis, corroborating findings.</td>
</tr>
<tr>
<td></td>
<td>- A3) Making segments of raw data used as indirect quotes (inferences) available for reader’s checking (under request).</td>
</tr>
<tr>
<td></td>
<td>- A4) Description of each case individually (within-case analysis) and through triangulation of data (primary and secondary sources).</td>
</tr>
<tr>
<td></td>
<td>- A5) Presentation of propositions.</td>
</tr>
<tr>
<td></td>
<td>- B3) Comparison of findings with both conflicting and similar literatures.</td>
</tr>
<tr>
<td></td>
<td>- B4) Validation of the groupings of institutions and their roles through a second individual meeting with 2 interviewees, which were chosen because of</td>
</tr>
<tr>
<td></td>
<td>their distinguished knowledge over the Paraguayan institutional framework.</td>
</tr>
<tr>
<td>C) Reliability</td>
<td>- C1) Detailed description of data collection procedures and data analysis.</td>
</tr>
<tr>
<td></td>
<td>- C2) Provision of an “inquiry audit” for reviewers to examine both the process and the product of the research for consistency.</td>
</tr>
<tr>
<td></td>
<td>- C3) Elaboration of a Research Protocol (planning and execution of all methodological procedures).</td>
</tr>
<tr>
<td></td>
<td>- C4) Use and presentation of Interview Protocols.</td>
</tr>
<tr>
<td>D) Objectivity (confirmability)</td>
<td>- D1) Pre-validation and scrutiny of Interviews Protocols,</td>
</tr>
<tr>
<td></td>
<td>- D2) Transcription of interviews and making them available along with field notes and documental research sources (under request).</td>
</tr>
<tr>
<td></td>
<td>- D3) Search for cross-case patterns and exposition of them through condensed data display.</td>
</tr>
</tbody>
</table>

Table 17 – Criteria and corresponding strategies for research quality.  
Source: elaborated by the author.

In agreement with Barbour (2014), we defined the strategies to ensure rigor over the whole qualitative research, especially in terms of its design, carry out, data analysis and presentation. By doing so, we expected to move beyond the author’s individual assessment and provide a list of objective criteria to be evaluated by the audience.
4. RESULTS: CONTEXT AND INSTITUTIONS

4.1. Context evolution since the “Maquila regime” establishment

The “Maquila regime” was established in 1997 in Paraguay by the National Law Nº 1064. It is regulated by the Decree Nº 9585 from 2000, whose main aim is to orientate companies 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, Tsang & Peng, 2008). From the beginning, we notice the pivotal role of the State (Peci, 2006).

The “Maquila regime” was born in Paraguay under political instability and during Wasmosy’s mandate (1993-98) – the first civilian president in nearly half a century (Library of Congress, 2005; Masi & Borda, 2011). Wasmosy’s almost resigned in 1996 and was forced to pursue temporary asylum in the US Embassy (Global Security, 2018). National Law Nº 1064 was approved near the upcoming elections and under deep political turmoil. Table 18 summarizes a series of events that took place in Paraguay since then.

After 3 years of Law Nº 1064, the “Maquila regime” was regulated by Decree Nº 9585 (2000), laying the basis for the first Maquila Programs’ implementation through the application of law (CNIME, 2018a). The regulation was essential to complement the previous law, to detail the role of institutions and, as suggested by Davis & North (1971) and North (1990), to set the formal mechanisms and constraints of the specific institutional framework assigned for the regime. It was also relevant for defining what is legitimate too, as firms are sensitive to institutional ground rules and adapt their practices and strategies to comply with them (DiMaggio & Powell, 1983).

The Decree provides the “necessary administrative actions, in order to enable the agile and simplified application of bureaucratic procedures that allow these Companies to achieve the maximum competitiveness” (Decree of 2000, free translation). Such “rules of the game” (North, 1990) are expected to be applied to every company operating in the “Maquila regime” (Peng et al., 2018a). The lack of reliable information on Paraguay and on the newly established regime, for SP2_D (6), contributed to the low speed of installation of maquiladoras operations during the initial years.
<table>
<thead>
<tr>
<th>Period</th>
<th>Event and antecedents</th>
<th>Result(s) and impact to Paraguay</th>
</tr>
</thead>
<tbody>
<tr>
<td>97-98</td>
<td>Raul Cubas (Oviedo’s running mate) became the candidate after the General was prevented to run in the elections by the Court.</td>
<td>Cubas was elected president in August 1998.</td>
</tr>
<tr>
<td>98-99</td>
<td>The murder of Cubas’ Vice-President Luis Maria Argana arose a storm of protests and Cubas’ resignation was urged by protesters.</td>
<td>Cubas remained in power for less than a year. Due to a political deadlock and with an impeachment trial pending (Library of Congress, 2005), he resigned in the wake of turbulence (Masi &amp; Borda, 2011). In the absence of a Vice-President, he was replaced by the President of the Senate, Luis Gonzalez Macchi.</td>
</tr>
<tr>
<td>99-03</td>
<td>Macchi was appointed caretaker President and was expected to call new elections in 1999 (Global Security, 2018).</td>
<td>Macchi did not call elections and completed Cubas’ term in 2003 (BBC, 2018; Global Security, 2018). For SP2_D (5), Paraguay was adrift during those years, once Macchi neither had strong legitimacy nor established alliances to govern.</td>
</tr>
<tr>
<td>03-08</td>
<td>In August 2003, Nicanor Duarte, who had democratically won the presidential elections, start its mandate.</td>
<td>Duarte implemented efficient macroeconomic policies, improvements in the quality of management, reestablishment of the country’s relationship with the IMF and partial stabilization of the economy – better macroeconomic performance and inflation falling (Encyclopedia Britannica, 2018; Global Security, 2018). The economic reforms brought notable improvements and faster-than-expected results (Library of Congress, 2005).</td>
</tr>
<tr>
<td>08-12</td>
<td>On April 2008, Fernando Lugo, a former bishop and representative of a leftist opposition coalition, won the elections and broke a more-than-six-decade supremacy of the right-wing Colorado Party. Lugo was a progressive, committed to social causes and the “Bishop of the Poor” (Global Security, 2018).</td>
<td>For SP2_J (3), Lugo’s term was characterized by a high volume of foreign direct investments. SP2_G (2) underlined that the “Maquila regime” begun to be disseminated and gained dynamism (start of a new era that would be enhanced by Cartes). For SP2_G (3), there was a close relation between Lugo and Luis Inacio “Lula” da Silva (Brazilian president); it can be suggested that the dissemination of such program in Brazil was eased.</td>
</tr>
<tr>
<td>12-13</td>
<td>In 2012, Lugo was impeached by the largely right-wing Congress – alleged of bad performance of his duties.</td>
<td>Many confrontations between armed police and civilians (campesinos and rural farmworkers) took place. The impeachment process followed constitutional requirements, but it was controversial because of its speed (Global Security, 2018).</td>
</tr>
<tr>
<td>12-13</td>
<td>Lugo’s vice-president Federico Franco took office for a fourteen-month mandate.</td>
<td>Franco, who had stopped supporting Lugo in response to some political disagreements (Encyclopedia Britannica, 2018), reversed many policies. Paraguay was suspended of Mercosul in protest of Lugo’s ouster (BBC, 2018).</td>
</tr>
<tr>
<td>13-18</td>
<td>On August 2013, Horacio Cartes, a candidate of the Colorado Party and one of the wealthiest businessmen in the country (Encyclopedia Britannica, 2018), started his mandate as president elected.</td>
<td>Cartes inaugurated of a period of neoliberal policies, following a business philosophy arising from his own previous ventures (Global Security, 2018). For SP2_A (2), Cartes brought legal certainty for the business community by enhancing inversion systems and strengthening the country’s legal framework.</td>
</tr>
</tbody>
</table>

Table 18 – Key events in Paraguay since the “Maquila regime” establishment. Source: elaborated by the author.
The context in which the Decree was enacted resembled the instability of 1997. There was a coup attempt foiled, Macchi was plagued for many allegations of corruption and harsh political divisions, and he even faced an impeachment trial in the Senate (BBC, 2018; Global Security, 2018). Economic mismanagement almost resulted to a default on external debt during the early 2000s (Encyclopedia Britannica, 2018). SP2_J (1) underlined the fragility of such government and reminded that the country almost went through a default process due to crises in Argentina and Brazil, which hit the ailing Paraguayan economy. At the end of Macchi’s administration, the first foreign investments in “maquila” operations helped to develop new products to export (Masi & Borda, 2011).

Cartes’ rise to power in 2013, more than a decade after Decree Nº 9585 and following Lugo’s attraction of foreign investments, represented a “turning point” for the “Maquila regime”. His government thoroughly promoted it overseas, coupled with a better image of the country and some competitive advantages. For Masi (2017), Cartes chose the maquila as the foundation of an industrialization plan to Paraguay. The FDI inflow increased and more than 75% of all Maquila Programs approved since the its beginning were originated in this period, according to SP2_E (7).

As suggested by SP2_M (4), the government started to push the regime more aggressively, conducted a simplification of installation procedures and took advantage of economic downturns in the neighboring countries, i.e. Brazil and Argentina. The emphasis to the “Maquila regime” by Cartes’ government was also spontaneously pointed out by SP2_J (4), SP2_L (1) and SP2_H (1). The latter revealed the escalation of the number of industries and the volume of exports in Paraguay, indeed:

*I’ll mention one [period] before and one after the Horacio Carter government. The current president (...), he managed to have the number of industries almost tripled, and exports soared I think 5-6 times more (...) this year we will probably get close to the 600 million dollars of exports (SP2_H, free translation).*

In August 2018, when the above-mentioned quote was obtained, the total exports had reached US$ 456 million, versus US$ 291 million for the same period of 2017 and US$ 208 million in 2016 (CNIME, 2018b). By the end of November 2018, the total exports climbed to US$ 637 million, an increase of 55% (ABC, 2018). It is the best result of the “Maquila regime” exports ever, in line with the positive perspectives of CP2_I (5).

When it comes to politics, Cartes considered to amend the constitution to seek a second term – what had also been suggested for President Duarte because of his government
macroeconomic stabilization (Library of Congress, 2005). However, Cartes’ attempt was defeated (CIA, 2018). In both cases, we note short-term economic outcomes being employed as arguments to change the country’s institutional framework, once reelection is not allowed in Paraguay. Those facts suggest volatile systems, high uncertainties and strong ambiguities, which are all typical characteristics of emerging economies (EE) institutional environments (Luo & Tung, 2007; Peng et al., 2018a; Peng, Lee, & Wang, 2005). Since August 15th, 2018, Paraguay has been run by elected President Benitez, who shares a pro-business outlook (Encyclopedia Britannica, 2018) and is expected to follow Cartes’ neoliberal orientation. He has promised to foster foreign direct investments by low tax policies (BBC, 2018).

After a series of political deadlock and turmoil, the Paraguayan political scenario can still be considered fragile and recently stable. Since the National Law Nº 1064 of 1997, only Duarte has completed the five-year term prescribed in the national constitution, as Cartes presented his resignation 3 months before the end of his mandate to start a new term as elected Senator. This way, some attributes of EE institutional frameworks seem to have shaped the Paraguayan context since then: uncertainty, high levels of opportunism, unlawful behaviors, sudden institutional disruptions, drastic changes in the Government, institutional tensions and political hazards (Cuervo-Cazurra & Genè, 2008; Monticelli, Garrido, & Vasconcellos, 2018; Peng, Lee, & Wang, 2005; Su, Peng, & Xie, 2016; Uhlenbruck et al. 2006; Yamakawa, Peng, & Deeds, 2008). Figure 12 demonstrates some drastic political changes and complements Table 18.

In economic terms, the country has been one of the most dynamic economies in Latin America. Its GDP expanded by an average of 4.6 percent from 2007 to 2017 (World Bank, 2018a), but broad fluctuations were registered – from 2004 to 2016, the real GDP volatility (measured by standard deviation) was the second highest one in the region (BID, 2018). This is in line with the late and rapid economic growth registered in EE (Bianchi, 2009; Hoskisson et al., 2000; Welsh, Alon & Falbe, 2006). The drop of industrial production in Brazil and commodities international price fluctuations were the leading factors for the variation. Soybeans (mainly), meat and electric power altogether corresponded to 76% of all exports from 2004 to 2016 (BID, 2018). Indeed, SP2_I (2) called attention for the ongoing importance of the agrobusiness sector for Paraguay, its industrialization turning and its recent role as the country’s main prosperity vector.
Figure 12 – Political instability in Paraguay over the last 20 years.

Source: elaborated by the author based on BBC (2018); BID (2014, 2018); Cerqueira César (2016); CNIME (2018a); Encyclopedia Britannica (2018); Global Security (2018); Library of Congress (2005); Masi (2016); Masi & Borda (2011).
Figure 13 illustrates the GDP irregular expansion – negative growth was registered in 2009 and 2012, for example, when it was hit by the end of the commodity boom (World Economic Forum, 2017). Drops were also partially linked to weather-related events that impacted one of the least-industrialized and heavily-dependent-on-agriculture countries in South America (BID, 2018; Encyclopedia Britannica, 2018).

Paraguay has been doing better than most of the regional countries – monetary policy has been kept consistent, inflation has been at the Central Bank target and The Fiscal Responsibility Law (FRL) has supported fiscal austerity (BID, 2018; World Bank, 2018c). The investment grade has been exceeding the Brazilian one, and Paraguay’s rating went from BB- to BB at FITCH Ratings and from Ba2 to Ba1 at Moody’s (BID, 2018). Inflation, for example, is pointed out to be the less problematic factor for doing business in the country among other 16 aspects (World Economic Forum, 2017). Paraguay’s national currency, the guaraní, has performed relatively stable by Latin American standards (Encyclopedia Britannica, 2018).

The Global Competitiveness Report 2017–2018, a very disseminated index in academic literature (Rocha & Ávila, 2015), demonstrates that, despite Paraguay is ranked 112 in the general index, only ahead of Venezuela and Haiti in Latin America and the Caribbean, when it comes to Macroeconomic environment – one of the 12 pillars of the study – it jumps to the 42 position, ahead of Argentina (125), Brazil (124), Uruguay (95), Colombia (62) and Mexico (43), close to South America’s top-ranked countries Chile (36) and Peru (37) (World Economic Forum, 2017). According to BID (2018), the mid-term macroeconomic prospects are positive; and the World Bank (2018c) points out a GDP growth expectation of 4% for 2018-2020 period.
As reported by IFO/FGV indicator of better economic climate in Latin America, Paraguay leads the July 2018 pools; and it is ranked 2nd when it comes to the last 10 years average, behind Peru only (IFO & FGV, 2018), what confirms the positive outlook.

FDI inflow is volatile, concentrated in few sectors and on negative trend in terms of total GDP share since 2011 (BID, 2014, 2018). Even though the latest governments welcomed foreign investments, the country historically did not provide a stable environment for business (Library of Congress, 2005). “In industry, FDI flows (16.7% of the total) have been directed mainly at maquila-related activities (textile-apparel, auto parts and plastics represent 23.5% of industrial FDI)” (BID, 2018, pp. 44, free translation). FDI mechanisms and exportations promotion are frail; they lack sectorial orientation (BID, 2018) and are less attractive than other Latin American countries. The lack of predictability is still an obstacle to investments attraction (Masi & Borda, 2011). Figure 14 confirms a stronger inflow rates lately, despite its ups and downs.

![Figure 14 - Paraguay net inflows of foreign direct investments - FDI (1980-2017) in US$ million. Source: elaborated by the author based on World Bank (2018b).](image)

In the same way, the “Doing Business Project”, an important measurement of business regulations and their enforcement worldwide, ranks Paraguay in 146 (out of 190 nations) for “Starting a business”, 138 for “Protecting Minority Investors” and 127 for “Paying taxes” indicators (World Bank Group, 2018). It somehow reflects some barriers for international investments and elucidate why Paraguay is below the reference values of the region and of similar-income countries in terms of FDI attraction (BID, 2018). In the overall ranking, Paraguay is on 108th position, ahead of Argentina (117) and Brazil (125), with a performance slightly superior than Latin America and Caribbean average.

Paraguay is an original member of Mercosul. The Trade Union assisted the country to develop the industrial sector and created opportunities for firms’ vertical integration (Masi &
Borda, 2011) with Brazil and Argentina. It has also brought reduction of formal barriers for production distribution to neighboring countries. Before Mersosul, Paraguay had already been opened to the reverse inflow, either legally or illegally (Cerqueira César, 2016). The preferential member access is an opportunity to expand new products exchanges, especially those coming from *maquiladoras* industries. The potential of the “Maquila regime” inside Mercosul is high (BID, 2018).

Paraguay’s economy is still based on agrobusiness and economic growth has been volatile, typical from EE (Bianchi, 2009; Hoskisson *et al*., 2000; Welsh, Alon, & Falbe, 2006). There is a relative macroeconomic stability and internal political cohesion can be regarded as fragile. As the country has been courting FDI, it is important to strengthen business investment protection, develop stronger protection for minority investors (Li *et al*., 2018) and improve its institutional environment quality by evaluating regulative factors (Ávila, Rocha, and Silva, 2015). Based on the national context, we assume the “Maquila regime” can favor the internationalization of the economy, deepen the country’s participation in global value chains, and help the national industry development.

### 4.2. Characteristics of the Paraguayan “Maquila regime”

The “Maquila regime” is an explicit system for investments attraction (CNIME, 2018a). It is the main incentive mechanism for foreign investment in the country’s industrial sector (BID, 2018). It was conceived to be an international commercial trade platform for Paraguay, what justifies its orientation to international markets. The benefits expected are industrial development, employment generation and exports growth (CNIME, 2018a). It has a high potential of growth due to some Paraguayan competitive advantages and preferential access to Mercosul (BID, 2018).

The importance of the “Maquila regime” for Paraguay’s economy and industrialization was recognized by SP2_C (1), SP2_D (1) and SP2_F (1). Besides, it can also generate employment and foster innovation through the development of local processing plants as part of global value chains, as suggested by SP2_C (2). In the perspective of BID (2018), Paraguayan supply chains over the world are scarce and concentrated in agriculture. This implies low levels of sophistication, though. The expansion of the country's participation in global value chains is thus recommended as part of its integration and production diversification policies (BID, 2018).
According to SP2_E (1), in short, the Paraguayan “Maquila regime” is a tax incentive system similar to those existing in Central America and Mexico, with the difference of including intangible goods (services). As a regulatory and fiscal framework, it relies on some formal institutions to limit, intervene and influence the preferences of companies that are part of it. Those institutions are also responsible for general orientations, underlying rules and application of sanctions and punishments, when necessary (Meyer & Peng, 2016; Meyer et al., 2009; North, 1990; Peng, 2002).

One of the formal constraints (North, 1990) imposed by the regime is that companies must produce goods or services to be exported. Only up to 10% of the previous year’s production is permitted to remain in the country and if authorized by CNIME (CNIME, 2018a; Rediex, 2018). As reminded by SP2_K (1), all fees are not suspended in such exception. Therefore, it is evidenced that economic activities are highly regulated and local institutions establish the conditions for competition and functioning of markets (North, 1990), converging to Su, Peng, and Xie (2016).

Companies are either approved or not for operating under the “Maquila regime”, so they need to seek legitimacy (DiMaggio & Powell, 1983; Klopf & Nell, 2018; Suchman, 1995). Since the expression of interest, 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, 1991; Meyer & Peng, 2016) – though not instantaneously (Peng et al., 2017).

An example of coercive mechanism imposed by assigned entities (Rocha & Ávila, 2015) to all firms willing to benefit from the “Maquila regime” is the Maquila Contract. It is signed between two parties: a company legally established in Paraguay (known as “maquila company”, “maquiladora” or “contracted company”) and another company located abroad (known as “head office” or “contracting company”) (CNIME, 2018a). An alternative is to register a Letter of Intention, but then the contracted company has a deadline of 120 days for presenting the final Maquila Contract (Rediex, 2018).

SP2_E (2) observes that a maquiladora is even enabled to subcontract other Paraguayan companies to perform some partial process or subprocess, giving rise to “sub-maquiladoras” – and consequently, a whole “Maquila production chain” is established. In SP2_M (1) point of view, there is no Maquila per se, since a private contract is required, that it, two parties involved, and one of them must be domiciled abroad.
For operating a Maquila Contract, a Maquila Program should be previously submitted to the assessment of CNIME, the regulatory body (CNIME, 2018a; Rediex, 2018). As stressed by SP2_E (3), such a program is composed by two parts: a business plan and a technical description of products to be manufactured. For him, the latter is the most important because it contains the production technical ratios and demonstrates the transformation of raw material into goods. These mechanisms illustrate host-country formal institutions governing transactions and monitoring efficiency (Mingo, Junkunc & Morales, 2018; North, 1990), what impacts markets (Su, Peng & Xie, 2016).

After approval, a Biministerial Resolution is jointly drawn up and issued by MIC and Ministerio de Hacienda to assign the operation acceptance (CEMAP, 2018a; CNIME, 2018a). For SP2_C (3), those requirements indicate that a company must meet prior criteria established by Paraguay through a specific regulatory system for maquiladoras. For that purpose, the country makes use of rules and regulations, as the National Law Nº 1064 from 1997 and the Decree Nº 9585 from 2000. Still in accordance to SP2_C (3), the operation under the “Maquila regime” is different from other internationalization processes because it calls for a host-country approval (it is not just about the company’s own decision). Figure 15 presents the initial procedures for becoming a maquiladora.

![Figure 15 – Initial steps for setting up operations under the “Maquila regime” in Paraguay. Source: elaborated by the author based on Rediex (2018).](image)

Contractual mechanisms are part of the “Maquila regime” institutional framework and their absence result to illegitimacy and sanctions (e.g. not approval to operate) (DiMaggio & Powell, 1983, 1991; North, 1990). The Paraguayan contracted company can be either a formal subsidiary or not. The production is thus made by order and on demand of the contracting
A company located abroad as part of its offshoring or outsourcing strategy. This requires a high degree of coordination (Paiva, Carvalho Júnior, & Fensterseifer, 2009) between the maquila company and the head office.

The resulting output can be sent to any country (CEMAP, 2018a) – either to the contracting company’s home country for reselling by the head office, directly to that contracting company final clients’ or even straight to other different markets overseas, as confirmed by SP2_D (2) and SP2_G (1). Such a decision is always by account of the head office (CNIME, 2018a), but exports for third parties (i.e. not directly to the contracting firm) must be previously authorized by CNIME (Decree of 2000). The inclusion of this additional step can impact market efficiency (North, 1990; Su, Peng & Xie, 2016).

Similarly, the maquila company can also receive capital goods, inputs and raw material from the head office or directly from third parties (providers or suppliers) at any other part of the world (CEMAP, 2018a; CNIME, 2018a). In accordance with SP2_M (2), the “Maquila regime” assumes that all (or part of) the raw materials come from the outside; there is no “Maquila process” with 100% of national raw materials and inputs. Accordingly, before the exports of final goods, it must take place an import flow.

One of the main benefits of the “Maquila regime” is that goods enter the country through a temporary admission with suspended duties and taxes, remaining in Paraguay for the time established in the Maquila Program. The entering should be previously guaranteed by mortgage, pledge, bank guarantee, or insurance policy or warrant (CNIME, 2018a; Rediex, 2018). For SP2_K (2), even though guarantees are mandatory to compensate the suspended taxes, they are much more convenient than paying import taxes, which vary on average from 18 to 25% for imports out of Mercosul.

Another advantage is the one single tax of 1% applied on the total value added to the product within the Paraguayan territory (CEMAP, 2018a; Rediex, 2018). As provided for in Article 29 of Law Nº 1064, “the Maquila Contract and the activities carried out in its execution are taxed by a single tax of 1% (one percent) on the added value in the national territory” (Maquila Law of 1997, free translation). A composition of the “value added” is presented in Table 19.

<table>
<thead>
<tr>
<th>How to add value in the national territory</th>
<th>Example(s)</th>
</tr>
</thead>
</table>
| a) By acquiring goods in the country     | - Locally purchased goods (in the country)  
|                                          | - Definitively imported goods by the maquiladora and/or sub-maquiladora |
(continuation of Table 19)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Characteristic(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>b) By hiring personal and paying salaries</td>
<td>- Payroll (including social contributions)</td>
</tr>
</tbody>
</table>
| c) By hiring services | - Electric power, water and telephone bill  
- Rentals or leases paid, whether for real estate, plant equipment, etc.  
- Insurance of industrial plant, raw materials and finished products  
- Operational capital financing cost of the factory  
- Depreciation of machinery (in case of owned by the *maquiladora*)  
- Independent professionals services |

Table 19 – Adding value in Paraguay.
Source: elaborated by the author based on Rediex (2018).

Paraguay is the only Mercosul country to require only 40% of regional value added to issue a certificate of origin – label “Made in Paraguay” (CNIME, 2018a). The fiscal benefit provided by the “Maquila regime” is, in consonance with SP2_E (4), the greatest incentive for foreign companies. Once more, we notice Paraguayan institutions within the “Maquila regime” affecting transactions, shaping market structures and determining transformation costs (Su, Peng and Xie, 2016; North, 1990) to a high extent. Table 20 offers a whole picture of the additional “Maquila regime” operating rules:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Characteristic(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Type of business</td>
<td>- Either individuals or legal entities (Corporations, Limited Liability Companies, Branches of Foreign Companies or Limited Individual companies)</td>
</tr>
<tr>
<td>2. Field of production</td>
<td>- No restrictions regarding the field</td>
</tr>
</tbody>
</table>
| 3. Person who is benefited | - Any national or foreigner who has set up a company in Paraguay (as long as it bears some relationship with another company established abroad)  
- It can be a natural or juridical person, as well as a company that has idle capacity |
| 4. Available capital | - No limits or minimum amounts  
- It can be foreign capital, local capital or a mix of both |
| 5. Location | - Industries are free to settle anywhere in Paraguay |
| 6. Labor Law | - No special regulations within the regime - relations between workers and employers are regulated by the current Labor Code - Law 213/93 |

Table 20 – Key operating rules of the Paraguayan “Maquila regime”.
Source: elaborated by the author based on CNIME (2018a); Rediex (2018).

SP2_D (3) emphasized that the existing legal regulatory framework (Laws and Decree) legitimates the “Maquila regime” and the intervening institutions ensure that it follows all the expected requirements. He meant that the institutional conditions are not vulnerable to unilateral arbitrary changes. Any modification must conform the current legal and political systems, which foresee subsequent amendments over the existing rules followed by the
ratification of the Paraguayan Congress. In other words, SP2_D (3) sustains the existence of supportive institutions within the “Maquila regime” framework contribute to the absence of “institutional voids” (Khanna & Palepu, 1997).

If we take that assumption as completely true, then Peng et al. (2018) argument that weak institutional environments hold extensive institutional voids is refuted. Firms would rely basically on such formal institutions to work effectively (He & Wei, 2013) and the informal ones would not be necessary to fill in the gaps (Dau et al., 2018; Meyer & Peng, 2016; North, 1990; Orcos, Pérez-Arados, & Blind, 2018; Peng, 2003). This, in turn, would enhance the internal contradictions and ambiguities that characterize EE (Peng et al., 2018a; Peng, Lee & Wang, 2005). However, it is beyond our main purpose to evaluate the existence or not of “institutional voids” within Paraguay or the “Maquila regime” or how an EE can eventually hold strong institutions concurrent to extensive institutional voids; but rather having a broad picture of the chosen context for the study.

In this sense, SP2_E (5) indicated that a sole minor alteration has been registered in the regime rules so far. It changed the maximum period for transformation of imported raw materials into final goods and subsequent export from 6 months (with an additional of 6 months) to 12 months (with an additional of 12 months). As a result, it gave origin to Law Nº 5408, a modification of article 12 of Law Nº 1064, and widen the deadlines for manufacturing. SP2_M (3) also confirmed it was the only modification up to now. It exemplifies that institutions and their mechanisms are mutable over time (Peng, 2003).

The amendment took place during Lugo’s mandate and by request of maquiladoras, as informed by SP2_D (4). This shows the dynamic relation between institutions and companies, given that the latter can influence and impact the former (Peng, 2002). SP2_E (6) explained that many maquiladoras import high volumes of raw materials for bargaining better commercial conditions, so an extension of the deadline was meaningful for them. Therefore, the modification was aimed to enhance competitiveness, supporting Monticelli, Garrido, and Vasconcellos (2018). It illustrates how institutions can also be shaped by companies’ feedbacks and influenced by them. Still according to SP2_E (6), the suit was also necessary to equalize the period of stay with the country's Customs Code.

As reported by SP2_E (7), out of the 173 Maquila Programs approved and active up to September 2018, only 42 were originated before 2014. This indicates a “turning point” in the near past and cannot be analyzed apart from Cartes’ neoliberal policies to attract FDI, though. The recent boom is perceived by SP1_A (1) once the number of maquiladoras members of
AICP reached its peak. The same was noted by SP2_F (2) and SP2_A (1). For SP2_I (1), what calls attention is the exports volume growth too.

4.3. Textile-apparel sector and the “Maquila regime”

The textile-apparel sector is very traditional and dominant in Paraguay. It has historically drawn attention of the foreign investments driven to manufacturing, despite the participation of the industry in the economy has traditionally been marginal. During 2011-2014, the industrial sector represented 10.3% of the national GDP, and it has not reached more than 15% since the 90s. The industrial dynamism over the last 20 years, to which contributed the investments on maquiladoras operations, has not been enough for the Paraguayan industry to achieve greater participation in GDP (Masi, 2016).

One of the major seekers of workforce (13% of the total industrial workforce in 2010), the textile-apparel sector is also the most representative in terms of industrial units (21% of the total in 2010). It is primarily composed by micro and small businesses (94.5%), which generate 52% of the job vacancies (Masi, 2016; Pena, 2014). Although the sectorial production has been expanding – notably since 2010, with a variation of +21% in 2013, for instance – the share of the textile-apparel sector in industrial GDP fell 3 percentage points in 10 years. Still, it is the third most important sector for the manufacturing activity (Masi, 2016).

We notice that the expansion of textile-apparel sector seems to be at a slower pace than other Paraguayan industries (e.g. agri-food) (Masi, 2016; Pena, 2014), even though the sector is one of the most favored by preferential access to the European Union through SGP+. Indeed, such analysis can be twofold: even though it may be a risk at the sectorial perspective, on the other hand it may also reflect industrial diversification, what is important for EE. Appendix 4 offers additional characteristics of the sector in Paraguay.

Due to its expressiveness, mainly in social and economic terms (e.g. jobs and income generation), the textile-apparel industry has been a subject of interest of the Paraguayan Government for a long time. In 1992, when ProParaguay was created – and later incorporated to Rediex by Decree Nº 8721 from 2005 (ABC, 2007) – the sector was chosen as a key player to be supported and to have its companies’ competitiveness promoted overseas (Masi & Borda, 2011). Similarly, Decree Nº 4746 from 2016 establishes “supporting mechanisms for the enhancement and competitiveness of the national textile industry” (Decree of 2016, pg. 86, free translation), an example of the State intervention in business, attribute of EE institutional
frameworks (Rocha & Ávila, 2015). For SP1_F (1), it still lacks force of law to gain strength within the institutions it encompasses (e.g. MIC). All this suggests it is still a fragile instrument though.

The enactment of such mechanism by the Government meets, at least partially, the sector claims for protection of the national industry in face of the current challenges of international manufacturing. Decree Nº 4746 encourages investments in technology, design and qualification, and protect the domestic industry of imported goods. Other actions are directed to the habilitation of credit lines with special conditions, implementation of innovation projects, development of programs and training, and certification of labor competencies through public-private alliances (Decree of 2016).

AICP is another relevant player for the sectorial competitiveness. With more than 250 members and founded in 1951, it is one of the oldest and most prestigious Chambers of Commerce in Paraguay. AICP promotes the national industry in technology development, training, and productivity. It advocates before the Paraguayan government and international entities too (AICP, 2018a; AICP, 2018b), facilitating networks between government and firms (Meyer & Peng, 2016) and lobbying (He & Wei, 2013).

Regarding the “Maquila regime”, CNIME (2018d) indicates that 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. While by December 2017, 6 out of the 24 new Maquila Programs approved came from the textile-apparel sector (CNIME, 2017), up to November 2018, it fell to only 3 out of the 30 new maquiladoras approved (CNIME, 2018c).

According to 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. SP2_E (8) endorses its importance and SP2_D (8) estimates the apparel industries are the most representative in number. The sector is pointed as one that first benefited from the system in consequence of international competition (IOS, 2017). In accordance with SP1_D (1), the textile-apparel maquiladoras are complementary to Brazilian industries because Paraguay enhances international competitiveness by offering some important local advantages – labor, electricity and capital costs.
4.4. Competitiveness factors for international manufacturing

Some competitive advantages and disadvantages on the empirical field were identified and grouped into three dimensions: Paraguay, “Maquila regime” and textile-apparel sector. Figure 16 summarizes them. A complete list is provided in Appendix 5.

![Competitive advantages and disadvantages](image)

The most and the less problematic factors for operating in Paraguay are synthetized in the Global Competitiveness Report. Corruption, inadequately educated workforce, inefficient government bureaucracy, inadequate supply of infrastructure and access to financing are indicated as the main obstacles. On the other side, inflation, foreign currency regulations, tax rates, tax regulations and restrictive labor regulations remain at low levels (World Economic Forum, 2017).

For Trepowski, Martinez, and Romero (2014), the key factors for competitive advantage can be grouped into 4 categories: workforce, electricity, taxes and logistics. Cerqueira César (2016) outlines the attractiveness is originated by reduced production costs and the pragmatism of regulatory environments. Masi (2017) highlights the “Maquila regime” has been serving as...
an FDI pull factor (Conti, Parente, & Vasconcelos, 2016), even though it has not been the main engine of Paraguay's industrialization yet.

Based on the identified competitiveness factors, figure 17 consolidates the advantages international companies can seek when managing a textile-apparel manufacture in Paraguay under the “Maquila regime”. It elucidates the motivations behind their decision-making process too – costs saving and access to new markets beyond Paraguay, in our opinion.

Figure 17 – Key advantages for a textile-apparel industry in Paraguay under the “Maquila regime”. Source: elaborated by the author.

None of those factors can be analyzed isolated and apart from institutional frameworks and institutions (big picture). Competitiveness is either strengthened or not by a series of institutional conditions and generally requires coordination of resources, investments and policies among different players. Consequently, it is essential to identify which formal and regulative institutions are embedded to the empirical context under analysis, the constraints they impose, their mechanisms and how they influence the actions and behavior of maquiladoras companies.

4.5. Institutional framework, institutions and the “Maquila regime”

During data collection, 32 Paraguayan institutions were mentioned by interviewees. A complete list of them is provided in Appendix 6, along with their frequency. Nonetheless, we
perceived a high diversity of institutional conditions (Meyer & Peng, 2016) and varied effects among institutions (Meyer et al., 2009). 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 et al., 2018).

Aiming to group the emergent host-country institutions in accord with their roles and stage of influence over companies operating under the “Maquila regime”, we present Figure 18. The groupings were validated by 2 specialists – SP2_D and SP2_E – who were selected as they most contributed to the interviews and proved to better understand the institutional framework to which the institutions are embedded. Group “C” is the most important for the purpose of this inquiry as it represents formal and regulative institutions (North, 1990; Peng, 2002, 2003).

Group A is represented by institutions whose main purpose is to promote international business and to seek for foreign investments in Paraguay, not necessarily through the “Maquila regime” (e.g. Rediex). Group B is composed by institutions that support and enable the process of starting a business in Paraguay, both on a national (e.g. SUACE) and also on a local level through municipality (e.g. Prefectura), confirming that institutions can be multilevel (Dau et al., 2018; Hitt, 2016). The institutions responsible for approving (or refusing) the operations under the “Maquila regime” were added to Group B too (e.g. CNIME). Group C is the one that intervenes in the daily operations of the “Maquila regime” by defining what can be done and what should not be done, thus proving legitimacy (DiMaggio & Powell, 1983, 1991; Scott, 1987; Suchman, 1995). Finally, group D gathers those institutions that advocate before different government and private entities, seeking for sectorial interests and representation.

Some institutions are placed in more than one stage. CNIME, for instance, when understood as the Board responsible for the Maquila Program approval, is part of Group B. It is composed by representatives of MIC, Ministerio de Hacienda, BCP, MRE and STP, and defines the go/no go for a company to operate under the “Maquila regime”. It formulates and evaluates politics for promoting *maquiladoras* industries and appraises any modification companies may request in their Maquila Program (CNIME, 2018a).

In contrast, the operating dimension of CNIME, represented by the Executive Secretary and administrative teams (known as the “Secretaria Ejecutiva del CNIME”), is considered in Groups A and C, accordingly. It conducts the daily activities and ensures the regulations set by the Board, besides attracting foreign direct investments within the “Maquila regime”. *Maquiladoras* interact with this institution daily, as it provides permission for the imports of
Figure 18 – Host-country institutions grouped by their respective roles.
Source: elaborated by the author based on the interviews and secondary data.
capital goods, raw materials and inputs, and exports. According to SP2_E (9), the Executive Secretary holds three divisions: Legal, the one that regulates *maquiladoras* and ensure compliance with the law; Foreign Trade, where imports and exports are tracked and production technical ratios are monitored; and Technical Assistance and Control, a specialized unit for the acquisition of foreign companies interested in maquila (operating jointly with Rediex) and technical assistance on the regulatory conformity. An Information Technology unit supports the divisions and is transverse to them. Consequently, we assume the Secretaría Ejecutiva del CNIME has a role in commercial promotion (Group A) and regulation of operations (Group C).

MTESS, IPS and Prefectura were disposed both in Groups B and C because companies must register employees in MTESS and into the national social security system (IPS) continually, i.e., each time a new employee is admitted. Salaries, social contributions and benefits can be included in the composition of minimum local “value added” in Paraguay, then firms have an additional incentive for keeping up the workforce regular, despite the large informal labor market in the country. As observed by SP2_I (4), MTESS has been increasingly related by the Government as a specialized training provider due to its professional programs, such as SNPP and SINAFOCAL.

Regarding the local municipality (Prefectura), at the beginning of the operation companies may register industrial patents and obtain a business license, renewable annually against payment, as pointed out by SP2_K (3). This relationship can be somehow regarded as indirect at the kickoff because many procedures taken by foreign firms are consolidated at SUACE, the national centralized unit for opening and closing firms, as explained by SP2_D (10). Subsequently, companies are regulated by Prefectura on a monthly basis due to payment of local taxes too, justifying the position in Group C.

SEAM and INTN are mandatory institutions when starting a business. The former issues the environmental license, renewed every 2 years, as described by SP2_K (4). The latter certifies the production and the product lines, ensuring conformity with national technical standards (INTN, 2018). However, both institutions can be necessary if the company happens to change its manufacturing plant or even alter or expand production lines. Any modification of the plant location needs to be evaluated by SEAM. Before introducing new products to the market or every time production parameters are modified, INTN is requested. Due to it, both institutions were grouped into categories B and C.

Figure 18 also reveals some intersections between Groups A and D and Groups C and D. Given that CEMAP and CCPB are mostly representative associations that execute promotional
actions in partnership with government agencies and by which the “Maquila regime” is fostered, they were placed midway Groups A and D. Following the same reasoning, AICP and UIP are representative associations that play a central role in the process of issuance of the certificate of origin for exports (i.e. for label “Made in Paraguay”). For that reason, both stands over the junction of Groups C and D.

Among the 32 formal institutions identified (Appendix 6), the most cited ones were: MIC, CNIME, Ministerio de Hacienda, Rediex and DNA. It was somehow expected that the first three were on the top of mind since Law N° 1064 explicitly empowers those institutions by legitimating their regulatory role. Articles 5 and 6, for instance, creates CNIME, defines its main responsibilities and sets it as the main regulatory agency of the regime. The institution is the advisor body of MIC and Ministerio de Hacienda on matters relating to maquila, what explains the reference for all three.

Considering the industrial development purpose of the “Maquila regime” and the tax incentives, it makes sense to have two Ministries (MIC and Ministerio de Hacienda) behind CNIME. They serve as indirect constraints, regulating the economic activities of the regime, influencing decisions and determining norms (DiMaggio & Powell, 1983, 1991; North, 1990; Scott, 1995). MIC presides over CNIME Board, what is composed by representatives of Ministerio de Hacienda, BCP, MRE and STP too. The Executive Secretary is nominated by Ministerio de Hacienda. As determined by Article 8, “The Secretaría Ejecutiva del CNIME […] will be in charge of the application of all aspects established in this Law and its norms” (Maquila Law of 1997, free translation). Other institutions are subordinated to MIC too: DGCE, Rediex, SUACE and VUE.

Given the constant imports and exports flows, it was not a surprise to have DNA among the most cited institutions either. It assumes a key role in tracking and auditing the inflows and outflows of goods, contributing to the compliance mechanisms through which companies operating under the “Maquila regime” must account their manufacturing process. In this respect, Article 15 of Law N° 1064 institutes the obligation to “submit to DNA, through CNIME and on a monthly basis, a form of information regarding the volume, species and value of the imports used and exports or re-exports made” (Maquila Law of 1997, free translation).

The many citations of Rediex surprised us. Many interviewees assumed it is a regulatory body, though. The institution’s role was misunderstood by many interviewees, who pointed it out as the one that sets the “rules of the game” (North, 1990) and associated it with the “Maquila regime” beyond business promotion and development. Actually, the agency’s main attribution
is to attract foreign investments to Paraguay and promote exports. We infer the lack of clearness is a consequence of the early involvement with investors and of the fact that Rediex is a gateway for many foreign companies, including the ones interested in the “Maquila regime”. Additionally, Rediex was also reminded as the supposed “focal point” of companies operating under the “Maquila regime” instead of Secretaría Ejecutiva del CNIME. However, the institution does not regulate the maquila activities and it is neither mentioned in Law Nº 1064 nor in Decree Nº 9585.

4.5.1. Institutions and their roles

Group C (and its intersection with D) represents formal and regulative institutions (DiMaggio & Powell, 1991; 1983; North, 1990; Scott, 1987) that influence the operation of companies under the “Maquila regime” in Paraguay. As a result, we give more emphasis to it and offer Table 21, what depicts the role of such institutions and indicates how they can regulate companies’ activities by pushing them to conform with specific and non-specific standards of the “Maquila regime”. Secondary data is triangulated with the perception of interviewed specialists, thus enhancing the reliability of the institutions’ roles and corroborating the findings.

As it can be noticed below, institutions play different roles over the “Maquila regime” and demand adequacy from maquiladoras (Rocha & Ávila, 2015). To operate under the regime, for example, companies may first have their Maquila Program approved by CNIME and, after that, obtain the environmental license in SEAM, the certification on production lines in INTN and the business license and industrial patents in Prefectura. For imports and exports, firms manage (or hire third-party providers for that) specific systems required by institutions, such SAM-WEB and SOFIA. The responses to institutional pressures hence show conformity (Peng, 2003), confirming firms seek legitimacy in participating of a given institutional environment (Klopf & Nell, 2018).

By setting limits, rules and regulations, such as the conditions for issuing the certificate of origin (DGCE), the mandatory registration of employees (MTESS and IPS) as an alternative to compose the minimum “value added” of 40% (CNIME) and the audit on origin of goods, production processes and commercial invoices (AICP), to mention just a few cases, we recognize that institutions are predominantly more restrictive than inclusive (Monticelli et al., 2017; Rocha & Ávila, 2015). Their influence on economic activities are evident (North, 1990),
<table>
<thead>
<tr>
<th>Institution</th>
<th>Main roles</th>
<th>Relation to the “Maquila regime” and mechanisms</th>
<th>Evidences from interviewees</th>
</tr>
</thead>
</table>
| Secretaría Ejecutiva del CNIME | - Ensuring the implementation of the Maquila Law and its regulations (CNIME, 2018a).  
- Executing activities to generate optimal regulatory and operational conditions for the development of the regime (CNIME, 2018a).  
- Promoting the maquila overseas, in the sense of acquiring new companies to the “Maquila regime” (CNIME, 2018a).  
- Managing the online Automated Maquila System (SAM-WEB). | - It is the only regulatory body of the “Maquila regime” and it is specific of it, what means that companies not operating under the regime do not need to interact with it.  
- It is ensured by Law Nº 1064 and Decree Nº 9585.  
- Through SAM-WEB, the imports and exports are jointly controlled and authorized by CNIME and DNA.  
- It keeps formal contact with companies by e-mail only. | - SP2_D (11): “(...) CNIME is the only regulator of all maquila issues.”  
- SP2_E (10): “Basically, it makes sure that companies comply with the Maquila Law.”  
- SP2_E (11): “Well, first we have a law (…) and that law is enforced by this Maquila Executive Secretary I lead.” |
| DNA | - Controlling the entry and exit of people and goods in Paraguay through exclusive power (DNA, 2018).  
- Collecting taxes and fees regarding the inflows and outflows of people and goods (DNA, 2018).  
- Managing SOFIA, the customs tax system (DNA, 2018).  
- Ensuring compliance with the Customs Code, created by Law Nº 2422 of 2004 and regulated by Decree Nº 4672 of 2005 (DNA, 2018). | - Given the suspension of all taxes and duties on imports of raw materials, inputs and capital goods and through a temporary admission process provided by the “Maquila regime”, DNA plays a pivotal role for the permission of such suspensions during the process of inflow.  
- DNA is mentioned in Law Nº 1064 and Decree Nº 9585, what reinforces its importance for operations under the “Maquila regime” and its regulatory role.  
- SOFIA is integrated to SAM-WEB, the online Automated Maquila System managed by CNIME, what facilitates data cross-checks between DNA and CNIME. | - SP2_D (13): “(...) the DNA, responsible for the whole process of imports and exports and customs clearance, needs to know which [companies] are framed in the Maquila Law.”  
- SP2_E (12): “Then DNA is another institution to where all the maquila operations are daily involved.”  
- SP2_E (13): “(...) 4-5 years ago, we linked this maquila system [SAM-WEB] with the customs system [SOFIA] (…) so we became more agile” |
| VUE | - Integrating people and institutions involved in export processes by making available a unique registry of exporters (VUE, 2018).  
- Connecting exporters, Custom Brokers, certifying entities (both public and private ones) and MIC, i.e., different users and beneficiaries linked to export operations (DGVUE, 2018)  
- Facilitating exports procedures in terms of registration management and exit of national and/or nationalized goods (VUE, 2018).  
- Decree Nº 7290 of 2006 regulates and legitimates the application of VUE.  
- Since all companies operating under the “Maquila regime” are compulsory exporters, they must be registered in VUE and make use of the online platform for exports procedures.  
- Companies mostly have indirect contact with VUE because procedures are conducted by private Customs Brokers (third-part service providers).  
- The certificate of origin for exports, which confers the label “Made in Paraguay” and is required for Mercosul and SGP+, goes through VUE. | - Decree Nº 7290 of 2006 regulates and legitimates the application of VUE.  
- Since all companies operating under the “Maquila regime” are compulsory exporters, they must be registered in VUE and make use of the online platform for exports procedures.  
- Companies mostly have indirect contact with VUE because procedures are conducted by private Customs Brokers (third-part service providers).  
- The certificate of origin for exports, which confers the label “Made in Paraguay” and is required for Mercosul and SGP+, goes through VUE. | - SP2_D (14): “(...) VUE – which is the ‘Ventanilla Única de Exportación’ – is a kind of single export window to facilitate export processes and the same thing for import.”  
- SP2_D (15): “(...) it is a facilitator for exports.”  
- SP1_F (2): “(...) In this ‘Ventanilla Única de Exportación’, all the export procedures are carried out. All the documentation for exports goes through that computer system.” |
(continuation of Table 21)

| DGCE | - Supporting public and private sectors in issues related to trade policy and foreign trade in Paraguay (DGCE, 2018a).  
- Conducting national and international negotiations on regional integration; managing foreign trade operations documentation; coordinating trade negotiations on antidumping, safeguards and countervailing duties (DGCE, 2018a).  
- Acting as facilitator for producers, exporters and importers in processes of international commercial negotiation (DGCE, 2018a).  
- It regulates and control the issuance of certificates of origin, keeping up to date the database of issued certificates and the list of products commercialized abroad (DGCE, 2018b).  
- As highlighted above, the label “Made in Paraguay” is required for Mercosul and SGP+.  
- It verifies the productive process for ensuring: 1) the origin of the product both to be exported and imported; and 2) the fulfillment of the origin by request of customs overseas. | - SP2_E (15): “(...) we generate these authorizations of imports and exports here in maquila through DGCE.”  
- SP2_J (7): “In the certificates that have to be issued, there is a question of foreign trade which passes through them [DGCE]. And this is a somehow bureaucratic process, [DGCE] sometimes slow the process a bit.”  
- SP2_M (5): “With DGCE, which is the one that issues the certificates of origin. Each export, we issue a certificate of origin.” | - Decree 17071 of 1943 and Decree-Law 1860 of 1950 determines the rules of the Social Security in Paraguay and the role of IPS.  
- All employees must be registered at MTESS (i.e. be part of the formal labor market in Paraguay) and salaries and social charges compose the “value added” in national territory. Therefore, the contribution to IPS (9% by employee and 16.5% by employer) helps companies to meet the requirements of the certificate of origin for exports. Besides its importance for employees’ welfare, the registration at IPS is of interest of companies operating under the “Maquila regime” due to the certificate of origin. | - SP2_D (16): “(...) all the employees have to be formalized and all have to be enrolled in the Institute of Social Security, the IPS (…) All companies that hire people must enroll their employees in the IPS.”  
- SP2_E (17): “IPS, the Institute of Social Security, is where maquiladoras register their employees (…) obviously, it is very beneficial for maquiladoras companies to keep up to date the registration of their employees.”  
- SP2_L (3): “This is something that all companies must do in Paraguay: the social welfare. Any company in Paraguay must relate with the Institute of Social Security.” |

| IPS | - Directing and managing the Social Security system in Paraguay (IPS, 2018).  
- The Social Security system covers a series of events for salaried workers, such as non-professional illness, maternity, disability and death (IPS, 2018).  
- Offering pensions, medical care, and subsidies during illness for insured members and funded by contributions from government, employers, and employees (Encyclopedia Britannica, 2018).  
- Providing a set of services related to protection of illness, accidents at work and occupational diseases for insured members and their families (IPS, 2018).  
- Only the formal workforce can access the benefits tied to IPS (IOS, 2017), what is a challenge in Paraguay because of its large informal labor market (Masi & Borda, 2011). | - SP2_D (16): “(...) all the employees have to be formalized and all have to be enrolled in the Institute of Social Security, the IPS (…) All companies that hire people must enroll their employees in the IPS.”  
- SP2_E (17): “IPS, the Institute of Social Security, is where maquiladoras register their employees (…) obviously, it is very beneficial for maquiladoras companies to keep up to date the registration of their employees.”  
- SP2_L (3): “This is something that all companies must do in Paraguay: the social welfare. Any company in Paraguay must relate with the Institute of Social Security.” | - Companies operating under the “Maquila regime” must register their employees in MTESS and formalize their workforce. | - SP2_H (3): “One of the obligations of the maquiladoras is to keep 100% of employees up to date with their labor obligations.” |

| MTESS | - Regulating the Labor, Employment and Social Security policies in Paraguay (MTESS, 2018).  
- Ensuring compliance with current labor regulations, the improvement of working condition | | | |
and the respect of workers’ fundamental rights (MTESS, 2018).
- Promoting the employability, self-employment and decent work, as well as the validity of labor rights in the workplace (MTESS, 2018).
- Salaries paid for formal labor force compose the “value added” in national territory, thus contributing for the company to meet the requirements of the regime of origin and obtaining the certificate of origin for exports.
- SP2_M (6): “[firms relate] with the Ministry of Justice and Labor [MTESS] and with the Institute of Social Security [IPS] in what is to fulfill the labor standards.”

| INTN | - Supporting the improvement of quality, productivity and certification of conformity for national products by establishing technical standards (INTN, 2018).
- Acting as the National Certification Agency and certifying of products, systems and services (INTN, 2018).
- Strengthening the economic and social development of Paraguay though its technical agencies (INTN, 2018).
- Laws N° 862 of 1963 and N° 2575 of 2005 support the role and work of INTN.
- Companies operating under the “Maquila regime” must be certified by INTN in terms of production and product lines. It is done in the beginning of the operation and every time production is adjusted or new products are developed. The purpose is to conform to what is declared in the Maquila Program.
- SP2_D (19): “(...) all maquiladoras must have their production certified by INTN.”
- SP2_H (4): “(...) INTN, that will certify the consumption according to the technical description of products.”
- SP2_L (4): “INTN only when companies want to expand the [maquila] program. Many times, models are changed, or a model evolves. In that case, we ask CNIME for an extension of the program, showing out the model (…) and the components, and it is certified again by INTN.”

| SEAM | - Formulating programs and policies, as well as executing environmental actions, plans and projects related to the preservation, conservation and management of Paraguayan natural resources (SEAM, 2018).
- Ensuring the ecological and environmental ordering by seeking economic growth, social equity and long-term ecological sustainability (SEAM, 2018).
- An environmental license, renewable every 2 years, is required for companies manufacturing under the “Maquila regime”, and SEAM is the responsible for it issuance. Additionally, eventual new plants are subject to evaluation of the institution and issue of other environmental licenses.
- SP2_E (19): “Also at the beginning of operations, one of the main precautions that maquiladoras companies must comply with is to obtain the environmental license. That is, companies cannot prevent from having the environmental license.”
- SP2_L (5): “SEAM is very important (…) each maquila process must have an approval of SEAM.”

| Prefectura | - Promoting the comfort and safety of citizens, as well as the welfare of the general public.
- Governing a territorial organization with political, administrative and normative autonomy, as stated by the National Constitution (UCLG & OECD, 2016).
- Companies may register industrial patents, renewable every 6 months, and obtain a business license in the Prefectura. Additionally, they are expected to pay local taxes for operating in that territory.
- SP2_K (11): “(...) the local municipality, no matter how much you, okay, you're going to need a [business] license, but their influence on day-to-day activities of maquiladoras is not relevant.”
- SP2_E (20): “In fact, the industrial patent is renewed every six months.”
Paraguay is composed by 238 municipalities and 17 departments (UCLG & OECD, 2016). Collecting its own resources and investing it (UCLG & OECD, 2016) aiming to maximize the welfare of its citizens.

- **SET**
  - Application and administration of all legal provisions regarding taxation (SET, 2018).
  - Collecting taxes with integrity, efficiency and transparency, facilitating the taxpayer to comply with his/her obligations (SET, 2018).
  - Managing processes according to the legal framework and applicable requirements, enabling the compliance with tax obligations (SET, 2018).
  - Managing MARANGATU, the tax payment system (SET, 2018).
  - Since companies operating under the “Maquila regime” are subject to one single tax of only 1% on the value added to production within the Paraguayan territory, SET plays a fundamental role in the exemption of taxes over the manufacturing process.
  - MARANGATU is integrated to SAM-WEB, the online Automated Maquila System managed by CNIME, what facilitates data cross-checks between SET and CNIME.

- **AICP**
  - Promoting the national textile-apparel industry in terms of technological development, training and productivity (AICP, 2018a, 2018b).
  - Advocating before the Paraguayan government and international bodies (AICP, 2018b).
  - Offering technical and commercial advices (AICP, 2018a).
  - AICP authorizes the certificates of origin for textile-apparel exports, i.e., it intervenes in the control of exports by checking out goods, production processes and commercial invoices. There is no sectorial export, being it under the “Maquila regime” or not, that is not audited by AICP before the certificate of origin issuance.

- **UIP**
  - Promoting the industrial competitiveness and leveraging it over the national economy (UIP, 2018).
  - Advocating before the Paraguayan government (UIP, 2018).
  - Providing training opportunities for Paraguayan professionals (UIP, 2018).
  - UIP is authorized to issue certificates of origin for exports by DGCE. Considering that all companies operating under the “Maquila regime” are compulsory exporters, UIP is an option for certificates of origin issuance.
  - Other entities accredited by DGCE are: SNCSP and CAPEX.

**Table 21 – Host-country institutions influencing operations under the “Maquila regime”**

<table>
<thead>
<tr>
<th>Entity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SET</td>
<td>Application and administration of all legal provisions regarding taxation (SET, 2018). Collecting taxes with integrity, efficiency and transparency, facilitating the taxpayer to comply with his/her obligations (SET, 2018). Managing processes according to the legal framework and applicable requirements, enabling the compliance with tax obligations (SET, 2018). Managing MARANGATU, the tax payment system (SET, 2018). Decree-Law of 1990 and Law Nº 109 of 1992 legitimates the role of SET and taxation. Since companies operating under the “Maquila regime” are subject to one single tax of only 1% on the value added to production within the Paraguayan territory, SET plays a fundamental role in the exemption of taxes over the manufacturing process. MARANGATU is integrated to SAM-WEB, the online Automated Maquila System managed by CNIME, what facilitates data cross-checks between SET and CNIME.</td>
</tr>
<tr>
<td>AICP</td>
<td>Promoting the national textile-apparel industry in terms of technological development, training and productivity (AICP, 2018a, 2018b). Advocating before the Paraguayan government and international bodies (AICP, 2018b). Offering technical and commercial advices (AICP, 2018a). AICP authorizes the certificates of origin for textile-apparel exports, i.e., it intervenes in the control of exports by checking out goods, production processes and commercial invoices. There is no sectorial export, being it under the “Maquila regime” or not, that is not audited by AICP before the certificate of origin issuance.</td>
</tr>
<tr>
<td>UIP</td>
<td>Promoting the industrial competitiveness and leveraging it over the national economy (UIP, 2018). Advocating before the Paraguayan government (UIP, 2018). Providing training opportunities for Paraguayan professionals (UIP, 2018). UIP is authorized to issue certificates of origin for exports by DGCE. Considering that all companies operating under the “Maquila regime” are compulsory exporters, UIP is an option for certificates of origin issuance. Other entities accredited by DGCE are: SNCSP and CAPEX.</td>
</tr>
</tbody>
</table>

Source: elaborated by the author based on the interviews.
as well as the likelihood of affecting firms’ competitiveness (Monticelli, Garrido, & Vasconcellos, 2018) and promoting greater or lesser flexibility (Young, Welter, & Conger, 2018).

Institutions can also have positive influences on firms too (Monticelli et al., 2017). When Law Nº 1064 and Decree Nº 9585 determine the temporary suspension of all taxes and duties for maquiladoras, foreign companies are benefited. They impact on the functioning of markets and facilitate industrial development (Su, Peng, & Xie, 2016) in Paraguay. By centralizing the exports procedures in a single window and unifying the exporters’ registration, VUE reduces the operational work (or at least makes it easier) too.

When institutions clearly set their institutional expectations (Scott, 1995) and which choices they support (Peng, 2002), they contribute for a convergence of behaviors. This way, maquiladoras tend to become more isomorphic over time (DiMaggio & Powell, 1983, 1991; Meyer & Peng, 2016), as they need to cope with the institutions (Klopf & Nell, 2018) to maintain the fiscal benefits of the “Maquila regime”. If they do not, they face penalties (Lu, Tsang & Peng, 2008) and can lose benefits.

The institutions brought on Table 2 are assigned to enforce compliance to different organizational aspects (Rocha & Ávila, 2015). Their formal constrains (North, 1990) and regulative responsibilities (Scott, 1995) are evaluated with more details in Appendix 7. Those institutions can be either specific to maquiladoras or comprehensive to all firms operating in the host-country. CNIME, for instance, only exists because of Law Nº 1064 and Decree Nº 9585, showing that given institutional environments can give rise to special institutions. The other institutions exist irrespective of the “Maquila regime”, even though they can have structures, personnel and mechanisms oriented specially to maquiladoras.

In consequence of all stated above, to operate under the “Maquila regime” framework implies that companies may address a number of different issues with different institutions: Maquila program and operational conditions (CNIME); custom rights (DNA); labor and social security (MTESS and IPS); technical standards (INTN); environmental preservation (SEAM); national and local taxes (SET and Prefectura); and foreign trade (DGCE and VUE). Companies thus manage multiple restrictions of host-country institutions and keep a dynamic relationship with them. Figure 19 illustrates and summarizes the complexity of the “Maquila regime” institutional framework for firms.

We assume the institution that most pressure and regulate companies is CNIME, as it is the watchdog of the “Maquila regime” and the main regulatory body. Firms are expected to
interact with Secretaría Ejecutiva del CNIME frequently. DNA and SET come in sequence and are very restrictive too due to the nature of their activities. The former because it only admits the temporary suspension of taxes and duties for those items contemplated in the Maquila Program, what presumes strict inspections. And the latter because the low tax burden on the national value added implies reduction of direct tax collection for the country. It is not a coincidence that the online Automated Maquila System (SAM-WEB) is integrated to SOFIA (DNA) and to MARANGATU (SET). Once companies can outsource operational tasks to third-party providers and suppliers (e.g. Customs Broker, Accounting Office, etc.), we considered they may reflect institutional pressures too.

![Institutional framework for companies operating under the “Maquila regime” in Paraguay](image)

**Figure 19 – Institutional framework for companies operating under the “Maquila regime” in Paraguay.**
Source: elaborated by the author.

In conclusion, by taking wider influences from institutions, companies can incorporate those aspects into their strategy as they both evolve (Peng, 2002). Institutions and institutional frameworks are not static; they are mutable over time (Peng, 2003), especially when considering an emerging economy like Paraguay, with many political breaks over the last 20 years. As previously suggested, the country’s political scenario can be considered fragile, unstable and uncertain, which means the speed of changes may be high, typical from EE (Peng, Lee, & Wang, 2005). “Institutions” dimension only ranks 131 out of 137 countries in the Global Competitiveness Report 2017 – 2018 (World Economic Forum, 2017). Low levels of
government integrity and institutional weaknesses are reported on international (BID, 2014, 2018; Heritage, 2018) and national (Trepowski, Martinez, & Romero, 2014) studies. All of this put together indicates that likelihood of the “Maquila regime” institutional framework suddenly change is high.
5. RESULTS: WITHIN-CASE AND CROSS-CASE ANALYSIS

5.1. Company A

Company A operates in Ciudad del Este, Paraguay, close to the Brazilian border and under the “Maquila regime” since 2008. It produces curtains and micro fiber blankets for exports to Brazil. It is an associate member of AICP (AICP, 2018c) and active member of CEMAP – the company’s CEO is a representative of the association’s board (CEMAP, 2018b). In 2017, Company A was on top 100th exporters, among more than 1.100 firms, and on top 6th textile exporters (both in FOB US$) (Departamento de Estadísticas da DNA, 2017), what places it as one of the most important companies in the textile-apparel sector in Paraguay (Pena, 2014; Trepowski, Martinez & Romero, 2014).

The equity capital of Company A is 100% Brazilian. It was founded to meet Company Alpha needs, a curtains market leader in Brazil, created in 1993 and with headquarters in Santa Catarina. The decision of not constituting a formal subsidiary of Company Alpha in Paraguay and keeping different brands was motivated by strategic and competitiveness issues. Also, it chose to have a legal structure apart from the Brazilian company to not extending occasional labor issues and obligations from the subsidiary to the head office and vice-versa.

Besides curtains, Company Alpha also commercializes wallpapers and fabrics in Brazil. With operations in Lages, Blumenau and Anita Garibaldi and a distribution center in Blumenau, it produces 440 thousand curtains a month and is present at more than 4000 points of sale (Correio Lageano, 2014), including some traditional retail chains in Brazil, like Havan, Pernambucanas and Riachuelo. The company has exported to Angola, Panama, Dominican Republic and Uruguay (Brazil4Export, 2018; MDIC, 2018). It generates more than 1300 direct and indirect jobs. It was a pioneer in the segment of ready curtains in Brazil – before it, curtains were tailor-made by specialized seamstresses only.

Company Alpha (Brazil) is understood in this study as Company A’s (Paraguay) head office because the entire host-country production is exclusively shipped to home country. According to CNIME records, among the ongoing and active Maquila Contracts of Brazilian textile-apparel companies in Paraguay, Company A holds the oldest one. Moreover, it is currently one of the top three oldest maquiladoras in the sector.

The Paraguayan unit has around 160 employees. The first level of the organizational chart is composed by a President (CEO), a Vice-President (Production Manager) and three other managers, as represented in Figure 20. All managers have direct reports to the President, who
led the project from the beginning. He is not an employee of the head office but a member of Company Alpha’s controlling family. The Vice-President undertakes the plant management when the President is away (in Brazil).

![Organizational Chart](image)

**Figure 20 – First level of Company A organizational chart.**
Source: elaborated by the author based on notes taken during the on-site visit.

Company A corresponds to the fourth plant of Company Alpha operations – the other three are in Brazil – and represents around 25% of its production, according to CP1_A (1). The Paraguayan plant 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 firm is subordinated to Company Alpha commercial department, responsible for sales forecasts. Plant decisions are thus constrained by the head office needs and expectations. As underlined by CP1_A (2):

> The [Company A] management is mine. But it is a management subordinate to the company in Brazil because it controls the commercial department, and the purchases are established by projections of such department. So, this management is limited because I depend on the information that comes from the head office in Brazil (CP1_A, free translation).

Still in accordance to CP1_A (3), such a model is not infrequent. Most of the companies operating in Paraguay under the “Maquila regime” opt to manufacture there and keep the commercial, marketing and purchasing departments, as well as other corporate structures responsible for strategic decisions, in the home country. Basically, the Paraguayan factories are just about manufacturing.

The start of Company A’s operation in Paraguay was driven by cost efficiency. Company Alpha faces import duties of 26% for inputs and raw materials coming out of Mercosul and
used in the manufacturing process in Brazil. The same finished goods it produces can be imported with duties of 35% in the home country (also if the origin is not Mercosul), just a slight difference from inputs and raw materials import duties. This way, the competition within the Brazilian market is intensified, margins happen to be tight and Asian textile finished goods become easily cheaper than local products.

Therefore, we notice that limitations of the home country somehow triggered its internationalization (Conti, Parente, & Vasconcelos, 2016). As pointed out by CP1_A (4), the company had faced two remaining options before expanding to Paraguay: 1) to totally become an importer of finished goods from Asia (reseller – end of its manufacturing process), or 2) to seek for low tax burden alternatives in order to reduce costs, as provided by the Paraguayan “Maquila regime”. According to CP1_A (5):

*It is hard for you to fit into this new [competitive] landscape. Hence there are alternatives such as Paraguay to lower costs, right? The idea of Paraguay is to lower costs. If we had the same advantage [in Brazil] as in Paraguay, import taxes of 0%, I would not have started production in Paraguay, I would have continued to produce in Brazil. Obviously, the main advantage of Paraguay is such taxes exemption, then (CP1_A, free translation).*

This quotation illustrates the cost-driven decision taken by the company when starting to produce in Paraguay. As summarized by CP1_A (6): “So why have we come to Paraguay? To lower cost. If it were about doing the same price of Brazil, it would have remained in Brazil. Although reality is more difficult [in Paraguay], it has to lower cost, otherwise [the investment in] Paraguay is not justified” (CP1_A (6), free translation). Consequently, we assume the “Maquila regime” advantages represented pull factors, while the home country limitations, push factors (Conti, Parente, & Vasconcelos, 2016).

Besides import taxes and duties suspension, CP1_A (7) highlights other benefits to produce in Paraguay: young and abundant workforce, lower cost of labor (compared to Brazil), simplified tax structure, cheap industrial electricity and flexible labor legislation. In consequence of that, Paraguay becomes a very close and convenient option to Brazilian companies rather than seeking manufacturing alternatives in other regions, such as Asia.

5.2. Company B
Company B is the Paraguayan subsidiary of a Brazilian company founded in 1988 and a national leader in the production of ropes. Its headquarters is located in Santa Catarina and products are distributed throughout the national territory, including exports to Uruguay (Brazil4Export, 2018; MDIC, 2018; Portal da cidade Brusque, 2016). The company has 80 employees. The mix of products is composed by eco-friendly ropes (made by recycled polyester or materials derived from the nature, such as sisal and cotton), professional ropes, kits and slings (produced with polyester, polyamide or polyethylene), slacklines, multipurpose tarpaulins and clothesline, as well as pet accessories. It covers a wide and diversified market segments, from civil engineering, transports and agrobusiness to fishing, according to its website.

The company started to manufacture in Paraguay and under the “Maquila regime” in 2017 and the plant is situated at Limpio, near the capital Asunción, in the Central Department. It is estimated that the initial investment was around US$ 2 million (Canal Pro, 2017). The company intends to convert the Paraguayan plant into its international distribution center, once there are projects to export not only to the head office, as provided in the Maquila Contract, but also to other Mercosul members and to countries outside Mercosul (Canal Pro, 2017). Up to date, the Brazilian market is still the main destination, though. Company B was among the top 300th exporters in Paraguay in 2017 (in FOB US$) (Departamento de Estadísticas da DNA, 2017).

The subsidiary has 40 employees. The administrative level of the organizational chart is composed by an Executive Officer (CEO), a Production Manager and an Administrative Manager, as indicated in Figure 21. Both managers have direct reports to the Executive Officer, who accumulates the same function in the Brazilian head office.

Aiming to make the replacement of imported products from Asia by the company’s own manufacturing possible, Company B’s expansion to Paraguay was motivated by cost saving,
i.e. efficiency seeking, as indicated by CP2_A (1). “Paraguay turned up as a country (...) in which it could offer us lower cost compared to the importation of products, and that could give us a competitive advantage (...)” (CP2_A (2), free translation). Despite the short period of operation (less than 2 years), the subsidiary already accounts for 30% of the company production, according to information provided by CP2_A.

Before expanding to Paraguay, the company led comparative studies between China and the country (Canal Pro, 2017) that ended up pointing to the latter as the best location for the Company B’s needs. Still from the perspective of with CP2_A (3), the country hosts the following advantages: cheaper workforce (compared to Brazil) due to low social charges and greater annual working hours for each employee per year; cheaper industrial electricity (also compared to Brazil); and low tax burden and simplified tax structure. The interviewee calls it the “tripod” of the Paraguayan competitive advantage.

Company B’s unit in Paraguay is oriented to manufacturing. The commercial, marketing and financing departments and decisions are centralized in the home country, as stressed by CP2_A (4). The Executive Officer also accumulates the same function in the Brazilian head office, what can bring some advantages to the company in terms of greater control of operations, speed of decision-making, better internal communication and shareholders reporting. The formal structure between head office and subsidiary was chosen, according to CP2_A (5), given the corporate structure of the group (5 shareholders and 3 members in the Board of Directors) and an eventual difficulty in splitting investments and returns. Furthermore, the Directors understood that is would be better to have both information and control centralized (greater reliability). A trade-off faced is higher costs – double taxation by the Paraguayan and the Brazilian governments.

Besides incorporating an existing assembly line from Brazil, the Paraguayan factory is also in charge of a new line of products that used to be totally imported. The production insourcing started to be studied and developed in the Brazilian plant, but it has never achieved industrial scale there. Therefore, it represents a new venture for the company, reinforcing the importance of the Paraguayan unit beyond cost-saving of previous existing lines. CP2_A (6) observes that:

(...) when we started the project for producing this family of imported products that we had not produced in Brazil [so far], we already had the technical knowledge. We hired a technician with a lot of experience in a competitor – who already had worked for 10 years in a competitor. He came to work with us, stayed in Brazil working one year long, helping out in the development of the project, and when we put it into
operation [in Paraguay], we brought this person here, to be the responsible for it [in Paraguay] (CP2_A, free translation).

The factory in Paraguay was not originally conceived for developing innovative products, though. This is confirmed when CP2_A (7) does not highlight “innovation” as an expected outcome of neither such a unit nor from the host country. Product development and marketing functions remain in the home country. Products manufactured in Paraguay are not exclusive – they are produced by other competitors too.

5.3. Operations decisions taken by Companies A and B

Apart from the location decision, corroborated by Conti, Parente, and Vasconcelos (2016) as one of the very first and most important when companies opt to produce overseas, companies also make other choices in international manufacturing. By doing so, they face trade-offs, which in turn guide their operations strategy, as postulated by Skinner (1969). Table 22 shows the sub-categories of operations decisions that emerged during the interviews within the cases under analysis. There was no distinguishing category arising from an exclusive case, but distinct emphasis was given accordingly.

<table>
<thead>
<tr>
<th>Sub-categories of decision</th>
<th>Dimensions</th>
</tr>
</thead>
</table>
| C1) People and organization | C1D1) Organizational structure (organization chart, work organization and reporting levels)  
C1D2) Employees profile and Origin of workforce (local x foreign)  
C1D3) Job description (role in such organization)  
C1D4) Job specialization (high x low specialization)  
C1D5) Salary and benefits policies and non-financial incentives  
C1D6) Workforce training and development  
C1D7) People recruiting and selection  
C1D8) Workforce regulations and internal rules |
| C2) Plant | C2D1) Plant location (proximity to head office)  
C2D2) Characteristics (ownership, size, quantity, timing)  
C2D3) Plant facilities (sewage disposal, electricity supply)  
C2D4) Plant focus (cost cutting x high technology)  
C2D5) Level of control (high x low control)  
C2D6) Plant requirements and regulations  
C2D7) Origin of resources (own capital x third-party financing) |
| C3) Product | C3D1) Product portfolio  
C3D2) Product characteristics (origin of raw materials and inputs, high x low added value, exclusiveness x complementarity, adaptation x standardization)  
C3D3) Product design and responsibility  
C3D4) Product requirements for exports |
| C4) Production | C4D1) Production insourcing x outsourcing (make or buy)  
C4D2) Production focus (volume x quality)  
C4D3) Production representativeness (over total production)  
C4D4) Productivity and scale |
The decisions presented above represent the orientation set by those companies (Kim, Sting, & Loch, 2014) for the Paraguayan operation. In accordance with Wheelwright (1984), we notice they are complementary to the extent that decisions support and / or impact each other. For example, we cannot consider inventory decisions completely isolated from the characteristics of plant, the product portfolio, production processes and quality management. As an outcome of today’s competitive economy, managers face multiple conflicting goals, what turns manufacturing decision-making processes more complex (Ehie, 2010) and calls for integrate choices. Table 23 compares the identified sub-categories of decision with the seminal literature and demonstrate we find support for them, with just some differences in the grouping and naming of dimensions and / or sub-categories.

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1) People and organization</td>
<td>“Labor and staffing” and “Organization and management”</td>
<td>“Workforce” and “Organization”</td>
<td>“Human resources”</td>
</tr>
<tr>
<td>2) Plant</td>
<td>“Plant and equipment”</td>
<td>“Facilities”</td>
<td>“Facilities”</td>
</tr>
<tr>
<td>3) Product</td>
<td>“Product design/Engineering”</td>
<td>-</td>
<td>“New products”</td>
</tr>
<tr>
<td>4) Production</td>
<td>“Production planning and control”</td>
<td>“Capacity”, “Production planning / materials control” and “Quality”</td>
<td>“Capacity”, “Equipment and process technology”, “Quality” and “Systems”</td>
</tr>
<tr>
<td>5) Machinery and equipment</td>
<td>“Plant and equipment”</td>
<td>“Technology”</td>
<td>-</td>
</tr>
</tbody>
</table>
Rather than following Wheelwright and Hayes (1985) grouping into structure- and infrastructure-related decisions, we follow Ward, McCreery and Anand (2007) as we understand the emergent sub-categories are all interdependent and mutually interconnected. Moreover, we find support on that choice in Choudhari, Adil, and Ananthakumar (2012), who highlights that decisions taken may influence other decisions too. Aiming to better comprehend the most important decisions taken by the two companies operating in Paraguay, we briefly present them following this section.

5.3.1. People and organization decisions

It is noticed that both Company A and Company B took some similar decisions: 1) emphasis on the manufacturing floor workforce, with very lean administrative structures; 2) absence of commercial, marketing and product specialists, which means absence of those skills within the plant; 3) predominance of Paraguayan workforce, even for administrative functions and leadership positions, except for two: CEO and Production Manager; 4) implementation of in-house training programs for workforce assisted by home-country specialists; 5) incentives for career development and promotion, given the difficulty in finding out people with technical skills; 6) adoption of 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, etc.); 7) people recruitment based on employees’ own indications, because recruitment consulting companies are scarce; and 8) undertaking of motivational actions for increasing the well-being and productivity within the workforce. Table 24 provides a chain of evidences for such related decisions.
### Company A decisions - evidences

**CID1**) Organizational structure / **CID4**) Job specialization:

CP1_A: "(...) Management is not complete in Paraguay, right. It’s partial. It’s more the productive part in Paraguay (...)"

CP1_A: “Commercial department and product development are all in Brazil. We do not do this here [in Paraguay]”

**CID2**) Employees profile and Origin of workforce:

CP1_A: "(...) Why are all the employees Paraguayan? First reason is to lower costs. Second reason is idiosyncrasy (...) let's say I put all the Paraguayan on the factory floor, and all the Brazilians as managers, I'm going to have a culture shock (...) By having all from the same culture (...) from the same country, it facilitates (...)”

**CID6**) Workforce training and development:

CP1_A: "(...) today we manage our internal training by ourselves.”

CP1_A: “I always had advice from Brazilians (...) to train the Paraguayan staff”

CP1_A: “Today, our best employee, she went into the cleaning department (...) she has been working, she has been learning, she has been developing herself (...) she did not have the knowledge, she added it here (...) we pay lots of attention to it.”

CP1_A: “(...) in Paraguay, sometimes it is difficult for you to find qualified people (...) I need to hire (...) an industrial machine mechanic. I will not find it. So, I have (...) motorcycle mechanics (...) [and they have been] developing themselves to become mechanics of the machines that we use. (...) there is no specific workforce”

**CID8**) Workforce regulations and internal rules:

CP1_A: “It is called internal work regulations. It becomes, as if it were the labor laws within your company, it cannot be against the Ministry of Labor (...) we insert an article of duties and obligations for our reality.”

**CID7**) People recruiting and selection:

CP1_B: “[We recruit] by reference. Yes, we let the employees know (...)”

CP1_A: “(...) Do you know how I started to hire employees? I announced it on the radio.”

**CID5**) Salary and benefits policies and non-financial incentives

CP1_C: "(...) then we let them listen to the music (...) in the period before, with no music, for a time we banned it (...) it made them that little fall [in motivation] (...) after we started releasing it again, it also completely changed production, they started to improve and, and today (...) they are excited, they are producing more.”

### Company B decisions - evidences

**CID1**) Organizational structure / **CID4**) Job specialization:

CP2_A: “(...) we have, today in Paraguay, the industrial part centralized; commercial and financial parts are centralized in Brazil.”

CP2_A: “(...) the support structure is very lean, it has 3 people: two in administrative, and one in production. The others, that's all operational (...)”

**CID2**) Employees profile and Origin of workforce:

CP2_A: “I only have one Brazilian (...) who is the textile technician who takes care of all the production. The others, all Paraguays. And I, Brazilian, as the company’s Executive Officer.”

CP2_A: “There are two concerns: one is the spread of our culture; (...) to pass this over to a Paraguayan, it would take a long time (...) and the second concern is to be in control, in the knowledge of operational processes (...) So, it is easier to bring a technician from Brazil, with more than 10 years of experience, in order to disseminate this knowledge little by little.”

**CID6**) Workforce training and development

CP2_C: “(...) everyone had no qualifications in this area. We trained them all in here. They all were develop here.”

CP2_C: “(...) I had to do it along with the guy (...) to learn how it is (...)”

CP2_C: “(...) I still have, a little still, let’s say, more in the weaving area, where the staff is in learning process.”

**CID8**) Workforce regulations and internal rules

CP2_A: “(...) we also made the manual, every employee when hired, he/she signs it and knows the rights and duties that he/she has inside the company.”

**CID7**) People recruiting and selection:

CP2_A: “When we implanted it here, before starting the operation (...) every day our guard came to ask if he could already receive resumes, that people are used to coming into the company’s door for delivering the resume (...)”

**CID5**) Salary and benefits policies and non-financial incentives

CP2_C: “So last month, we distributed lollipops to everyone. Now this month, next week, we'll distribute popsicles. Did you understand it? These are little things that have no cost, almost no financial value, and which have a great benefit within production. So, we have created a sound environment.”

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Table 24 – People and organization similar decisions.

Source: elaborated by the author based on the interviews (free translations).
Some differences between the decisions on people and organization can be observed, though. First, in Company B, the Executive Officer accumulates the same function of the Brazilian head office, where he is responsible for the company’s strategic planning, international purchasing and industrial activity, what can contribute to operations control, higher speed of decision-making process and culture dissemination. In Company A, the President is responsible exclusively for the Paraguayan unit only, what can lead to a narrow perspective of the market and the textile-apparel sector, as well the dissemination of distinct organizational cultures and lower speed in decision-making.

Second, Company B seems to be pursuing a standardization of the functions performed by employees with reference to the head office, while this aspect was not perceived in Company A. It can be either because such a homogeneity of functions has already been reached after 10 years of operations or due to the possibility of the unit to perform activities independently, reflecting some difference on the top management between Paraguay and Brazil.

Third, after high turnover rates in the beginning, Company A achieved a low staff turnover, confirmed by the increase of employees average age. The workforce demonstrates greater autonomy. In Company B, the beginning of operations was turbulent too, with some negative leaders showing up and being replaced by new employees. Although it seems that staff turnover has stabilized, it can be considered a very recent achievement. The current workforce is younger than Company A and requires close supervision, once it is still in learning curve. Consequently, it can also be assumed that Company B’s workforce presents a limited autonomy over the manufacturing process, what in turn can hamper high productivity rates, job rotations or internal replacement.

While Company A revealed difficulties in hiring administrative staff, Company B does not. Two possibilities emerge out of it: 1) the former can be in search of more specialized profiles and competences, as the company has greater experience and a better division of labor (beginners, as Company B, tend to seek for more generic skills and demand generalists); 2) it is a consequence of the plant location, given that Asunción area shelters more universities and supposedly better qualified workforce. Difficulties in hiring people can impact on pipeline planning, though.

Lastly, Company B has declared to be seeking more engagement of the workforce within some factory issues (e.g. total quality program), empowering some employees to be internal ambassadors and spread the new culture around. No clue was given by Company A in this sense. Table 25 gathers some evidences of it all.
<table>
<thead>
<tr>
<th>Company A decisions - evidences</th>
<th>Company B decisions - evidences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C1D3) Job description / C1D1) Organizational structure:</strong></td>
<td><strong>C1D3) Job description / C1D1) Organizational structure:</strong></td>
</tr>
<tr>
<td>CP1_A: “Sometimes I miss a little information on the textile sector because, in fact, I manage the industry in Paraguay, the general management (...) I’m not so tied to textile production, do you understand?”</td>
<td>CP2_A: “(...) the whole industrial part in Brazil, industrial part in Paraguay, are under my responsibility.”</td>
</tr>
<tr>
<td>CP1_A: “(...) in Paraguay itself, our process is totally operational, right? The general commercial management, it is all carried out by Brazil.”</td>
<td><strong>C1D4) Job specialization:</strong></td>
</tr>
<tr>
<td><strong>C1D6) Workforce development / C1D7) People recruiting and selection</strong></td>
<td><strong>C1D6) Workforce development / C1D7) People recruiting and selection</strong></td>
</tr>
<tr>
<td>CP1_C: “(...) We have already had a very high turnover. But today we do not anymore, the turnover [is] low.”</td>
<td>CP2_C: “They feel the difference of the person who arrives with a different culture (...) so at first they created a certain rejection.”</td>
</tr>
<tr>
<td>CP1_A: “We do not have a very high turnover, so they get old along with the company. So, (...) our average age is increasing, because we do not change employees very much, they get older working with us.”</td>
<td>CP2_C: “(...) emerged (...) the first negative leaders inside the factory.”</td>
</tr>
<tr>
<td>CP1_C: “(...) there is no need even to be there (...) each one, after you do the training with them, they are each one already doing their part, their work (...)”</td>
<td>CP2_A: “(...) the average age of Paraguayans is 34 years (...) if you consider our company, most are under 30 years working with us.”</td>
</tr>
<tr>
<td>CP1_C: “(...) before, they (staff) had many doubts (...) they most asked things rather than they worked.”</td>
<td>CP2_C: “In Brazil (...) Janir, who is a rope specialist, he has been there [working in the head office] for almost 20 years, right. I do not have anyone like this here.”</td>
</tr>
<tr>
<td>CP1_C: “First they came (...) to ask how to do and so, and then we started to pass the responsibility for them, so they learned how it works, and we started teaching one by one (...)”</td>
<td>CP2_C: “(...) there [Brazil] you have experienced people that you do not have here.”</td>
</tr>
<tr>
<td><strong>C1D7) People recruiting and selection:</strong></td>
<td>CP2_C: “(...) the staff is still in learning curve (...) sometimes I face a certain delay in some setup (...)”</td>
</tr>
<tr>
<td>CP1_A: “We have been out there looking for people to the office for some time, and we do not find the profile we want. There is no simple way to find it, there is none, there are not many recruitment and selection companies.”</td>
<td><strong>C1D7) People recruiting and selection:</strong></td>
</tr>
<tr>
<td>CP1_A: “(...) but the workforce here is more “rough” in our segment, right, in the textile segment we feel more difficulties, where people with basic training have no idea of productivity and quality, then (...) there is a need to develop and train for the industrial needs (...) the training that people who came in had was more handmade, handmade sewing, not industrial sewing (...)”</td>
<td>CP2_A: “There is a lot of available workforce in Paraguay. So, the selection process, it is also very easy (...) It’s very easy to hire people.”</td>
</tr>
<tr>
<td>CP1_A: “(...) we do not find a lot of available workforce in Paraguay. So, the selection process, it is also very easy (...) It’s very easy to hire people.”</td>
<td><strong>C1D5) Salary and benefits policies and non-financial incentives</strong></td>
</tr>
<tr>
<td>CP2_B: “We are going to organize ourselves according to what they [head office] already have in their experience of so many years.”</td>
<td>CP2_C: “In Paraguay, skilled workforce is very scarce, there is almost none.”</td>
</tr>
<tr>
<td><strong>C1D6) Workforce development / C1D7) People recruiting and selection</strong></td>
<td><strong>C1D5) Salary and benefits policies and non-financial incentives</strong></td>
</tr>
<tr>
<td>CP2_A: “(...) we have some technics, some controls of all stages of the administrative process, where we have trained all the workforce, or have been training them, to perform in the same way (...) as if they were in Brazil.”</td>
<td>CP2_C: “We have created a Quality Management Board. So, they begin to learn (...) how to establish mechanisms to control this quality, right? Then, we called some people, right. So that people could feel important within the organization.”</td>
</tr>
</tbody>
</table>

Table 25 – People and organization distinct decisions.
Source: elaborated by the author based on the interviews (free translations).
5.3.2. Plant decisions

Plant location decisions say a lot about market orientation in these two case studies. Company B, for instance, opt to install the 2900 square meter plant in Limpio, Central Department, motivated by the proximity to Asunción port once the company intends to export its production beyond Brazil. Also, as it imports raw materials from Asia, loads are received faster. On the other hand, Company A has not demonstrated explicit intention to reach new markets beyond Brazil directly from Paraguay, so it elected Ciudad del Este for its operation because the Brazilian plants are easily accessed by road – Blumenau distribution center is 850 kilometers far from Paraguay. The company also imports from Asia and even though it takes more time to receive raw materials and inputs in Ciudad del Este, 320 kilometers distant from Asunción port, it prefers a shorter transit time for distributing rather than receiving goods – another option would be bringing them by road, from a Brazilian port to Ciudad del Este, but costs increase up to 40%.

Both companies chose to own a property and build its own facilities. The ownership decision was based on costs, since the low offer of properties in Paraguay raises the rental prices. Whereas Company B bought a finished property to speed up the installation process, Company A moved to a new plant in 2018, built over 3 years and close to the previous one, which had been purchased in the same condition (already finished) that Company B did. The latter opened its 800-square-meter factory in 2008 and progressively expanded it to a 3200-square-meter unit. Due to local restrictions for further expansion, it decided to move to a 6000-square-meter plant, with possibilities to widen it again. Thus, both companies concentrate their operations in single units in Paraguay.

The experience with those plants is recent: Company B has been operating for less than 2 years, while Company A moved in it on mid-2018. The latter reported some difficulties in sewage disposal and power supply in Ciudad del Este – water distribution is poor and an artesian well was considered when building the plant, and there is no sewage treatment in all areas. In contrast, Company B did not face those problems because Asunción area is provided with sewage disposal. It only mentioned the need of obtaining an environmental license before starting production – and even before submitting the Maquila Program for approval. Such a license was being renewed after 2 years and it was also cited by Company A. Besides it, both plants are fenced and count on with private security staff and cameras, suggesting security issues. Table 26 shows the evidences for these and other plant-related decisions.
<table>
<thead>
<tr>
<th>Company A decisions - evidences</th>
<th>Company B decisions - evidences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C2D1) Plant location:</strong></td>
<td><strong>C2D1) Plant location:</strong></td>
</tr>
<tr>
<td>CP1_A: “And other: transit time (...) my shipping left it on Friday, crossed from here to Brazil on Friday, left it on Monday, and on Tuesday it was there in our DC (...).”</td>
<td>CP2_A: “the most suitable region for us was (...) near the capital, because here we are very close to the port (...) and as we have the intention of direct exports, it is (...) much cheaper logistically (...).”</td>
</tr>
<tr>
<td>CP1_A: “(...) our (...) imports come from maritime and river (...) up to Asunción, then road from Asunción to Ciudad del Este. This is the most common option and (...) the cheapest one.”</td>
<td>CP2_A: “(...) as we have projection of direct exports from the subsidiary, here we would reach other markets easier.”</td>
</tr>
<tr>
<td>CP1_A: “(...) I save lots of more time with this [road transportation from Brazilian port to Ciudad del Este], but it is 40% more expensive this road freight.”</td>
<td>CP2_A: “(...) our raw material is also almost 100% imported from Asia, it arrives here at the port, so the logistics cost (...) [is] much cheaper than if I were in Ciudad del Este.”</td>
</tr>
<tr>
<td><strong>C2D2) Characteristics:</strong></td>
<td><strong>C2D2) Characteristics:</strong></td>
</tr>
<tr>
<td>CP1_A: “We needed more space, we could not grow in there (...) we had purchased 3,200 m² of our own, but (...) we had nowhere to grow, the plots around were already busy (...) we bought those 6 acres and built now these 6,000 m² and we already have a project to build more 6,000 for the next year.”</td>
<td>CP2_A: “(...) we opted to buy, to acquire a property for, an already built property, for speeding up, accelerating the process of setting up the company here.”</td>
</tr>
<tr>
<td>CP1_A: “(...) at some periods of the year you have more energy shortages [in Ciudad del Este].”</td>
<td>CP2_A: “The option to purchase the property was due to (...) the little offering of rent, then the cost of the property, for renting, is much higher (...).”</td>
</tr>
<tr>
<td>CP1_A: “(...) a businessman who will invest today, he/she will probably have the same difficulties I had 10 years ago - infrastructure (...), security, etc.”</td>
<td>CP2_B: “The first [environmental license] was issued in 2016 and now in 2018.”</td>
</tr>
<tr>
<td><strong>C2D3) Plant facilities / C2D6) Plant requirements and regulations:</strong></td>
<td><strong>C2D3) Plant facilities / C2D6) Plant requirements and regulations:</strong></td>
</tr>
<tr>
<td>CP1_A: “You're going to build a factory, (...) you have to make an artesian well, as well the part of sewage, too (...) there is no sewage treatment in Ciudad del Este.”</td>
<td>CP2_A: “(...) to start a maquila project, you may have (...) an industrial property already defined (...) to do the environmental feasibility study, you necessarily may have a physical location (...).”</td>
</tr>
<tr>
<td>CP1_A: “(...) at some periods of the year you have more energy shortages [in Ciudad del Este].”</td>
<td>CP2_B: “The first [environmental license] was issued in 2016 and now in 2018.”</td>
</tr>
<tr>
<td>CP1_A: “(...) a businessman who will invest today, he/she will probably have the same difficulties I had 10 years ago - infrastructure (...), security, etc.”</td>
<td><strong>C2D5) Level of control:</strong></td>
</tr>
<tr>
<td>CP1_A: “(...) you have a better quality control (...) Here you are closer [to head office] (...) so your control is much faster and much easier.”</td>
<td>CP2_A: “(...) the second concern is to be in control, in the knowledge of the operational processes (...) so, it is easier to bring a technician from Brazil, with more than 10 years of experience, to be able to disseminate this knowledge around, so that we can stay more comfortable about it.”</td>
</tr>
<tr>
<td>CP1_C: “It has been eight years since I came here.”</td>
<td>CP2_C: “(...) our production costs are better than in Brazil.”</td>
</tr>
<tr>
<td><strong>C2D4) Plant focus:</strong></td>
<td><strong>C2D4) Plant focus:</strong></td>
</tr>
<tr>
<td>CP1_A: “(...) some alternatives such as Paraguay emerge to lower costs (...).”</td>
<td>CP2_C: “(...) I started to design the inhouse weaving project (...) they knew nothing about the factory, and they had nothing either. So, I had to start from the beginning.”</td>
</tr>
<tr>
<td>CP1_A: “(...) today we import all the fabrics, and our idea is to start a &quot;small inhouse weaving&quot; to start developing something related to fabrics area too. We already have an inhouse weaving in Brazil today (...) out of what is done in Brazil, about 30% is already made by ourselves. Not everything comes from China anymore.”</td>
<td>CP2_C: “(...) tying kits, securing cargo kits, they were created and born here.”</td>
</tr>
<tr>
<td>CP2_C: “(...) there is no technology here, right, we bring it from somewhere else.”</td>
<td>CP2_A: “(...)”</td>
</tr>
</tbody>
</table>

Table 26 – Plant decisions.
Source: elaborated by the author based on the interviews (free translations).
The level of control can be considered high for both plants. Company B ensures it by having an experienced Brazilian Production Manager. Company A maintains the same Production Manager for 8 years and argues that the proximity to Brazil makes control easier. The CEOs travel to Paraguay on a monthly basis and spend around 1 week in locus. When they are away, the control is exerted by the Production Managers and the relation remains remotely.

Concerning plant focus, it was noticed that Company A has a great focus on cost efficiency, but it is about to start an inhouse weaving to manufacture its own fabrics. The project becomes viable with the new plant and it aims to reduce the imports of raw materials from Asia. At the same time, Company B also stresses the emphasis on cost, but the plant was already conceived to accommodate an inhouse weaving, which was implemented since the beginning of operations. While Company A already has its own inhouse weavings in Brazil, corresponding to 30% of its production – Company B does not, so it means that the Paraguayan plant can represent an important asset for the company, given that it shelters new ventures (product lines not manufactured in Brazil).

Company A demanded third-party funding for building the new plant, but due to several bureaucracies, the release of the loan took so long that the factory was almost finished. The funding was then used as working capital because the start and evolution of the project demanded faster resources enabled by the company’s own capital.

5.3.3. Product decisions

For both cases, product-related decisions are concentrated in the home country. However, given the company structure, such a division seems to be more consolidated in Company A than Company B. In the former, it is clearly stated that product design and sales forecast are responsibilities of the head office, a strict division of activities. The Paraguayan unit is evidently subordinated to product decisions taken by the head office – observing the production capacity, though. It follows instructions regarding product standards. In the latter, the fact of having the same Executive Officer for Brazil and Paraguay seems to soften such decision hierarchy, and some product adaptations (packing, labeling and color) are handled directly by the subsidiary – a less strict division of activities. Once this Paraguayan unit already carries out specific processes and manufactures exclusive products not produced in Brazil, it can lead to a greater exchange (in terms of feedbacks, outputs, etc.) with the head office. The same may happen when Company A implement its own inhouse weaving.
Company B mix of products is composed by: 1) a previous existing assembly line composed by professional ropes – produced with polyester, polyamide or polyethylene – and transferred from Brazil to Paraguay; and 2) a new line representing the production insourcing of some final goods (tying kits, securing cargo kits and tying slings) complementary to professional ropes and that used to be totally imported in Brazil from Asia. Those new products also add value to the company portfolio. All the product lines mentioned above are exclusively manufactured in Paraguay and have in common the consumption of virgin raw materials. The Brazilian unit is responsible for eco-friendly ropes, made by recycled materials, which are not manufactured in Paraguay. Ropes correspond to 80% of the total sales, while 20% are originated from tying slings.

Company A, on the other hand, preserve the portfolio of the Brazilian units – curtains and micro fiber blankets – which represent 25% of the head office’s total production. The Paraguayan unit is orientated for a mix of products with greater added value (i.e. more expensive fabrics) that would lead to higher production costs in Brazil because of import duties. The company has learned the importance of concentrating the Paraguayan manufacturing in lines of products with greater added value because of the gradual increasing of costs of labor due to exchange rate. That was not perceived from the beginning, in 2008, tough, when exchange rates favored low costs of labor in Paraguay, enabling lines of products with lower added value. Thus, the company evolved its product decisions over time.

Like Company B did, Company A has a project to start its own inhouse weaving, aiming to replace the import of final goods (fabrics) from Asia by the development of its own fabrics. Another important aspect of Company A’s mix of product is that it varies accordingly, based on collections defined by the head office: two new ones every six months, and another annual one. This way, product variations are low. All products specifications (fabrics, size, weight, color, etc.) are established in the home country, as well as market strategy. The Paraguayan unit is responsible for the manufacturing only.

Table 27 presents the evidences for the aforementioned-product-related decisions. Furthermore, it was identified two other aspects in common. With regards to product specification for exports, the certificate of origin (label “Made in Paraguay”) for facilitated access to Mercosul and SGP+ demands extra efforts from the companies (e.g. coordination among imports and exports flows, Customs Broker, CNIME requirements,
Company A decisions - evidences

C3D3) Product design and responsibility:
CP1_A: “Products already came designed for the [Paraguayan] unit. We only produce what the head office sends (...) it already defines which are the inputs (...) the composition.”
CP1_A: “(...) we do not go into [product] development; (...) it is the head office.”

C3D1) Product portfolio / C3D2) Product characteristics:
CP1_A: “Product is the same [between the Paraguayan and Brazilian units] - curtains.”
CP1_A: “(...) today, Paraguay accounts for 25% of the business. 75% is still in Brazil and we never thought about changing it.”
CP1_A: “(...) we try to work here in Paraguay with products of higher added value (...) as the cost of labor became higher, the higher the value of the fabric, the input base, the more we can dilute those costs (...).”
CP1_A: “(...) this is something [products of higher added value] that we had to change ... at the beginning, we were not very much concerned because, for the cost we found here, the workforce was much cheaper than we paid at that time in Brazil.”
CP1_C: “(...) we came here [in 2008] with no machinery, only in the manual mode itself, and we started producing the cheapest products, just to get an idea (...).”
CP1_A: “Every year (...) there are new product lines (...) collections, in fact (...) every year we change the fabrics base, we change size, we change specifications (...).”

C3D4) Product requirements for exports:
CP1_D: “(...) this [certificate of origin] has to do directly with what is the customs clearance document, which are the Customs Broker who are authorized. We can access it and verify what they are carrying on, when it is closed and made official (...), in which departments it is going on (...) until it is authorized, and we then print it.”
CP1_C: “(...) we are going to make a product, this product is of another measure, or it modifies something, etc. (...) then we get in touch with them [CNIME] (...).”

Company B decisions - evidences

C3D3) Product design and responsibility:
CP2_A: “(...) when we started (...) [the] family of imported products that we did not produce (...) we hired a technician with lots of experience in a competitor, who (...) had been working for a year in Brazil, assisting the development of the new project (...).”
CP2_C: “(...) we bring a customer here, and “What do you want? Do you want your name here? Do you want your brand on the label?” We do it. “No, but I want a standard package.” We do it.”

C3D1) Product portfolio / C3D2) Product characteristics:
CP2_A: “We had two situations: (...) we brought a production line that we had in Brazil, and a new production line (...) that would be the substitution of imported products by our own production.”
CP2_C: “Everything we produce here (...) there is no production in Brazil.”
CP2_C: “(...) we do not make slings there, for example. Here, we do it.”

C3D4) Product requirements for exports:
CP2_B: “(...) because that is under the responsibility of the Customs Broker, the certificates of origin.”
CP2_A: “(...) the certificate of origin is issued at the same day. In Brazil, it takes 2, 3, 5 days for you to get a certificate of origin. The process is the same, but the bureaucracy delay in Brazil is scandalous in relation to Paraguay.”
CP2_C: “One of the things that it [INTN] covers, as we were talking about right now, is product engineering.”
CP2_B: “We just had a visit from them last week for checking out the production and if everything we have in the factory works accordingly. It was the INTN visit.”
CP2_A: “So this [product registration] is something that we do not have in Brazil, right?”

Table 27 – Product-related decisions.
Source: elaborated by the author based on the interviews (free translations).
etc.). However, Company B perceives the issuance of the certificates as faster and less bureaucratic than it is in Brazil, compensating the coordination efforts. Second, all products manufactured under the “Maquila regime” are submitted to the evaluation and registration of CNIME (watchdog of the Maquila Program) and INTN (technical conformity), so the companies’ product-related decisions are dependent upon the approval of those institutions. Company B, for instance, argued that the company does not have to comply with such kind of requirements in the home country.

5.3.4. Production decisions

Production decisions are by far one of the most important since the main purpose of the Paraguayan units is manufacturing. The beginning of operations was different for them: while Company A opted to a step by step start, with manual processes, handmade products and lack of machinery and equipment, Company B decided to migrate a whole assembly line and implement its own inhouse weaving, which called for a greater extent of planning, coordination and automatization.

Due to its initial approach, Company A gradually evolved up to the current stage of production, which is on its highest peak, with 89 thousand pairs of curtains in the second month after changing plant (versus a previous average of 65 thousand). The new plant has brought better communication and integration within teams, favoring activities rotation in accordance with the production needs. The workforce was concentrated in a single daily shift, in contrast to the many ones it used to have. Production layout has also been modified and all steps come upon in sequence, different from the other plant, thus resulting in more organized production lines.

Company B preferred distinct work shifts for each sector tough, different from Brazil, where it adopts a single daily shift to most of the workforce. Its current stage of production can be remained stable. We assume there are opportunities to enhance productivity since it is a recent operation and different from the other case, where productivity is in a higher level. The operation is very controlled, with indicators for all critical processes and tracking of several rates, such as failure and loss, and on a daily basis. For the firm, it was essential to replicate all those mechanisms (controlling, scheduling, productivity level, quality level, etc.) as the CEO already keeps track of them in the head office. Considering that, one can infer that there is a
high potential to achieve faster and more substantial gains of productivity than Company A did in the beginning.

To reach higher levels of productivity, Company A has adopted some practices of Company Alpha and made intensive use of technology and operational systems over recent time. The company considers to be very dependent of those operational systems because the whole production management (product status, productive stage, responsible, etc.) is controlled through them. The production scheduling and balancing is made by the Production Manager, who dictates the daily rhythm of production. The implementation of product technical forms has contributed to the consolidation of productive processes.

On the other hand, over the short period of operation, Company B seemed to be more oriented not directly to productivity; but to production engineering in the application of raw materials. Reducing the weight of slings without impacting its resistance was a great challenge. The company reported to have reduced 8 grams in the product, which still resisting 3 tons, an important advantage over Chinese competitors, whose sling outweighs 4 grams.

A system of financial reward based on individual productivity is adopted by Company A. Despite not being a recent decision, the reliability on production records has increased and calibrates the financial incentives. Before the current operational systems, the control was fragile and divergences between virtual and real volume were frequent. Employees can now check their productivity on real time and evaluate their delivery, what contributes to greater transparency. No information was provided by Company B in this sense during the interviews.

Company A has enhanced its quality management and the number of dirty curtains has decreased. Nonetheless, the company deals with an important trade-off between quality and costs, as the idea of producing in Paraguay is tied to cost efficiency, but production is oriented for greater added value products, which are expected to be superior in terms of quality. Such quality issues have emerged out of the interviews, thus suggesting that volume is a driver, but not an end by itself. The company perceives that quality management is facilitated by the proximity to head office and is ensured by the Brazilian Production Manager, who plays a major role in this regard. Table 28 provides a chain of evidences for production decisions taken by both companies.

In Company B, the quality system implementation takes place at the same time it does in the home country. It was in 2016 that the company took the first steps in this direction, so when it opened the subsidiary, the quality practices started to be naturally transferred to Paraguay but suited to product differences. In the interviews, the company reported to have just implemented
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<thead>
<tr>
<th>Company A decisions - evidences</th>
<th>Company B decisions - evidences</th>
</tr>
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<tr>
<td><strong>C4D7) Work shifts and routine / C4D5) Production processes:</strong></td>
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<td>CP1_C: “(...) we had production in the upper part and in the bottom part, so the communication there did not work very well, because it looked like separate rooms (...) and it was very difficult to get everyone to understand each other (...).”</td>
<td>CP2_A: “Here (...) there is a sector that works 2 shifts, a sector that works 3 shifts, a sector that works in business hours.”</td>
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<td>CP1_C: “(...) they took it as if (...) each sector was a different company.”</td>
<td>CP2_A: “In Brazil, we work with a sector with 3 shifts, and the rest in business hours.”</td>
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<td>CP1_C: “Today we are all in a general [shift], so this is something else that has improved. We were there in two shifts (...) we were in two shifts because there was no way we could accommodate all people on a single shift (...).”</td>
<td>CP2_A: “(...) in Brazil we have a little more restricted production capacity, we put most of the sector during business hours, because that way we have a slight reduction of labor cost, a slight decrease in energy cost (...) [in Paraguay] as we are making use of a greater capacity, instead of investing in more machines, I simply distribute the workforce in shifts, it becomes easier to manage.”</td>
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<td>CP1_A: “(...) we are on a new plant (...) more organized (...) starting here with the experience of the previous shed, we have already developed it better, right, more planned, more organized.”</td>
<td><strong>C4D4) Productivity and scale / C4D5) Production processes:</strong></td>
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<td><strong>C4D4) Productivity and scale / C4D5) Production processes:</strong></td>
<td>CP2_A: “(...) we have control (...) so today we have metrics, indicators of all processes, failures rates, losses rates, production rates, specific quality controls - if I have a product that I have to control the weight, we can do the daily check. So, we had almost no problem in implementing this system here.”</td>
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<td>CP1_A: “(...) we are a company that is 25-years-old in Brazil, here in Paraguay, 10, and we are still evolving in processes, in productivity, so it is a constant improvement. We never get to the peak. We are always evolving.”</td>
<td>CP2_A: “(...) Every day, I get several indicators that we control in my emails: productivity per sector, shift, inventory report, finished products, raw material, quality rate, everything that is a managerial indicator, I receive it daily. Both in the reports from Brazil and Paraguay.”</td>
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<tr>
<td>CP1_C: “(...) we were in a very manual process where a cut of fabrics (...) there were two workers for that (...) and they took an hour to do this 100-meter fabric process. Today, with the cutting machine we have there, it takes us 1 minute (...).”</td>
<td>CP2_A: “(...) we have control (...) so today we have metrics, indicators of all processes, failures rates, losses rates, production rates, specific quality controls - if I have a product that I have to control the weight, we can do the daily check. So, we had almost no problem in implementing this system here.”</td>
</tr>
<tr>
<td>CP1_A: “We're not at the limit, we're at the highest productivity level we have ever had. The limit is different - the sky is the limit.”</td>
<td>CP2_A: “(...) we have control (...) so today we have metrics, indicators of all processes, failures rates, losses rates, production rates, specific quality controls - if I have a product that I have to control the weight, we can do the daily check. So, we had almost no problem in implementing this system here.”</td>
</tr>
<tr>
<td>CP1_C: “(...) our average was 60 thousand pairs of curtains, 50, 60 thousand pairs, 65 (...) now in the second month of production, it went to 89 thousand pairs.”</td>
<td>CP2_A: “(...) Every day, I get several indicators that we control in my emails: productivity per sector, shift, inventory report, finished products, raw material, quality rate, everything that is a managerial indicator, I receive it daily. Both in the reports from Brazil and Paraguay.”</td>
</tr>
<tr>
<td>CP1_C: “(...) the systems evolution, for us, was very important (...).”</td>
<td>CP2_A: “(...) Every day, I get several indicators that we control in my emails: productivity per sector, shift, inventory report, finished products, raw material, quality rate, everything that is a managerial indicator, I receive it daily. Both in the reports from Brazil and Paraguay.”</td>
</tr>
<tr>
<td>CP1_A: “(...) today, half of our business is about systems; if I run out of the internet, part of my production stops (...) if we run out the system, we are lost: we do not know where the product is (...) then in the system you have the total production control.”</td>
<td>CP2_A: “(...) we have control (...) so today we have metrics, indicators of all processes, failures rates, losses rates, production rates, specific quality controls - if I have a product that I have to control the weight, we can do the daily check. So, we had almost no problem in implementing this system here.”</td>
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<tr>
<td>CP1_C: “today, (...) our production is on automatic mode (...).”</td>
<td>CP2_A: “(...) Every day, I get several indicators that we control in my emails: productivity per sector, shift, inventory report, finished products, raw material, quality rate, everything that is a managerial indicator, I receive it daily. Both in the reports from Brazil and Paraguay.”</td>
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<tr>
<td>CP1_C: “They already know what to do… and so it goes, and the curtain is ready in the front.”</td>
<td>CP2_A: “(...) every day, I get several indicators that we control in my emails: productivity per sector, shift, inventory report, finished products, raw material, quality rate, everything that is a managerial indicator, I receive it daily. Both in the reports from Brazil and Paraguay.”</td>
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Table 28 – Production decisions.
Source: elaborated by the author based on the interviews (free translations).
C4D4) Productivity and scale / C4D5) Production processes (continuation):
CP1_C: "(...) here in Paraguay the culture, the industries, productivity, production parts, they were very small, so it was very difficult for these people to adapt here inside the company, so it was something with no rule (...)."
CP1_C: "(...) after we changed the system, we started making those technical forms (...) marking the sequence."
CP1_C: "[The technical forms] are (...) how the process it has to be done, it follows a sequence of how it has to be done."
CP1_C: "(...) every indication made by employees, they can see themselves, so they want to win the individual productivity, they know how much they are delivering (...)."
CP1_C: "today (...) I can already analyze everything as it is, my way of working, how is it, who is performing better, worse, that’s why I told you, that today we already have this balance (...)."

C4D2) Production focus / C4D6) Quality management:
CP1_A: "(...) there we had a very high rate of dirt on the curtains."
CP1_A: "(...) we are always balancing cost and quality (...)."
CP1_A: "(...) I cannot analyze quality alone. If I focus only on quality, I do not sell my product because it gets very expensive. If I analyze only the pricing, I lose the quality and do not sell the product either, it has no quality."

C4D8) Distribution of manufacturing:
CP1_A: "We work on a daily basis (...) but it is a day-to-day decision that is evolving (...) When you have very big jumps, your risk of falling is also very great, so you have to build the foundations and develop it (...)."
CP1_A: "And another is our inability to predict the market."
CP1_A: "(...) here we work exclusively for this head office in Brazil."
CP1_A: "As a complementary chain, Paraguay is perfect. But not as a chain for companies to migrate here (...)."

C4D4) Productivity and scale / C4D5) Production processes (continuation):
CP2_C: "(...) today, for example, we began our sling with 73 grams. Today it is 65. And it continues to resist 3 tons. The Chinese [competitor], its sling is 69 grams. So, we are 4 grams cheaper than Chinese."

C4D2) Production focus / C4D6) Quality management:
CP2_C: "We are implanting there [in Brazil] the quality system (...)."
CP2_C: "It is almost, let’s say, a joint work of quality, because there [Brazil] it has also started recently."
CP2_C: "The creation of our Quality Management Board, this ends up impacting the whole environment, we are still crawling (...) we have just 1 month and 10 days (...)."
CP2_C: "(...) we have another group, which we are working on, that will start now, which is 5 Ss, so let's make the “5 Ss day” too."
CP2_C: "(...) the quality vision that they are beginning to have now within this team. That they did not have before. This vision of quality, organization (...)."
CP2_C: "In terms of quality (...) a small [difference] (...) there it does not make slings, for example. Here it does. So, but in this control, we follow ABNT norms - the ABNT technical norms. So, within ISO, we follow this."
CP2_C: "(...) [the difference between the subsidiary and the head office] it is only in terms of product, because [the quality management] is standard. It's a company standard."

C4D8) Distribution of manufacturing:
CP2_A: "The goal is the more (...) the more independent the subsidiary from Brazil, the better. Even because we always see the situation in Brazil, right, we have been dragging a critical economic-financial situation (...)."
CP2_A: "(...) we still have very centralized exports from the Brazilian head office to other countries, but we have this work on development for direct exports too, from Company B’s subsidiary to other countries (...)."

Table 28 – Production decisions.
Source: elaborated by the author based on the interviews (free translations).
a Quality Management Board with representatives of the workforce. The idea of involving the employees in such a project was to empower them and to spread a great awareness over the theme; also, to develop standard processes and quality guidelines between head office and subsidiary.

Regarding the production planning, it is noticed that Company A does it on a daily basis, what suggests the company lacks a long-term view and future goals. This perception is confirmed when the company demonstrated that the evolution of production had not been planned but happened by chance and as progressive responses to the Paraguayan favorable context. We assume the production has always been drained exclusively to the Brazilian market – no plans to go beyond it were revealed. Production scaling is still considered deficient. The company emphasized that the Paraguayan supply chain is partial and complementary to the Brazilian one – not exclusive or apart from it. In contrast, Company B seems to have a long-term plan in which the subsidiary is a key asset for its expansion: a platform for exports through which international markets can be accessed independently from Brazil, considered by the company’s CEO as economically volatile when compared to Paraguay.

5.3.5. Machinery and equipment decisions

As we briefly mentioned above, Company A started manufacturing with few machines and processes were very manual. Machinery and equipment decisions were clearly based on Company Alpha experience, inputs and know-how. The incremental substitution of manual processes by machinery handling faced some opposition of the employees and it took a while for them to get used to the new condition. It is worth remembering that through the “Maquila regime”, to imports of machinery and equipment are given a temporary admission and they can remain in Paraguay for the time established in the Maquila Program.

Machines were tailored to meet Company A specific needs (cutting, sewing and drilling) in the manufacturing of curtains and blankets and developed by Company Alpha’s mechanical engineers. Machinery was mainly imported from Brazil and just a few had been previously used by Company Alpha. The company owns around 15 machines that were progressively incorporated into the assembly lines. Recently, Company A also imported a new one from Canada through Law 60/90, which is expected to bring higher level of automatization to produce some lines. Thus, the company seems to be constantly seeking for higher productivity levels though machinery acquisition.
For the assembly line that already existed in Brazil, Company B transferred the machinery used in Brazil to Paraguay. For the new line, new machines and equipment were either developed through partnerships or imported from Asia and the United States. As the operation is recent, it seems the company opted to have an additional working shift at a first moment rather than incorporating new machinery, which we suppose will be progressively done. This choice could have been motivated by either plant size limit, lack of financial resources or simply a starting strategy. The information on the origin of machinery is corroborated by SP2_I (6):

(...) I have been to Company B, I have been to other companies too, exactly to check in loco how this production is structured, and lots of things, you observe, the machinery, to a large extent, is Brazilian, and that will necessarily generate a relationship [between Paraguayan subsidiaries and Brazilian companies] in terms of technical assistance, and in the replacement of machinery itself (...) (SP2_I, free translation).

For maintenance and replacement of machinery parts and equipment due to tear and accumulated wear, Company A reported some difficulties because of the lack of specialized suppliers in Paraguay. So, it relies upon the importation of parts from Brazil, where there is a range of providers with high level of specialization. The trade-off is timing – it takes some time to receive them. This calls for resilience and dependence of other supply chains for firms operating in Paraguay. The same was mentioned by Company B – it took some time to find local providers of industrial parts and materials. Table 29 summarizes the main decisions for machinery and equipment in the case studies.

5.3.6. Technology decisions

Also connected to production and machinery and equipment choices are technology decisions, which encompasses management systems and automatization. Company B has been adopting the same management systems it has in Brazil for quality management and controlling. The general guideline is for standardization but in compliance with some local particularities (ex: system language, which is Spanish in Paraguay and Portuguese in Brazil). Regarding the ERP system, the company reported some trouble in terms of delivery time and service quality with the local implementation team indicated by the system provider of the head office. Besides that, some unexpected customization had to be done to enable the integration of home- and host-country systems, although they belong to the same provider. Company B also invested on a business intelligence platform to create reports and track managerial information.
### Company A decisions - evidences

| C5D2) Machinery characteristics / C5D1) Origin of machinery and equipment: |
| CP1_C: “(...) we were gradually adapting some of the processes that we were observing, with Company Alpha sharing with us some things that they were doing, some machinery that were giving evolution in the production, and then we started to leave all this manual process behind.” |
| CP1_C: “(...) each year we were bringing one machine, another, another (...)” |
| CP1_C: “(...) at the beginning, when we brought the process of different machines here ... the staff did not want to use the machinery, they thought that they would have higher speed in executing the old process, we had to argue with them (...).” |
| CP1_C: “All these machines, in fact, are adapted for our production of curtain, so they are machines (...) that maybe you will not even find in other places, because it was really tailor-made... Company Alpha has a mechanic in Brazil who does the work for the company (...) only customized for the company.” |
| CP1_C: “(...) out of all the machinery here, I think a couple of them were used in Brazil, the other ones were new machines that came for us...” |
| CP1_C: “Today I do not know how many machines there exists here, but there may be, I do not know, 12 or 15 machines that have been improving the process.” |
| CP1_C: “(...) we have this machine now that has just arrived from Canada.” |

### Company B decisions - evidences

| C5D2) Machinery characteristics / C5D1) Origin of machinery and equipment: |
| CP2_A: “one line we brought machines from Brazil, and the other line we had to acquire everything new, because it was a new process, we were starting, and we did not have any machinery yet. So, there were two processes: one, for bringing machines that we had in Brazil, and another to import - there were machines from several countries, from Asia, from the United States, from several countries we had to acquire.” |
| CP2_C: “Looms, dyeing, sewing machines, mats, cutting machines, all these machines, we either developed in partnership with someone, or we imported. They are all new.” |
| CP2_C: “The braces we brought from Brazil. It was a line [of production], we transferred it.” |
| CP2_A: “(...) as we have been using a greater capacity, instead of investing in more machines, I simply shift the workforce, it becomes easier to manage.” |

### C5D3) Machinery evolution (replacement x maintenance):

| CP1_C: “(...) I will give an example of our machines when they spoil, something like that. Finding parts in Paraguay (...) is very difficult. The specialized mechanical parts is very difficult (...).” |
| CP1_C: “(...) you can take all the manufacturers from here, who are here today in Ciudad del Este (...) it is the same difficulty. This skilled labor, where it fits a mechanic or parts [of machinery] for manufacturing... it represents a great difficulty in finding parts.” |
| CP1_C: “(...) or do some imports from Brazil, because in Brazil ... you find parts (...) the one you want and even better than you want. So, the only way is to bring in as an import, with Sedex, to bring somehow like that, bring it here. So, this is a... but, of course, it takes days, it takes time.” |
| CP1_C: “(...) who comes here may be very well-prepared or have a partnership in Brazil where he/she can have this support.” |

Table 29 – Machinery and equipment decisions.

Source: elaborated by the author based on the interviews (free translations).
The use of an own management and information system was indicated by Company A, which is constantly evolving. The firm seemed to be giving stronger focus on automatization than Company B. We assume it is a consequence of either operating for a longer time in the host country or having a clear division of activities between head office and subsidiary, what would result in management systems being independently managed.

Additionally, other possibility is that the company has lasted so long to advance in terms of automatization that it has been trying to run behind it only recently. Anyways, the development of new automatizations is pointed out to be latent by the CEO and Production Manager. It is perceived a lesser emphasis on the topic by Company B at this moment, but the company has also mentioned some opportunities to connect machines and production belts automatically, for example.

Due to the “Maquila regime”, both companies 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). Others are present too: 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. They are contracted for import and export proceedings and to issue the certificate of origin. Table 3 evidences some technology-related decisions taken by both companies.

5.3.7. Supply and purchasing decisions

When it comes to supply and purchasing decisions, there are many similarities among the companies – and as an outcome of the low level of local suppliers. First, Companies A and B have dealt with obstacles in local purchasing at some moment, especially for inputs and components acquisition. Second, both opted to maintain the imports of raw material from Asia, since they do not find the raw materials they need in Paraguay. Third, they opt for local providers of administrative services (e.g. Custom Brokers, Accounting Office, etc.), different from the ones of the home country, and in general, they have a positive perception of their service provision. Fourth, both have faced some difficulties with logistics in inbound delivery, leading to late receiving of goods and impact on operation.
<table>
<thead>
<tr>
<th>Company A decisions - evidences</th>
<th>Company B decisions - evidences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C6D1) Management systems / C6D4) Connectedness:</strong></td>
<td><strong>C6D1) Management systems / C6D4) Connectedness:</strong></td>
</tr>
<tr>
<td>CP1_A: “We always had our own system that is constantly evolving.”</td>
<td>CP2_C: “(...) we have the same system [of the unit from Brazil], which is Totus, we have the inventory controls, they are all the same.”</td>
</tr>
<tr>
<td>CP1_C: “(...) at first, in terms of system, we worked with our friend Excel, it saves a lot, right, actually, for a long time, it saved a lot. And today it is still used for some things that we need.”</td>
<td>CP2_A: “(...) in Brazil we have Totus implanted, here we have implanted it too, but as it is contracted, there are different offices to assist it, here you have a platform all in Spanish, because the official language here is Spanish, the system that is sold here is a little different from the one in Brazil - so some adjustments we had to make (...)”</td>
</tr>
<tr>
<td>CP1_C: “(...) the system evolution, for us, was very important, even the process that we had nothing in system, production, nothing in system.”</td>
<td>CP2_A: “The understanding or the quality of the workforce implementation in Paraguay, of the system team itself, is much lower than in Brazil (...).”</td>
</tr>
<tr>
<td><strong>C6D2) Technology emphasis / C6D3) Automatization:</strong></td>
<td>CP2_A: “(...) the system, which was expected to be implemented in 3 months, as we already had a similar system, here it took almost 1 year to have it running properly - and we only achieved it because we had an operational team in Brazil, with IT people from Brazil, very well trained and they managed to give the support here, because if we depended on the support of the system sales team here, we would be dead.”</td>
</tr>
<tr>
<td>CP1_A: “We have been working hard on that [automatization] (...) we have been developing and investing heavily in automatization.”</td>
<td>CP2_A: “(...) we have a system, which we bought it, that also brings BI, it is a reporting system, we can cross-reference many information, (...) everything that is a managerial indicator, I get it daily.”</td>
</tr>
<tr>
<td>CP1_C: “(...) and another automated machine that is the lateral sewing machine, for curtains (...).”</td>
<td><strong>C6D2) Technology emphasis / C6D3) Automatization:</strong></td>
</tr>
<tr>
<td>CP1_C: “(...) [The new machine] is completely automated, so it's just the process of working with it there, but it does everything for you. You only work on her and on her panel there, showing you what you want to do, then you put the fabrics there, and it already executes the whole process.”</td>
<td>CP2_C: “(...) that you saw the mats there, there is no one yet, because the idea is to have everything interconnected, from machines and ropes, all automated.”</td>
</tr>
</tbody>
</table>
| CP1_C: “There, the computers already do the appointments, they're doing all the appointments.” | **Table 3**

0 – Technology-related decisions.
Source: elaborated by the author based on the interviews (free translations).
For raw materials, Company A has a list of around 30 Asian suppliers and it rotates among them, based on costs and product specifications. Those suppliers are not necessarily the same of the Brazilian units, but the head office influences the purchasing decisions due to product features. In Paraguay, the CEO is responsible for the purchasing negotiation (pricing comparison) and the Imports and Exports Manager and Customs Broker share the responsibility for customs procedures of imports and exports.

Company B adapted its purchasing policy in Paraguay: whereas in the home country it practices at least 3 price quotations, in the host country that is not always possible. It gives preference for local suppliers, but imports from Brazil are not infrequent since some components and inputs are still not found in local market. In terms of service providers, the company is satisfied with the local supply, although quality is an issue, as in happened in the case of the ERP installing. For small and repeated purchases, it had more difficulty in the beginning of the operation, but after almost 2 years in Paraguay the company considers it is not an issue anymore. It has even established a local network that provides what is needed. We assume that the plant location, in the most developed area of Paraguay, is a facilitator for that.

In contrast, Company Alpha has opted for being as verticalized as possible and it produces most of the components for the manufacturing of curtains in Brazil – from fabrics to PVC blackouts. It is then oriented to specialization and has a short supply chain; many third-party units provide the head office with exclusivity. We assume the head office is used to coordinate resources and investments over many units. Company A is then benefited by that and is less dependent of third-part suppliers in Paraguay, what means that it has a low involvement with local markets in terms of purchasing. It confirmed to have faced the same difficulties in finding local components as Company B did, so the firm also imports from Brazil when necessary. We assume that the plant location, not in the Central Department, the most developed region, may contribute to that, but at the same time the proximity to the Brazilian border would facilitate imports and provisions. Table 31 provides some evidences of supply and purchasing decisions.
### Company A decisions - evidences

**C7D1) Imports x domestic purchasing / C7D4) Suppliers network:**
CP1_C: “Finding parts in Paraguay (...) is very difficult. The specialized mechanical part is very difficult. So, yes, that's what makes a lot of difficulties (...).”
CP1_A: “We have a list of at least 30 suppliers in China, and we are always evaluating price, quality, we are always balancing them. They are common - not necessarily the same that is here, is in Brazil.”
CP1_A: “Constant change [of inputs suppliers] too (...) we change suppliers a lot.”
CP1_A: “The decision is joint. The head office participates in the decision of buying inputs. Because they are the ones that define collection, right? When they define collections, they already define suppliers. We do not define suppliers here. It came to us defined by the head office.”
CP1_A: “One [problem] is the logistics of Paraguay (...) that it takes time.”
CP1_D: “(...) there are several people working outside for us.”

**C7D2) Suppliers integration (vertically x horizontally) / C7D3) Purchasing processes and policies**
CP1_A: “(...) we are very verticalized, right. So, we make, for example, the “zilhós” we make, we are who produce them, we inject them [in the curtains].”
CP1_A: “Today, out of what is done in Brazil, about 30% is already manufactured by ourselves. Not everything comes from China anymore.”
CP1_A: “(...) blackouts we also manufacture in Brazil (...) own manufacturing (...).”
CP1_A: “Basically, what we do not manufacture, right, today is the line, that we buy; the boxes, which we buy too; the other items are almost all insourced. Oh, and the fabrics, right ... a part of it is imported (...).”
CP1_A: “(...) there is not an outsourcing policy here (...) our process here does not require that much. It's not a common thing here, and we never developed it.”
CP1_A: “(...) the local textile market, I have nothing to tell you. I do not know it. We are not experienced, because we do not sell products there (...).”

### Company B decisions - evidences

**C7D1) Imports x domestic purchasing / C7D4) Suppliers network:**
CP2_A: “(...) finding out suppliers here, it's a constant battle. It's a win for you to get a supplier.”
CP2_C: “(...) here, there is a big gap [of suppliers].”
CP2_A: “Of course, lots of our raw material are already imported from Asia, so we have no difficulty [in hiring suppliers] (...).”
CP2_C: “Maybe a little at the beginning, but raw material imported from Asia, right, then we had a problem of delay, but it is not (...) just related to here.”
CP2_A: “(...) several components, small inputs that we need here every day, we always try, as far as possible, to replace from Brazil by local purchases.”
CP2_A: “Some items (...) [still] have to be purchased in Brazil (...) but a lot of things we have already been able to replace by Paraguay.”
CP2_C: “In the beginning we had a lot of trouble [with local suppliers].”
CP2_C: “(...) [hiring local suppliers] was something complicated. Yes, yes.”
CP2_C: “But we have developed good suppliers, good suppliers there. We have already developed partnerships. We have already established a certain network, indeed.”
CP2_A: “(...) of services they are very well structured. This we cannot complain - customs broker, freight agency, sea freight, road freight, accounting services, consulting for any kind of service, there are a bunch of. This is not a problem. They are well-structured in that. The problem is manufacturing. So, commerce and services, Paraguay has enough; in industry is that it does not.”

**C7D2) Suppliers integration (vertically x horizontally) / C7D3) Purchasing processes and policies**
CP2_A: “(...) in Brazil we have as default to make 3 quotations for a product, for an input; here in Paraguay, when you get two, it is already a victory, sometimes you only get one, then you have to purchase it jointly with Brazil. This point of (...) having no suppliers here in the country is a difficulty.”
CP2_C: “(...) there have been more people [i.e. suppliers] ... as the economy of the country has been growing, and the supply chains in the country have been expanding, it brings more automatically, right (...).”

Table 31 – Supply and purchasing decisions.
Source: elaborated by the author based on the interviews (free translations).
5.3.8. Inventory decisions

Company A decided to work with high levels of raw material inventory to mitigate risks and because it has already faced problems within its supply chain – not related to inbound delivery in Paraguay specifically, but mainly to the company’s own lack of accurate market forecasts. For not running out of inventory, it opted for purchasing higher volumes and stock them regardless of the opportunity cost. Considering the space constraints in the former plant, it was difficult to manage high levels of inventory, but this has been improved with the new plant.

Not differently, Company B also had some trouble in adjusting the adequate level of raw material inventory, especially because it insourced the manufacturing of some products. It means that it had to coordinate the migration of two inventory aspects at the same time: from final goods to raw materials, and from Brazil to Paraguay. After an initial period of drop, it managed to balance the inventory level. We infer that the company does not work with high levels of inventory as Company A does. One possible reason is that it can do better market forecast; also, since it is installed closer to Asunción port, it does not need to work with an additional transport’s modal, shortening transit time. Table 32 shows the evidences for inventory decisions taken by companies.

<table>
<thead>
<tr>
<th>Company A decisions - evidences</th>
<th>Company B decisions - evidences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C8D1) Raw materials x finished goods inventory / C8D2) Level of inventory:</strong></td>
<td><strong>C8D1) Raw materials x finished goods inventory / C8D2) Level of inventory:</strong></td>
</tr>
<tr>
<td>CP1_A: “(...) we have a very large inventory because of this - we have difficulties in working properly our supply chain. So, we work with higher levels of inventory for not taking risks.”</td>
<td>CP2_A: “So the difficulty was to identify, in the investment that we were about to make, when I bought goods from China, and I was going to convert it into manufacturing, what would be the correct timing for me to stop buying from China and start sending raw material to here, and produce and not have a shortage in Brazil.”</td>
</tr>
<tr>
<td>CP1_A: “(...) we have a large inventory because we cannot predict our market in a very assertive way today.”</td>
<td>CP2_A: “(...) we have had 2 to 3 months of inventory shortage in Brazil due to the delay, even in the process here, implementation, machinery installation (...).”</td>
</tr>
<tr>
<td>CP1_A: “(...) there have already been some situations of decreasing inventory and having product shortage. So, we perceived that our major risk is the lack of products. So, we work with larger inventories, so we do not run out of products and do not oversell the market. And do not make room for competitors. There's an inventory cost, of course, storage, but we perceive it as lower than the risk of shortage.”</td>
<td>CP2_C: “(...) we have the same system, which is Totus, we have the inventory controls, they are the same.”</td>
</tr>
<tr>
<td>CP1_C: “Now we are delivering more production, we are lowering the inventory level. But we were very tight with it.”</td>
<td></td>
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</tbody>
</table>

Table 32 – Inventory decisions. 
Source: elaborated by the author based on the interviews (free translations).
In common, the companies face two constraints in Paraguay: 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, what 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 such requirement.

Second, the inventory of companies operating under the “Maquila regime” is closely monitored and tracked by the Government, which makes a virtual control through SAM-WEB for imports and exports. In practice, differences between real and virtual inventories are not accepted by the Government and the company is subject to penalties, so companies put considerable attention on it and can even implement extra mechanisms of inventory controls for the subsidiaries. The origin of eventual differences can be production disbalance or product registration – products registered at CNIME with no accurate consumption of raw materials and inputs and which inspection of INTN has failed to detect. That is why companies are closely watched by both CNIME and INTN.

5.4. Operations decisions summary

Based on the 8 sub-categories of operations decisions presented above, we summarize some important decisions taken by each company when operating in Paraguay in Table 33.

<table>
<thead>
<tr>
<th>Sub-categories of decision</th>
<th>Company A</th>
<th>Company B</th>
</tr>
</thead>
</table>
| 1) People and organization | - Lean administrative structure  
- Emphasis on manufacturing  
- Paraguayan workforce, except for CEO and Production Manager  
- In-housing training programs  
- Internal rules of procedures approved by MTESS  
- CEO is only responsible for the Paraguayan unit  
- Workforce with great autonomy  
- Low staff turnover – workforce not being replaced | - Lean administrative structure  
- Emphasis on manufacturing  
- Paraguayan workforce, except for CEO and Production Manager  
- In-housing training programs  
- Internal rules of procedures approved by MTESS  
- Same CEO for Brazilian and Paraguayan units  
- Workforce in learning circle  
- Search for standardization of functions  
- Seek for more engaged workforce |
| 2) Plant | - Located in Ciudad del Este, near the Brazilian border and close to company’s distribution center  
- Property purchase  
- 6000-square-meter plant | - Located in Limpio, Central Department, close to Asunción port  
- Property purchase  
- 2900-square-meter plant  
- Investment of own capital |
(continuation of Table 33)

| 3) Product | - Decisions concentrated in Brazil, with a very strict division between head office and subsidiary  
- Subordination of the Paraguayan unit  
- Mix of products: curtains and microfiber blankets. Products with greater added value (more expensive fabrics)  
- No exclusive products (but rather exclusive collections and variations)  
- Investments for the certificate of origin  
- Product registration at CNIME and INTN. Decisions constrained by them. |
| 4) Production | - Progressive start (manual processes, lack of machinery)  
- Production at highest peak  
- Single daily shift  
- More organized production after plant change, with better communication within teams  
- Highly controlled operation with intensive use of technology and operating systems  
- Clear emphasis on productivity and scale, with constant evolutions  
- Balance between cost and quality  
- Quality management improved in the new plant  
- Short-term production planning  
- Production drained exclusively to the Brazilian market / Paraguay viewed as a partial and complementary chain  
- Financial reward system based on individual productivity |
| 5) Machinery and equipment | - Few machines at the start of manufacturing  
- Incremental use of machinery  
- Tailored-made machines developed by Company Alpha’s mechanical engineers  
- Machinery mainly imported from Brazil  
- Recent acquisition of new machines for gains of productivity and automatization  
- Ownership of around 15 machines  
- Difficulties in local maintenance and replacement of machinery parts results in imports from Brazil |

- It has moved to a new plant to expand operations  
- Third-party funding for new plant  
- Fenced and with private security  
- High level of control (facilitated by the proximity to home country and a Production Manager with 8 years of experience in the plant)  
- Cost-efficiency focus |

- Fenced and with private security  
- High level of control (facilitated by the proximity to home country, an experienced Production Manager brought from a competitor and the same CEO for both plants)  
- Cost-efficiency focus, but with an asset (inhouse weaving) that it does not have in the home-country |

- Decisions concentrated in Brazil, but with a less strict division and with some product attributes (color, etc.) being decentralized in Paraguay  
- Mix of products: 1) previous existing line in Brazil; 2) new line (production insourcing of final goods that used to be imported from Asia)  
- Exclusive products in Paraguay  
- Investments for the certificate of origin  
- Product registration at CNIME and INTN. Decisions constrained by them. |

- Aggressive start (migration of a whole existing line and implementation of a new inhouse weaving)  
- Production is stable, but not in the highest peak. There are opportunities to enhance productivity.  
- Distinct work shifts for each sector  
- Highly controlled operation with controlling mechanisms replicated from the Brazilian unit  
- Emphasis on production engineering, but also with a high-productivity-orientation  
- Quality system under implementation and at the same time of the head office. Transfer of quality practices.  
- Quality Management Board with representatives of the workforce  
- Long-term production planning  
- Production intended to be exported for other countries beyond Brazil  
- Subsidiary as a production platform |

- Transfer of previous existing line machinery from Brazil  
- Acquisition and development of new machines and equipment (imports from Asia and the United States)  
- Opted for an additional working shift at a first moment rather than incorporating new machinery  
- Difficulties in finding local providers of industrial parts and materials results in imports from Brazil |
The choices compiled above resulted from trade-offs faced by both Companies A and B in international manufacturing. Their decisions implied the recognition of alternatives and the selection of the most suitable ones (Skinner, 1969). Given the current competitive landscape, decisions become even more complex and integrated, and many decisions taken influence other decisions too (Choudhari, Adil, and Ananthakumar, 2012), as we aimed to illustrate above.
6. DISCUSSION

Paraguay and the “Maquila regime” were chosen by both Companies A and B due to cost-efficiency motivations. Company A intended to avoid the high import duties posed by the Brazilian Government for raw materials and inputs from Asia, what made it unfeasible to concentrate the firm’s whole manufacturing process in Brazil. Company B decided to replace some imported finished products from Asia by the insourcing of manufacturing, and a reduction of production costs proved to be necessary for making those products commercially viable. In common, some limitations of the home country (i.e. high production costs) seemed to trigger the internationalization of both companies (Conti, Parente, & Vasconcelos, 2016).

By investing in a neighboring EE with a particular tax incentive system, firms sought efficiency and followed a strategy recognized by Padilla-Perez and Nogueira (2018) as being largely pursued by the manufacturing sector. The international expansion corroborates the idea that many Latin American manufacturing companies can search for international efficiencies and give rise to “maquila branch-plants” over the region (Casanova, 2009). It also suggests that not only multilatinas use internationalization to escape from adverse conditions of Latin American countries (Cuervo-Cazurra, 2016), but small and medium companies too. This, in turn, can help extending the literature on multilatinas to a more inclusive one.

Given that Companies A and B have one international plant each, located within the region and originated from relatively new investments, we meet some characteristics of small and medium Latin American companies that took the internationalization path. Those attributes were discussed on the studies of Padilla-Perez and Nogueira (2018) and Casanova (2009). We also note that an offshoring strategy is pursued by both companies in Paraguay given that their investment drivers are access to low wages and to other factors of low-cost production (Ferdows, 1997). Companies A and B justify the international manufacturing in Paraguay in terms of the following factors: suspension of import taxes (low tax burden), young and abundant workforce, cheap industrial electricity and flexible labor legislation. This confirms that their operations under the “Maquila regime” are driven by factors of low-cost production.

Other indicatives of the use of an offshoring strategy over the Paraguayan units are specialization in certain products or families of products (high added-value curtain collections in Company A and professional ropes and complementarities in Company B); orientation for exports (what is even a requirement of the “Maquila regime”, by the way); low levels of technical investments (production, machinery and equipment are not the state-of-the-art, but
they meet the factories’ needs); absence of product development, marketing and commercial areas, which are kept in the home country; and emphasis on the assembly line, resulting in lean administrative structures (Ferdows, 1997; Paiva, Carvalho Júnior & Fensterseifer, 2009).

One of the instruments required by the Paraguayan Government to allow international companies operate under the “Maquila regime” is the Maquila Contract. Based on Massini and Miozzo (2012) matrix and on the aforementioned evidences of the offshoring strategy carried out by Companies A and B, we assume the relationship between Paraguayan plants (“contracted companies” in terms of the Maquila Contract) and Brazilian head offices (“contracting parts”) corresponds to the bottom-left quadrant for both cases, as illustrated in Table 34.

<table>
<thead>
<tr>
<th>Outsourcing</th>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>YES</td>
<td>Head office and maquila company relation in Paraguay – Examples: Company A and Company B</td>
<td>Head office, maquiladora and sub-maquiladora(s) relations in Paraguay – no evidences over the cases</td>
</tr>
</tbody>
</table>

Table 34 – Offshoring x Outsourcing matrix applied for case studies.
Source: elaborated by the author based on Massini and Miozzo (2012, pg. 1222)

As we did not verify subcontracting strategies (third-part providers to perform part of the manufacturing activity) over the cases, even though it is regulated by Law N° 1064 and Decree N° 9585, we do not find support for considering any company in the bottom-right quadrant. Therefore, both companies elucidate head office’s expansion to Paraguay through completely ownership of the maquiladora, which can be either a formal subsidiary of it or not. Companies could have opted for operating in Paraguay through international outsourcing and contract a distinct local company to perform manufacturing to them. This strategy is frequent over other companies operating under the “Maquila regime” and the Brazilian retailer Riachuelo (La Nación, 2015) provides a good example of that. However, in both cases, there were greenfield investments and the production’s knowledge transfer occurred within the same organization.

When it comes to the operations decisions taken by Companies A and B in Paraguay, we noticed that some aspects of the institutional environment shaped some choices over time, thus resulting in important trade-offs (Skinner, 1969). We briefly analyze those influences according to four dimensions: environment uncertainty, high intervention of the government in business, inadequate number (or even lack) of market intermediaries and complexity and inefficiency of
institutional mechanisms. We draw on each dimension below and relate them to the emergent sub-categories of decisions presented before.

As stressed by the literature, emerging countries are characterized by uncertain environments (Peng, Lee, & Wang, 2005) and vulnerability to sudden institutional disruptions (Yamakawa, Peng, & Deeds, 2008). This is especially true in Latin America, where there is a predominance of frail economic and regulatory frameworks and political volatility (Vassolo, de Castro, & Gomez-Mejia, 2011; Casanova, 2009). To illustrate that, we can take the short twenty-two-year period since the enactment of Law Nº 1064 in Paraguay: the country has presented a number of political and economic instabilities, leading to unpredictability (Rottig, 2016) and difficulties in assessing the future course of action on businesses (Singh, 2012). Besides sudden, changes were strongly motivated by ideology too: for instance, after a break in the more-than-six-decade supremacy of the right-wing Colorado Party, the president in course Fernando Lugo was impeached close to the end of his mandate and in fourteen months, the party took office again.

The lack of confidence in Paraguay and the high levels of uncertainty over the country’s institutional framework in 2008 made Company A to start the operations with minimum investments in production, technology and machinery. The country was on transition – President Duarte had finished his term pursuing efficient macroeconomic policies, the Colorado Party supremacy was gone and Lugo, the leftist and progressive winner of the elections, started its term. The provision of information could be considered asymmetric or even poor. As institutional changes tend to be more profound in EE (Peng et al., 2018a), companies can be reluctant in investing or even expanding operations in those countries (Singh, 2012). Higher risks prevent investors to commit resources and make long-range plans. As affirmed by CP1_C (1):

(...) and we came with the same fear, because when you do not know anything, you go with that fear, and that is why we did not bring any machinery, it was just, everything manual, and later we brought all the [production] processes – cutting, review – and since then it has been increasing production (CP1_C, free translation).

Company A was hesitant about the country. At that moment, the “Maquila regime” was not as disseminated as during Carter’s mandate (2013-2018) and no guarantees could be even considered, since there were few maquiladoras operating in the country in 2008. Paraguay could represent a shot in the dark. The “Maquila regime” future was unclear. In consequence, the firm opted for rudimentary processes, 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 (2) describes the beginning of the operation in terms of prudential actions:

*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, Company A took incremental decisions as it perceived lower risks for random modifications of the “rules of the game”. Differently, Company B found a more stable context in 2015, when it started to evaluate its expansion to Paraguay. Cartes’ mandate was halfway, there was a clear neoliberal orientation and economic prospects were positive. From the beginning, 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 not only greater resources allocation, as well as initial coordination and automatization efforts. Hence, Company B made some initial choices distinct from the ones taken by Company A.

By capturing the differences in the speed in which production and machinery and equipment decisions were taken by both companies and comparing them to the host-country environment instability, we propose a 2 x 2 framework (figure 22). On one axis, fast-paced and slow-paced choices are related to higher or lower uncertainty on the other.

![Figure 22 – Effect of institutional framework uncertainties on operations’ decisions. Source: elaborated by the author.](image)

By assuming that the Paraguayan context and formal institutions were of greater uncertainties in 2008 compared to 2015, we place Company A and Company B in opposite quadrants. To confirm the more optimistic outlook, it was during 2015 that Company A decided to start an expansion plan in Paraguay, which ended up in the inauguration of a plant in 2018.
This way, we noticed that Company A has accelerated its decision-making process as it gained more confidence on local institutions and became part of local networks, like CEMAP. In short: the same firm speed up decisions according to the extent of stability it perceived for business. Therefore, we assume the position of a company in the proposed framework is mutable and evolves over time, like institutions do (Peng, 2003), 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 companies 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). Political uncertainty (Cuervo-Cazurra, 2016) and vulnerable institutional context (Vassolo, de Castro, & Gomez-Mejia, 2011) are aspects traditionally granted in Latin American countries and that contribute for the region to be a turbulent place for business. Regardless of higher or lower propensity in taking risks, what is very particular from each company’s top management, we argue that institutional instability can cause prevention, delay or even interruption of a varied range of operations decisions taken by manufacturing companies in Paraguay.

Some possible decisions that can be influenced by uncertainty are: FDI / greenfield investments, expansion investments (acquisition of a new plant area, purchase of new machinery, replacement of existing machinery, etc.), increase in productivity (investments in technology and operational systems, work shifts, production layout, capacity, etc.), automatization (connectedness, modernization of machinery and equipment, etc.) and rhythm of manufacturing (planning, balance, inventory level, complete use of production factors, launch of new products, etc.), to mention just a few. As observed before, we perceived that Company A has been speeding up many of the aforementioned decisions over the last years.

Institutional frameworks in EE and Latin America are described with regards to the high intervention of the government in business too (Rocha & Ávila, 2015; Vassolo, de Castro, & Gomez-Mejia, 2011). Arbitrary modifications on formal institutions (the “rules of the game”) are perceived as recurring, the State is directly responsible for ambiguous policies (Aguilera et al., 2017) and many interferences in the private sector through controls, regulations or subsidies can be observed. The State is even active in the partial or total participation in the capital of
many Latin American firms (Casanova, 2009). When intervening, the local Governments tend to intensify the use of restrictive regulatory institutions (Rocha & Ávila, 2015).

As supported by the literature, intervening formal institutions can impact firms’ competitiveness in business through some mechanisms such as subsidies, protectionism or financial incentives (Monticelli, Garrido, & Vasconcellos, 2018). From the economic point of view, we infer they shape transactions and consequently the structure of the market and its functioning (Su, Peng, & Xie, 2016; North, 1990). In the sociological perspective, interferences can orientate the legitimacy of actions and consequently represent acceptance by the environment (Meyer & Peng, 2016; DiMaggio & Powell, 1991). Regulations, controls, limits and rules are generally imposed by assigned entities and serve to enforce compliance (Rocha & Ávila, 2015).

The “Maquila regime” itself is a clear example of high intervention of the government in business. At the same time maquiladoras are benefitted from aggressive tax incentives, they face many trade-offs: rules, monitoring, controls, sanctions and even punishments, if necessary. In line with Spring et al. (2017), we argue that policy interventions by governments, as in the case of the “Maquila regime” in Paraguay, can alter the structure of economic activity and enhance contemporary manufacturing. In this sense, Paraguay has been increasingly considered as a “Mexico of the Brazilian industry” (BBC, 2013) or the “Brazil’s China” (Forbes, 2018), for instance, given that it undoubtedly represents an alternative for many industrial sectors struggled with high costs in Brazil. This discussion about institutions, competitive threats and industrial policies, i.e. external factors that compose the institutional environment in which firms are embedded, enriches the Operations Management (OM) literature, contributing to analysis about the role of many aspects beyond the firm (Spring et al., 2017).

Some of the trade-offs that emerge within the “Maquila regime” are idiosyncratic, indeed, once they are not found in the company’s home country. The areas where we observe a high degree of interventionism are development of new products, inventory management, imports and exports, and issuance of the certificate of origin. The main mechanism used to ensure compliance is the Maquila Program, supported by Law Nº 1064 and Decree Nº 9585.

Since all products manufactured under the “Maquila regime” must be approved by CNIME and certified by INTN, we find an indicative of a high governmental intervention in business. From one side, we understand that the compliance process is important for the Paraguayan Government because it: 1) assures the technical description of products reported on Maquila Programs conform with national technical standards; 2) validates and ratifies if the
production technical ratios and product consumptions assigned on Maquila Programs are fulfilled by maquiladoras; and most important 3) keeps track on every transformation process inside maquiladoras’ factories, given that they were conceded with a temporary admission process and the imported raw materials and inputs are expected to result into final goods for exports.

However, the certification process takes place every time a single adaptation on products is done – e.g. color, size, weight, form. In the case of Company A, that changes collections every six months and annually, it implies in a recurrent activity. As stated by SP2_E (24), the contact between maquiladoras and INTN can happen once (in the start of operations and if does not make products adaptations or launch new products) or several times. These requirements are corroborated by two distinct specialists.

SP2_L (6): “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)

SP2_M (8): “(...) we have to take the product, to make a simulation so that they [INTN] corroborate that what we declare in the technical specifications of the product, the consumption that we declare is effective, and must be certified by them that it is true. To avoid that we declare that it consumes a kilo and it actually consumes three hundred, then we put the seven hundred grams in black in the country.” (free translation)

Because companies 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 companies 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 Company B. Likewise, the learning curve for companies 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 subsidiaries located in Paraguay. The situation reported by CP2_A (8) 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, Peng & Xie, 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).

Another example of government intervention is in inventory management, closely monitored and tracked through SAM-WEB. Greater inventory control in consequence of operating under “Maquila regime” is recognized not only by managers and executives that do not deal with such obligation in the home country. It can also be perceived by local employees with experience in other non-*maquiladoras*, as reported by CP2_B (1):

*The government system [SAM-WEB] has control over all our inventory, the raw material, what goes in and out and all the rest. They have control over the inventory. Things that usually in the other companies, in other factories [I have worked in], the government does not have control over that.* (CP2_B, free translation).

CNIME and DNA authorizes imports and exports, so they know exactly what *maquiladoras* have been producing and attest conformity to the Maquila Program. Additionally, companies are constrained by the rules of maximum period for transformation of imported raw materials into final goods and, if they do not comply with that, the suspension of duties and taxes is revoked. To sustain all those rules, a close watch on *maquiladoras*’ inventory is needed. Considering the effects of formal institutions on inventory management, we develop the following proposition:

**Proposition 3:** control mechanisms enforced by formal institutions can influence operations management processes, such as inventory.
There are two distinct perceptions about the inventory control made by Paraguayan institutions – and there can be opposing views within the same company and different levels. On the one hand, inventory regulation can be understood as negative: extra internal processes to local conformity, increase of bureaucracy, requirement of additional infrastructure or inclusion of unnecessary layers between finished goods and destination. From this perspective, emphasis should be put on production quality, when preventive actions can still be taken. In contrast, inventory control can be seen as positive, representing a good managerial practice, once raw materials and finished goods constitute company’s assets. Consequently, managers should know how much they value and how much is available, besides getting real-time estimates. The different insights around the theme were found in Company B.

CP2_A (9): “What I can cite as negative, is something that you must have a separate control, which is different in Brazil; as we are inside the “Maquila regime”, our whole process, to have the benefit, it is controlled by the government, then everything I indicate to the government as imports, exports, inventory, the government strictly controls all steps. So, I may have a very well-controlled inventory management because if I have any divergence, it will make it difficult for me to do an import, to do an export, because the government controls it, the government gives me a tax suspension (...).” (free translation)

CP2_C (1): “(... I’ll give you a clear example: inventory management. Here [in Paraguay] you must have a very well-done inventory control, right. Because your inventory here must meet the DNA, right? Your product engineering must be very well-done. I think this brings benefits to the company. It brings benefits. Many people can see this as ‘oh, one more task’, ‘oh, a task’. No, that brings benefits. It makes a company more organized. With a better view of the business (...) you are required to prove your inventory properly.” (free translation)

Because of this requirement, firms are requested to make different adaptations (Rottig, 2016) when operating in institutional environments with active interventions of the State. Same examples are: changes in the organizational chart for better communication between administrative and production areas; creation / review of flows and processes among related sectors; changes in the factory’s physical space management (i.e. location of raw materials inventory, finished inventory, etc.); or better internal systems for inventory management. Other possible outcome, i.e. strategic response for the dynamic interaction with formal institutions (Peng, 2002), is the outsourcing of some tasks to third-party providers.

The literature on institutions recognize that in EE institutional frameworks there can be an inadequate number of market intermediaries (Orcos, Pérez-Aradros, & Blind, 2018) or simply the inexistence of them (Khanna, Palepu, & Sinha, 2005). This would result from underdeveloped institutions and inefficient local markets (Taussig, 2017), thus reflecting the institutional deficiencies of formal rules (Puffer, McCarthy, & Jaeger, 2016) and extensive institutional voids typical from weak environments (Peng et al., 2018a; Khanna & Palepu, 2000).
Because of it, companies tend to have difficulties in transactions, deal with higher transaction costs or perform basic activities taken for granted in more developed markets (Rottig, 2016).

The effects are twofold. First, firms can become more horizontally and vertically integrated in bad-functioning markets (Gammeltoft, 2010). Company A, for example, is considered very verticalized once it produces most of the components for the manufacturing of curtains in Brazil and take advantage of them in the Paraguayan unit too. We assume the high import duties posed by the Brazilian Government for Asian inputs have developed a market deficiency that somehow triggered the insourcing. The company operates its own inhouse weaving in the home country and 30% of consumption of fabrics is already fulfilled by it. As it gained more confidence in Paraguay, it plans to inaugurate an inhouse weaving in the host country too, what would represent another step toward verticalization. By providing itself with what it not easily procured in local markets (Gammeltoft, 2010), Company A illustrates how some institutional voids may shape the “make or buy” decision-making process.

Second, firms can deal with the lack of specialized intermediaries by adapting internal rules and proceedings and finding out external suppliers and providers (other countries) while it develops local supply chains. Company B, for instance, made its purchasing policy flexible in Paraguay once it noticed that the minimum of 3 price quotations would not be achievable. It also imports inputs and machine components from the home country, where competition is wider, when they are absent in local markets. The company gives preference for local suppliers and providers, even though acknowledges a big gap in the market, and has demonstrated to be developing local supply chains through networking expansion. However, while it is not completely possible, it relies on the consistency of the home-country supply chain whether necessary, purchasing in the head office and exporting to the subsidiary.

Based on the distinct responses mentioned above, we suggest that:

**Proposition 4:** companies’ decisions of supply, procurement and service provision can be shaped by institutional frameworks.

From the perspective of service provision, we noted that some institutional requirements for imports and exports and procedures within CNIME have also influenced outsourcing of operational tasks to third-parties. Consequently, it gives support for Proposition 4 too. Services outsourcing, in turn, may contribute for lean administrative structures in the Paraguayan units,
then supporting the offshoring strategy: focus on the assembly line and strengthening of plant specialization (Ferdows, 1997; Paiva, Carvalho Júnior, & Fensterseifer, 2009).

For instance, to coordinate the issuance of the certificate of origin, an activity that involves many regulations and institutions (VUE, DGCE, AICP, UIP, etc.), constant flows of goods from and to other countries and permanent contact with CNIME and DNA, companies hired a Custom Broker. They transferred to it all operational tasks related to foreign trades, including part of the interaction with SAM-WEB and SOFIA. Given the relevance of imports and exports procedures within the “Maquila regime”, we assume the decision of following an outsourcing strategy is a critical one, as well as the selection of the partners.

Wrong reporting of information or inconsistencies are subject to punishments (e.g. revoke of taxes suspension), confirming that formal institutions can establish penalties and rewards mechanisms (Lu, Tsang, & Peng, 2008) to ensure conformity. In this same direction, additional service providers can also be needed according to other institutional demands, such as the process for VAT recovery or the delivery and protocol of printed documentation in the Government agencies. Company A confirms the coordination efforts to have third-party providers serving institutional clams.

CP1_A (10): “Whenever dealing with DNA, there is a Broker; sometimes in [the Ministry of] Finance, when it needs a refund of VAT, there is a third-party to handle that, I have a third-party service provider, it is a manager who makes a process for it. For making some tasks of CNIME, an online task, which is the Ministry of Industry, a documentation-related task, there is someone to submit the documents (...).” (free translation)

To close this matter, we found conflicting results for service providers quality perception. Company A has pointed out many difficulties in hiring administrative staff and skilled people, and to counter the problem, it recruits by references of employees or announce on the radio. Apparently, there seems to be a lack of recruitment and selection consulting, at least in Ciudad del Leste. On the other hand, Company B has a positive perception of service provision in Asunción and mentioned the wide of range of consulting companies for services of any kind. However, it had a negative experience with the implementation of the same management system it has in Brazil, what means that quality is an issue and not necessarily the number of providers. In both cases, we observe the lack of (or the existence of unskilled) intermediaries can lead to poor delivery of services or not very sophisticated ones (Khanna, Palepu, & Sinha, 2005).

Our fourth dimension of analysis is about complex and inefficient institutional mechanisms. According to Peng et al. (2018a) and Peng, Lee, and Wang (2005), prevalent imperfections in the host EE challenge firms and they have to reshape their strategic choices.
The distinct market inefficiencies (Meyer et al., 2009) and the existence of many institutional failures, what includes inefficient regulation (Mesquita & Lazzarini, 2008), influence companies in their course of action. Particularly in Latin American, it can be interpreted in terms of capital constraints (Casanova, 2009; Finchelstein, 2017), insufficient antitrust regulations (Casanova, 2009; Vassolo, de Castro, & Gomez-Mejia, 2011) and complex institutional mechanisms (Luo & Tung, 2007, 2018). We briefly present two situations below in order to explore this topic.

There is no special labor regulation for the “Maquila regime”; maquiladoras follow the same rules and system of other firms through MTESS and IPS. Companies comply with them first because they seek legitimacy by participating within the “Maquila regime” framework (DiMaggio & Powell, 1991; Klopf & Nell, 2018; Suchman, 1995). And second, they are benefited for doing that, i.e. salaries and social contributions count on the added value for the certificate of origin. This confirms that firms also seek to take advantage of institutions rather than just complying with them (Su, Peng, & Xie, 2016).

Inspections can take place at any time and companies are requested to report periodic personnel information, keep records updated (either through automated systems or offline) and implement organizational processes for personnel control. By doing so, they assign hours of working of their staff to perform those activities. The demands brought by MTESS and IPS seem to be dispersed and imbricate. Maquiladoras handle an overlap of manual inputs, demands for repeated information, higher chances of reporting misleading information, bad quality of computer-based systems and many subsequent inefficiencies that could prevent them from time they spent in those tasks and personnel assignment. From the point of view of Company A, many criticism can be made.

CP1_B (1): “(...) so we have double working: we communicate to the Ministry of Labor [MTESS], and we also communicate to IPS (...) I think it's a double working.” (free translation)

CP1_A (11): “She [Finance and Human Resources Manager] does the same thing in two separate bodies, from the same government. This information could be integrated, a unique system that [information] was inputted and it could be already searched in the same database.” (free translation)

CP1_A (12): “(...) as CP1_B said, if we report some information in duplicity, it's double working, it's unnecessary. It could be integrated, it should be integrated. And it should, for example, from the time I registered an employee, I should have a way to access [the information already provided] and only change it over the existing register. But not. Each time you have to register a new information.” (free translation)
Another example of inter-institutional overlapping and inefficient mechanisms of institutional control is the fiscal information reported to both DNA and SET. As much cross-reference of information is demanded by both institutions, penalties are enacted (Lu, Tsang, & Peng, 2008) if information provided for one is different from – or does not match – what was sent to the other. Given that companies make manual entries of data into systems, chances of mistakes or inconsistencies are high.

CP1_A (13): “(...) if you report it wrongly, you have an inconsistency of information, you can be later penalized for that, so you have to input two equal and correct entries. Whenever you do the same thing twice, the risk of having a mistake in one of them is great, and hence you pay for it (...).” (free translation)

CP1_A (14): “(...) if you have any mistake, if you have any discrepancy, you will pay a fine for it. And fines are high. So, it could ... if it was an information only, that is automatically integrated, we would not run the risk of having double information. But they [the Ministries] do not have it for now. In some cases, we have to explain the same thing twice; to say the same thing twice.” (free translation)

Further evidence of complex and inefficient institutional mechanisms can be found in relation to management systems among different Paraguayan institutions. As stressed by SP2_M (7), maquiladoras are impacted by the lack of integration among them. This embraces the inter-institutional communication too. For the interviewee, information systems performance is still an issue to be addressed and further optimization is needed. Such a point of view is in line with SP2_K (16), for whom the Government may work on unifying different institutional information systems, ensuring quality and reliability in the integration of data and improving performance.

At the same time management systems play a significant role for support, compliance and legitimation, their integration is important to work and report synchronization. Otherwise, it can result in extra consumption of resources because companies assign hours of their staff for them (or hire third-party providers). If mechanisms of control are duplicated or the lack of automation demands extra manual work, maquiladoras take the onus of that.

According to Company A, that have been operating with those information systems for 10 years, some improvements have been done, but the accountability could be enhanced by simplified processes and unified systems with better interfaces, thus reducing operational tasks. As recognized by SP2_E (26), there is room for process simplification, modernization of operational procedures and unification of institutional mechanisms aiming to simplify the daily operations of maquiladoras.
CP1_A (15): “And today DNA, along with the Ministry of Industry [CNIME], already has a somewhat more integrated system, SOFIA, which is not 100%, but it is already more integrated than it used to be. And the idea is to integrate even more. And this, we see it as a solution: to integrate [information] systems and computerize as much as possible in the public environment, right.” (free translation)

CP1_A (16): “There are some improvements, but the CNIME’s system [SAM-WEB] is one of the best because it is fully computerized. CNIME is one of the most automated processes, despite still having to present printed worksheets, the entries are all automatic. So, it’s not 100%, but it’s one of the best. But it still has to evolve. It is over the process of evolution, but it has many problems.” (free translation)

SP2_L (7): “(…) in SAM-WEB, they [CNIME] have to spend more on technology. They may expand it, more human resources, more servers, better systems. This is over time (…) then they [CNIME] can invest more in technology, in networks, in human resources. SAM-WEB would improve. And that would be the main problem: having more efficiency, investing in more resources.” (free translation)

By setting compulsory, inefficient and not-completely-integrated public management systems, institutions can encumber companies’ staff, hindering accountability. Maquiladoras already handle with other management and information systems for internal control and manufacturing automatization, what sustains their offshoring strategy in Paraguay. Based on these situations, we develop the following:

**Proposition 5:** inefficient mechanisms of control developed by formal institutions can impact decisions of staff assignment and demand resources from companies.

As the administrative structures are very lean in both Companies A and B, there are few assistants to help Managers with the institutional reporting activities. Most part of this operational job is under responsibility of the Finance and Human Resources Manager in Company A and the Administrative Manager in Company B. However, the simplification of processes could have a positive impact on staff assignment, once part of the tasks could be replaced by more tactical ones. Companies could save money with the contracting of third-party service providers and have less coordination efforts too, consequently reducing resources consumption and focusing on manufacturing.

As observed by SP2_K (15), an alternative to develop more efficient mechanisms of control by formal institutions is to open the market for a wide competition, for instance. Up to date, access for SAM-WEB is free for maquiladoras: they sign a contract of use and the licensing specifications are defined by CNIME. However, SAM-WEB is the only option, since there are not any other similar solutions on the market. Comparing to other “Maquila regimes” in different countries, the interviewee mentioned that:
In Mexico, [for instance], there are already companies providing different types of systems, such as SAM-WEB, but in Paraguay it does not exist, you must use SAM-WEB. It is free, but that is the only option to use. There, [in Mexico], no, there is already a competition, it [the country] has already opened the market for other companies that develop software to provide [other] options for maquila systems (SP2_K, free translation).

Indeed, market opening would benefit *maquiladoras* with a diversity of management systems designed to meet different needs and segments. At the same time, more public projects directed to automatization and centralization of processes would have a positive effect too. CNIME and other institutions could follow the example of SUACE, the one-stop shop for opening and closing companies in the country that is largely acknowledged as an example of simplification of public services (PEGN, 2016). According to the “Doing Business Project”, there are few steps for starting a business in Paraguay when compared to Brazil, thus contributing to entrepreneurship.

In the same direction, complexity and inefficiency can also be associated to some capital constraints (e.g. funding, credit, inadequate access to long-term capital), and in Paraguay there are plenty of them. It is a characteristic of Latin American countries and can be an obstacle for firms’ development (Casanova, 2009; Finchelstein, 2017), including for *maquiladoras* expansion. Formal constraints prevent companies from taking actions (North, 1990). In the absence of formal mechanisms and incentives, or presence of restrictions (i.e. institutional voids), foreign companies’ competitiveness can be impacted if their current manufacturing capacity reaches the limit and long-term capital is not available. As far as it hinders new industrial development through processing plants and employment generation, it is a disadvantage for Paraguay too. Company A has felt difficulties when it changed plants and CP1_A (8) stated that:

*And for a small and medium-sized company to invest [in a plant], it is a bit difficult because the capital for industries here is restricted, it does not exist. There is no funding. Everything we have done here was with our own capital. These [industrial] sheds are all owned by us, everything we bought was with our own money, we had no investment, we had no banking, nothing* (CP1_A, free translation).

The statement above was obtained during the first visit to Company A, in 2017, and was related to the former plant. For the new one, Company A demanded third-party funding, but the release of the loan took so long that the factory was almost finished when it accessed the credit, a clear example of inefficiency in institutional mechanisms. In accord with SP2_G (6), credit is restricted in Paraguay and public and private funding access is made difficult for foreign
industries operating in the country. Initiatives like Decree Nº 4746 from 2016 for the textile industry are thus relevant because it is expected from it to foster new credit lines. However, it would be important to contemplate maquiladoras and foreign companies operating in Paraguay as a whole.

In general terms, we noted that formal institutions are perceived differently by both companies, varying to different extents between them. This meets Essen et al. (2012), for whom firms are not expected to respond to institutional pressures in the same way. Company A seems to accept better the local requirements as part of “the game” (North, 1990), probably in consequence of becoming isomorphic (DiMaggio & Powell, 1991; Meyer & Peng, 2016) to it. Company B still feels the difference between compliance mechanisms between the host and home countries. Hence, some comparisons to the head office were invariably done by the CP2_A to elucidate the differences in imports and exports approval, product registration and inventory control.

After operating under the “Maquila regime” for 10 years, Company A is assumed to have been adapted to inventory control and product registration, for instance. Almost no comments were tailored to them among the company’s different interviewees. The company simply deals with those pressures and accept them as part of the ground rules established to maquiladoras. It has accommodated practices and resources to comply with the environment and seek legitimacy. This way, results suggest that Company A has become somehow isomorphic to that institutional framework, acting homogeneously with other maquiladoras and following institutional expectations (DiMaggio & Powell, 1991; Meyer & Peng, 2016).

On the other side, Company B has complained about some of the coercive mechanisms imposed by the “Maquila regime”, which somehow have been constraining it to make accommodations on internal controls in product, production and inventory management. When referring to them, CP2_A has used negative statements, indicating they are apparently not perceived as beneficial for the company. Even though other interviewees could have not criticized those specific mechanisms with the same emphasis as CP2_A did, they all mentioned them spontaneously. We therefore infer that they are concerns that engage the firm’s attention.

Consequently, results suggest that Company B has not been completed adapted to local rules (what does not mean non-compliance, though). It is still not totally used to them, as they differ from the experience the company has in the home country. Comparisons can be accentuated by the fact that the same CEO manages both factories, the home and host-country ones, so he can constantly contrast them. This is different for Company A, given that the CEO
does not manage two units in different contexts. In short, results indicate that Company B is in process of becoming isomorphic to the local institutional framework (DiMaggio & Powell, 1991; Meyer & Peng, 2016), so the characteristics of home country are more latent.

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

**Proposition 6:** the duration of the operation can influence the company’s perception about regulations set by formal institutions.

We assume Proposition 6 lies across all the other previous propositions suggested in this study because it relates the perception of local regulatory pressures in host-country environments with the duration of operations. This way, results suggest that the uncertain environment, high intervention of institutions in business, inadequate number of market intermediaries and inefficiency of institutional mechanism are potentially perceived with greater intensity by maquiladoras with more recent operations in Paraguay.

In short, results also indicate that besides the difference in operation time, the organization’s management (e.g. same or different CEOs between head office and subsidiary) and the plant configuration (e.g. greater or lesser emphasis on the assembly line) are considerably important for understanding the strategic choices made by companies in Paraguay. They can lead to the development of specific capabilities for firms to respond accordingly. Indeed, all decisions are somehow shaped by the context in which firms are embedded (Peng, 2002), though. Institutions matter, especially in emerging countries, where many institutional idiosyncrasies take place, and their effects are paradoxical. Therefore, the comprehension of the “broad picture” is important for Operations Management scholars and manager, from one side, and for policymakers too, to the extent that many national programs or policies (e.g. the Paraguayan “Maquila regime”) can benefit from the awareness of what takes place within the factory’s walls.
7. CONCLUSION

This exploratory research aimed to comprehend how operations decisions are influenced by host-country formal institutions in international manufacturing. It is guided by the institution-based view of international business, an integrative perspective to understand organizational phenomena in emerging countries, whose institutional frameworks are different from the relatively stable ones of developed economies (Peng, Wang, & Jiang, 2008). Considering that institutions and host-country context matter (Eden, 2010; Jackson & Deeg, 2008; Klopf & Nell, 2018; Patnaik, Choe, & Singh, 2015; Peng, Wang & Jiang, 2008) and the literature has increasingly recognized their importance (Dau et al., 2018; Koning, Mertens, & Roosenboom, 2018; Martin, 2014; Regnér & Edman, 2014), we draw on two extreme cases of Brazilian textile-apparel companies that expanded their operations under the Paraguayan “Maquila regime”.

One of the companies has been operating in Paraguay for more than a decade and, among the ongoing Maquila Contracts of Brazilian textile-apparel companies in Paraguay, it holds the oldest one. It started operations in 2008, in a very turbulent context and it took incremental decisions on production and machinery and equipment as the institutional framework evolved. The other firm begun to manufacture in Paraguay in 2017 and decided to migrate a whole assembly line and implement its own inhouse weaving, which called for a greater extent of planning, coordination and automatization. Both companies provide examples of extreme cases in terms of years of operation in such a context. We consider their distinct experiences in the institutional environment as important for understanding the influence of host-country formal institutions on companies’ operations decisions.

In general terms, we noticed that companies A and B made some either similar (e.g. both plants have very lean administrative structures and the workforce is predominantly Paraguayan, except for the CEOs and Production Managers) or different choices (e.g. plants have different locations and Company A is more verticalized than Company B, that adapted its purchasing policy to Paraguay and has been developing local suppliers) over time. Some aspects of the institutional environment that shaped their decisions were analyzed according to four dimensions: environment uncertainty, high intervention of the government in business, inadequate number (or even lack) of market intermediaries and complexity and inefficiency of institutional mechanisms.
Based on that, we developed some propositions to illustrate how the aforementioned elements influenced the different sub-categories of operations decisions identified. We observed that: 1) uncertainty can hinder companies to take fast operations decisions; 2) some mechanisms of control and compliance imposed by institutions can either negatively impact product-related decisions, innovation or staff assignment, or influence inventory and production management; 3) decisions of supply, procurement and service provision can be shaped by institutional frameworks. Results also suggest that the operation time can influence the perception a company has on local regulations set by formal institutions. While Company A seems to have already absorbed the institutional pressures and accepted them as part of the ground rules established to *maquiladoras*, i.e. it has become somehow isomorphic to that institutional framework, Company B appears to be in process of becoming isomorphic to the local institutional framework, as it has not been completely adapted to local rules (which does not mean non-compliance, though).

7.1. Contributions to literature, practice and society

This study shows that contributions can be offered to different literatures at the same time. First, by employing the institution-based view of international strategy proposed by Peng (2002), it contributes to the expansion of the theory to different organizational phenomena. It meets Peng *et al.* (2018a) call for new studies to enhance its reach and, in turn, enriches it as a paradigm for explaining several occurrences – and have their institutional roots depicted – within companies. As Peng *et al.* (2018a) pointed out that the institution-based view has helped to address fundamental questions in international business strategy, corporate diversification, corporate governance and entrepreneurship so far, we argue that it can also contribute to debates on global operations management and international manufacturing, such as the one proposed here, and at the same time benefits from it.

Second, this research brings some institutional aspects, especially from emerging economies, for the operations management literature, thus contributing to the development of a more inclusive area. As argued by Spring *et al.* (2017), operations are increasingly required to perform in terms of external dimensions too, which go beyond the factory’s walls, and the institutional environment is an important element as it impacts firm’s competitiveness and shape decisions. In the existence of a more “open socio-technical system, rather than a closed, rational system”, Spring *et al.* (2017, pg. 15) call for greater integration of at least some aspect of the “macro” level to OM, since they have been dismissed or ignored by OM scholars for a
long time. In consequence of that, we assume this study plays this role by exploring how operations decisions (and strategy) are influenced by host-country formal institutions in the EE context. A relationship between international operations management and institutions is then sketched and makes room for further inquiries.

Third, this study 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. Consequently, results reinforce the importance of the host-country institutional environment for managing international operations, thus helping to rethink international manufacturing in terms of contextual attributes, more precisely in a changing sector and in an EE. Consequently, we contribute to the literature by extending a topic that has been addressed in IB for some time (institutions) and integrating it to the context of international manufacturing.

In terms of managerial contributions, this study stresses the importance of the institutional environment for managerial decisions. Thus, it helps managers to become aware of and take into consideration the context and the institutional environment of the host country while managing their international operations, making choices and setting the international manufacturing strategy. At the same time, managers can also take advantage of the external environment too (Spring et al., 2017) and incorporate important institutional drivers to their decision-making process. More specifically, this research adds knowledge for managers operating under the “Maquila regime” and those interested in investing in Paraguay, once it brings a complete contextual description and outlines the main institutions that are part of the “Maquila regime”.

Moreover, we consider this research brings social implications too. By setting the “Maquila regime” and a changing sector worldwide as the empirical context, it recognizes the wider implications of the discussion offered here for the host-country industrial development and employment generation in Paraguay. Invariably, it leads to reflections on firm’s competitiveness in Brazil and the social aspects embedded to it (local and industrial development, income, employment, welfare, etc.), suggesting that Brazilian institutions need to be more competitive in order to retain manufacturing activities that impact on business. This study also illustrates how industrial policies, such as the one carried out by Paraguay, can be important instruments for foreign direct investments attraction and have the potential for changing the dynamism of a region. For policymakers, it represents an opportunity to evaluate the influence institutions have on business and elaborate policies accordingly.
7.2. Limitations and Suggestions for future researches

As any other research, this study presents some limitations that can represent opportunities for future researches. First, the limited number of cases (only 2) 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 plant decisions. In consequence of that, the institutional distance between home and host countries is not explored, what can be potentially important especially in case of EE and DE. Third, and related to the previous remark, this study focuses on the manufacturing plants and does not explore in deep the perception of other head office’s senior managers that could be involved in the decision-making process of expansion to Paraguay or even in the plant management. Forth, as it concentrates on firms from the textile-apparel sector, it does not capture eventual differences in mechanisms and pressures for other sectors and through other specific regulatory bodies (e.g. Health Ministry for food industry). Fifth, it does not compare the Paraguayan “Maquila regime” with other similar regimes existing in Latin America, what could provide a comparative analysis among different institutions and their influences on operations decisions.

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. Lastly, these results can motivate other researches with different home and host countries, what would be important for widening the reach of such debate proposed herein.
REFERENCES


AICP. (2018b). *Presentación institucional – AICP* [PowerPoint presentation].


Prezado Alexandre Bazzan,

Na condição de pesquisador da Escola de Administração de Empresas de São Paulo - Fundação Getulio Vargas (EAESP/FGV), gostaria de convidar a Cortinerias del Paraguay S.A. para participar da pesquisa que estou conduzindo para obtenção do título de Mestre e cujo objetivo é estudar a internacionalização produtiva de empresas têxteis brasileiras.

Trata-se de um estudo de caso qualitativo, estritamente acadêmico e que aborda a internacionalização sob uma ótica institucional. Dessa forma, não haverá necessidade de compartilhamento de dados de produção e de mercado, e o nome da empresa poderá ser mantido em sigilo, caso a mesma assim prefira. A coleta de dados seguirá rigoroso protocolo estabelecido pela EAES/FGV e será baseada na realização de entrevistas com os principais envolvidos no processo de internacionalização da empresa, a fim de explorar a percepção dos mesmos quanto aos aspectos institucionais do país de destino e o impacto destes nas principais decisões de operações da empresa. Visitas à campo (neste caso, fábricas) serão extremamente importantes para o desenvolvimento do trabalho.

Dessa forma, agradeço o primeiro contato e a disponibilidade em contribuir para o projeto. Como próximos passos, alinharemos uma agenda inicial de conversas para começar a explorar o tema, bem como a possibilidade de visitação para um primeiro contato com a fábrica.

Obrigado novamente pela atenção conferida e espero que seja o início de uma longa parceria!

Atenciosamente,

______________________________
Renan Lucas Ferraz (pesquisador)

______________________________
Profª Drª Luciana Marques Vieira (orientadora)
Prezado Fabiano Soeth,

Na condição de pesquisador da Escola de Administração de Empresas de São Paulo - Fundação Getulio Vargas (EAESP/FGV), gostaria de convidar Itacorda Indústria e Comércio de Cordas LTDA. para participar da pesquisa que estou conduzindo para obtenção do título de Mestre. O objetivo é estudar a internacionalização produtiva de empresas brasileiras.

Trata-se de um estudo de caso qualitativo, estritamente acadêmico e que aborda a internacionalização sob uma ótica institucional. Dessa forma, não haverá necessidade de compartilhamento de dados de produção e de mercado, e o nome da empresa poderá ser mantido em sigilo, caso a mesma assim prefira. A coleta de dados seguirá rigoroso protocolo estabelecido pela EAESP/FGV e será baseada na realização de entrevistas com os principais tomadores de decisão da empresa, a fim de explorar a percepção dos mesmos quanto aos aspectos institucionais do país de destino e o impacto destes nas decisões de operações da empresa. Visitas à campo (neste caso, fábricas) serão extremamente importantes para o desenvolvimento do trabalho.

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Obrigado novamente pela atenção conferida e espero que seja o início de uma longa parceria!

Atenciosamente,

__________________________________
Renan Lucas Ferraz (pesquisador)

________________________________________
Profª Drª Luciana Marques Vieira (orientadora)
Interview protocol A (pg. 1/4)

Date: ____/____/____  Time: ______________  Place: ______________
Interviewee’s name: ______________________  Position: ____________

Breaking the ice before the interview starts:
- General topic about something (office, street, weather, country, etc.)

Introducing the interviewer:
- Ongoing master course and research focus

Thanks for taking part in the study.

Interview format:
- Recording
- Notes
- No “right” or “wrong” answers

(For interviewer only – to keep it in mind):
- Main purpose of this interview:
  To first identify the main operations decisions taken by firms operating under the “Maquila regime” and then understand how those decisions are influenced by the “Maquila regime” formal institutions identified over the previous interviews.

(For interviewer only – General and Specific Objectives)
GO: How are companies’ operations decisions influenced by host country institutions in international manufacturing?
SO1: What is the Paraguayan "Maquila regime" and in which context does it develop?
SO2: Which are the Paraguayan institutions embedded to that context?
SO3: What are the roles of those institutions and how do they relate to each other?
SO4: What are the operations decisions taken by firms manufacturing in Paraguay?

Has anything called my attention before the interview starts?

Initial reminder:
*Q#: Indicated for both General Manager / Director (i.e., main decision maker) and to Coordinators / Supervisors (second-level of plant chart).
### Interview protocol A (pg. 2/4)

#### Primary Questions:

*Q1: Tell me a little about the operation of (company name) in Paraguay / Me conte um pouco da operação da (nome da empresa) no Paraguai: (INTRODUCTION / DEDUCTIVE)

<table>
<thead>
<tr>
<th>Topics for giving directions to interviewees, if necessary</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Decision / motivation to produce in the country / Decisão / motivação de produzir no país (INTRODUCTION / DEDUCTIVE)</td>
</tr>
<tr>
<td>- Production history / Histórico da produção (INTRODUCTION / DEDUCTIVE)</td>
</tr>
<tr>
<td>- Characteristics of the plant / Características da planta produtiva (INTRODUCTION / DEDUCTIVE)</td>
</tr>
<tr>
<td>- Factory organization chart, etc / Organograma da fábrica, etc. (INTRODUCTION / DEDUCTIVE)</td>
</tr>
</tbody>
</table>

*Q3: What are the advantages and difficulties of operating a factory in Paraguay under the "maquila regime"? / Quais são as vantagens e as dificuldades de se operar uma fábrica no Paraguai sob o “regime da maquila”? (GO / DEDUCTIVE)

*Q4: After (name of the company) decided to settle in Paraguay and received the approval of the maquila project, how was the operation started? And how has been the development of the operation since then? / Depois que a (nome da empresa) decidiu se instalar no Paraguai e recebeu a aprovação do projeto de maquila, como foi o início da operação? E como vem sendo o desenvolvimento da operação desde então? (SO4 / DEDUCTIVE)

<table>
<thead>
<tr>
<th>Topics for giving directions to interviewees, if necessary</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Capacity (Amount, timing, type) / Capacidade produtiva (quantidade, tempo, tipo) (SO4 / DEDUCTIVE)</td>
</tr>
<tr>
<td>- Facilities (Size, location, specialization) / Facilidades (localização, tamanho, especialização e da planta) (SO4 / DEDUCTIVE)</td>
</tr>
<tr>
<td>- Equipment and process technologies (Scale, flexibility, interconnectedness) / Equipamentos e processos tecnológicos (escala, flexibilidade, etc) (SO4 / DEDUCTIVE)</td>
</tr>
<tr>
<td>- Vertical integration (Direction, extent, balance) / Integração vertical (fornecedores, direção, grau) (SO4 / DEDUCTIVE)</td>
</tr>
<tr>
<td>- Vendors (Number, structure, relationship) / Vendedores (número, estrutura, relação) (SO4 / DEDUCTIVE)</td>
</tr>
<tr>
<td>- New products (Hand-off, start-up, modification) / Novos produtos (SO4 / DEDUCTIVE)</td>
</tr>
<tr>
<td>- Human Resources (Selection &amp; training, compensation, security) / Recursos humanos (mão de obra, R&amp;S, salário) (SO4 / DEDUCTIVE)</td>
</tr>
<tr>
<td>- Quality (Definition, role, responsibility) / Qualidade (definição, papel, responsabilidade) (SO4 / DEDUCTIVE)</td>
</tr>
<tr>
<td>- Systems (Organization, schedules, control) / Sistemas (organização, controle, agendamento) (SO4 / DEDUCTIVE)</td>
</tr>
</tbody>
</table>
Interview protocol A (pg. 3/4)

**Primary Questions:**

*Q6: Considering the decisions taken to start and develop the operation in Paraguayan, which ones were the most impactful for (name of the company)? / Considerando as decisões tomadas para início e desenvolvimento da operação no Paraguai, quais foram as que tiveram mais impacto para a (nome da empresa)? (SO4 / DEDUCTIVE)

*Q7: What is your opinion about the Paraguayan institutional environment? / Qual a sua opinião em relação ao ambiente institucional paraguaio? (GO / DEDUCTIVE)

*Q10: Considering the day-to-day operation in Paraguay, with which institutions does (company name) relate and how is this relationship? / Considerando o dia a dia da operação no Paraguai, com quais instituições a (nome da empresa) se relaciona e como é essa relação? (GO-SO3 / DEDUCTIVE)

(topics for somehow inducting interviewees, if necessary)
- Secretaria Executiva do CNIME (MIC) (GO-SO3 / INDUCTIVE)
- VUE – Ventanilla Única de Exportación (MIC) (GO-SO3 / INDUCTIVE)
- Diretoria de Comércio Exterior (MIC) (GO-SO3 / INDUCTIVE)
- Sub-Secretaria de Tributação (Ministério da Fazenda) (GO-SO3 / INDUCTIVE)
- Diretoria Nacional de Aduanas / Alfândega (Ministério da Fazenda) (GO-SO3 / INDUCTIVE)
- Instituto de Previdência Social (IPS) (GO-SO3 / INDUCTIVE)
- Ministério do Trabalho, Emprego e Seguridade Social (GO-SO3 / INDUCTIVE)
- Prefeitura local (GO-SO3 / INDUCTIVE)
- Ministério do Ambiente e Desenvolvimento Sustentável (SEAM) (GO-SO3 / INDUCTIVE)
- Instituto Nacional de Tecnologia, Normatização e Metrologia (INTN) (GO-SO3 / INDUCTIVE)
- Associação Industrial dos Confeccionistas do Paraguai (AICP) (GO-SO3 / INDUCTIVE)
- União Industrial Paraguaia (UIP) (GO-SO3 / INDUCTIVE)

*Q12: Among those institutions you mentioned, which are the ones that most influence the day-to-day operation of (name of company) and why? / Dentre essas instituições que você mencionou, quais são as que mais influenciam o dia a dia operação da (nome da empresa) e por que? (GO-SO3 / DEDUCTIVE)

*Q13: Throughout this period of operation, did (company name) need to make any adaptations to meet the Paraguayan institutions’ requirements? Could you give examples? / Ao longo desse período de operação, a (nome da empresa) precisou fazer alguma adaptação para atender as exigências de instituições paraguaias? Poderia citar exemplos? (GO-SO4 / DEDUCTIVE)

*Q15: Does (company name) today have dedicated people to relate to these Paraguayan institutions and to meet their demands? What is the day to day these relations? / A (nome da empresa) hoje conta com pessoas dedicadas para se relacionar com essas instituições paraguaias e atender às suas demandas? Como é o dia a dia dessas relações? (GO-SO4 / DEDUCTIVE)
Interview protocol A (pg. 4/4)

Secondary Questions:
Q2: What are the main similarities and differences between producing in Brazil and producing in Paraguay under the “maquila regime”? / Quais as principais semelhanças e diferenças entre produzir no Brasil e produzir no Paraguai sob o “regime da maquila”?
(INRODUCTION / DEDUCTIVE)

Q5: Comparing the beginning and the development of the operation in Paraguay with the operation in Brazil, what do you perceive of similarity and difference between the operations of (company name) / Comparando o início e o desenvolvimento da operação no Paraguai com a operação no Brasil, o que você percebe de semelhança e diferença entre as operações da (nome da empresa)? (SO4 / DEDUCTIVE)

Q8: When you compare the Paraguayan institutional environment with the home country one (Brazil), what similarities and differences do you perceive? / Quando você compara o ambiente institucional paraguaio com o do país de origem (Brasil), quais semelhanças e diferenças você percebe? (SO1 / DEDUCTIVE)

Q9: Was it easy or difficult to adjust to the Paraguayan institutional environment? Could you give some examples? / Foi fácil ou difícil se adequar ao ambiente institucional paraguaio? Poderia dar alguns exemplos? (GO-SO1 / DEDUCTIVE)

*Q11: In addition to the institutions mentioned, is there any other with which (name of the company) relates to the day-to-day operation? If so, how is this relation? / Além das instituições mencionadas, existe alguma outra com a qual a (nome da empresa) se relaciona no dia a dia da operação? Em caso afirmativo, como é essa relação? (GO-SO2 / DEDUCTIVE)

Q14: Have the adaptations mentioned above been initially planned by the company? If not, how did the company respond to such requirements? / As adaptações mencionadas anteriormente foram previstas inicialmente pela empresa? Em caso negativo, como a empresa reagiu a tais exigências? (GO-SO4 / DEDUCTIVE)

Q16: If you could change something in the "maquila regime" to meet the operation in Paraguay’s needs, what would you change and why? / Se você pudesse modificar alguma coisa no “regime de maquila” para atender as necessidades da operação no Paraguai, o que você mudaria e por quê? (GO-SO1 / DEDUCTIVE)

Did anything call my attention during the interview?

What insights did I have during the interview?

Other field notes
Interview protocol B (pg. 1/3)

Date: ____/____/____  Time: ____________  Place: ______________
Interviewee’s name: ___________________________  Position: _______________

Breaking the ice before the interview starts:
- General topic about something (office, street, weather, country, etc.)

Introducing the interviewer:
- Ongoing master course and research focus

Thanks for taking part in the study.

Interview format:
- Recording
- Notes
- No “right” or “wrong” answers

(For interviewer only – to keep it in mind):
- Main purpose of this interview:
  To mostly identify the formal institutions of the “Maquila regime”, their roles and how they might influence foreign companies operating in the country. Also, to get insights on the Paraguayan context under the Maquila Regime.

General and Specific Objectives:
GO: How are companies’ operations decisions influenced by host country institutions in international manufacturing?
SO1: What is the Paraguayan "Maquila regime" and in which context does it develop?
SO2: Which are the Paraguayan institutions embedded to that context?
SO3: What are the roles of those institutions and how do they relate to each other?
SO4: What are the operations decisions taken by firms manufacturing in Paraguay?

Has anything called my attention before the interview starts?
Questions

Q1: Tell me something about the Paraguayan “Maquila regime” / *Me conte um pouco sobre o “regime de maquila” paraguaio* (SO1 / DEDUCTIVE)

Q2: What are the characteristics of this “Maquila regime”? / Quais as características deste “regime de maquila”? (SO1 / DEDUCTIVE)

Q3: What are the advantages and disadvantages of the “Maquila regime” for foreign companies, especially for Brazilian firms? / Quais as vantagens e desvantagens do “regime de maquila” para empresas de outros países, especialmente para as empresas brasileiras? (SO1 / DEDUCTIVE)

Q4: In your opinion, how has it changed in Paraguay since the beginning of the “Maquila regime” / Na sua opinião, o que mudou no Paraguai desde o começo do “regime de maquila”? (SO1 / DEDUCTIVE)

Q5: Which institutions set the rules (political, economic, judicial, social, etc.) of the “Maquila regime” and define what is legitimate? / Quais instituições estabelecem as regras (políticas, econômicas, judiciais, social etc.) do “regime de maquila” e definem o que é legítimo? (SO2 / DEDUCTIVE)

Q6: What are the roles and functions of such institutions? / Quais os papeis e funções de tais instituições? (SO2, SO3 / DEDUCTIVE)

Q7: To which extent do those institutions influence, constrain or regulate foreign companies? / Em que sentido essas instituições influenciam, restringem ou regulam empresas de outros países? (SO2, SO3 / DEDUCTIVE)

Q8: What are the existing relationships among those institutions? / Quais as relações existentes entre essas instituições? (SO2, SO3 / DEDUCTIVE)

Q9: What would you change in the Paraguayan “Maquila regime” and why? / O que você mudaria no “regime de maquila” paraguaio e por quê? (SO3 / DEDUCTIVE)

Did anything call my attention during the interview?

What insights did I have during the interview?
Interview protocol B (pg. 3/3)

How can I get to know more information (history, roles, functions, etc) about those “Maquila regime” institutions you mentioned? / Como posso obter mais informações (história, papel, funções, etc.) sobre essas instituições do “regime de maquila” que você mencionou?

Besides those institutions you have already mentioned, do you remember any other else? / Além dessas instituições que você já mencionou, você se lembra de mais alguma?

Recommendations for future interviewees

Other field notes
Interview protocol C (pg. 1/3)

Date: ____/____/____  Time: _____________  Place: ________________
Interviewee’s name: _________________________  Position: _____________

Breaking the ice before the interview starts:
- General topic about something (office, street, weather, country, etc.)

Introducing the interviewer:
- Ongoing master course and research focus

Thanks for taking part in the study.

Interview format:
- Recording
- Notes
- No “right” or “wrong” answers

(For interviewer only – to keep it in mind):
- Main purpose of this interview:
  **To understand how the Brazilian textile sector is described in terms of competitiveness.**
  Also, if possible, to get some insights about Paraguay and Maquila Regime (inductive approach presented in last questions)

(For interviewer only – General and Specific Objectives)
GO: How are companies’ operations decisions influenced by host country institutions in international manufacturing?
SO1: What is the Paraguayan "Maquila regime" and in which context does it develop?
SO2: Which are the Paraguayan institutions embedded to that context?
SO3: What are the roles of those institutions and how do they relate to each other?
SO4: What are the operations decisions taken by firms manufacturing in Paraguay?

Has anything called my attention before the interview starts?
Questions
Q1: Tell me something about your relation with the textile sector / Me conte um pouco sobre a sua relação com o setor têxtil (INTRODUCTION / DEDUCTIVE)

Q2: What are the characteristics of the Brazilian textile sector? / Quais as características do setor têxtil brasileiro? (o que entrevistado achar relevante trazer como característica) (INDUSTRY OVERVIEW / DEDUCTIVE)

Q3: What are the main challenges and opportunities of the Brazilian textile industry nowadays? / Quais os principais desafios e oportunidades da indústria têxtil brasileira hoje? (SO1 / DEDUCTIVE)

Q4: In terms of competitiveness, has anything changed in the Brazilian textile sector lately? / Em termos de competitividade, alguma coisa mudou no setor têxtil brasileiro nos últimos anos? (SO1 / DEDUCTIVE)

Q5: In your opinion, the competitive level of the sector is appropriate nowadays? If not, what does it need to be done to improve the textile industry competitiveness? / Na sua opinião, o nível de competitividade do setor hoje é adequado? Se não, o que precisa ser feito para a competitividade da indústria têxtil aumentar? (SO1 / DEDUCTIVE)

Q6: The Brazilian textile sector has sustained its competitiveness internationally? If not, what are the main barriers and restrictions for International competitiveness? / O setor têxtil brasileiro tem conseguido se manter competitivo internacionalmente? Se não, quais as principais barreiras e os entraves para a competitividade internacional? (SO1 / DEDUCTIVE)

Q7: Much has been said about the competitiveness of Asian countries in the textile sector. Recently, we also have been listening about the “Maquila Regime” in Paraguay, which has been attracting some Brazilian textile companies to the country. What have you ever heard about this phenomenon? / Muito já se falou sobre a competitividade dos países asiáticos no setor têxtil. Mais recentemente, escuta-se falar também sobre o regime de maquila paraguaio, que tem atraído algumas empresas têxteis brasileiras para o país. O que você já escutou falar sobre esse fenômeno? (ou seja, empresas têxteis brasileiras indo para o Paraguai sob o regime de maquila) (SO1 / DEDUCTIVE)

Did anything call my attention during the interview?

What insights did I have during the interview?
### Recommendations for future interviewees

<table>
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<tr>
<th>Recommendations for future interviewees</th>
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### Other field notes

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<th>Other field notes</th>
</tr>
</thead>
</table>
Interview protocol D (pg. 1/3)

Date: ____/____/____     Time: ________________     Place:______________
Interviewee’s name:___________________________        Position:______________

Breaking the ice before the interview starts:
- General topic about something (office, street, weather, country, etc.)

Introducing the interviewer:
- Ongoing master course and research focus

Thanks for taking part in the study.

Interview format:
- Recording
- Notes
- No “right” or “wrong” answers

(For interviewer only – to keep it in mind):
- Main purpose of this interview:
**To understand how the Paraguayan textile sector is described in terms of competitiveness and how the country has been attracting Brazilian investments.** Also, if possible, to get some insights about Maquila Regime.

(For interviewer only – General and Specific Objectives)
GO: How are companies’ operations decisions influenced by host country institutions in international manufacturing?
SO1: What is the Paraguayan "Maquila regime" and in which context does it develop?
SO2: Which are the Paraguayan institutions embedded to that context?
SO3: What are the roles of those institutions and how do they relate to each other?
SO4: What are the operations decisions taken by firms manufacturing in Paraguay?

Has anything called my attention before the interview starts?
### Interview protocol D (pg. 2/3)

<table>
<thead>
<tr>
<th>Questions</th>
<th>(SO3 / DEDUCTIVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1: Tell me about AICP / Me conte sobre a AICP</td>
<td></td>
</tr>
<tr>
<td>Q2: Tell me something about your relation with the textile sector / Me</td>
<td>INTRODUCTION / DEDUCTIVE</td>
</tr>
<tr>
<td>conte um pouco sobre a sua relação com o setor têxtil</td>
<td></td>
</tr>
<tr>
<td>Q3: What are the characteristics of the Paraguayan textile sector? /</td>
<td>(SO1 / DEDUCTIVE)</td>
</tr>
<tr>
<td>Quais as características do setor têxtil paraguai? (o que entrevistado</td>
<td></td>
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<tr>
<td>achar relevante trazer como característica)</td>
<td></td>
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<tr>
<td>Q4: What are the main challenges and opportunities of the Paraguayan</td>
<td>(SO1 / DEDUCTIVE)</td>
</tr>
<tr>
<td>textile industry nowadays? / Quais os principais desafios e oportunidades</td>
<td></td>
</tr>
<tr>
<td>da indústria têxtil paraguaia hoje?</td>
<td></td>
</tr>
<tr>
<td>Q5: What are the differences between the Paraguayan and the Brazilian</td>
<td>(SO1 / DEDUCTIVE)</td>
</tr>
<tr>
<td>textile sectors? / Quais as diferenças entre o setor têxtil paraguai</td>
<td></td>
</tr>
<tr>
<td>o brasileiro?</td>
<td></td>
</tr>
<tr>
<td>Q6: How do you evaluate the competitiveness of the Paraguayan textile</td>
<td>(SO1 / DEDUCTIVE)</td>
</tr>
<tr>
<td>sector over the last few years? / Como você percebe a competitividade do</td>
<td></td>
</tr>
<tr>
<td>setor têxtil paraguai ao longo dos últimos anos?</td>
<td></td>
</tr>
<tr>
<td>Q7: In your opinion, the competitive level of the sector is appropriate</td>
<td>(SO1 / DEDUCTIVE)</td>
</tr>
<tr>
<td>nowadays? / Na sua opinião, o nível de competitividade do setor hoje é</td>
<td></td>
</tr>
<tr>
<td>adequado? Se não, o que precisa ser feito para a competitividade da</td>
<td></td>
</tr>
<tr>
<td>indústria têxtil aumentar?</td>
<td></td>
</tr>
<tr>
<td>Q8: How do you feel the interest of Brazilian textile companies in</td>
<td>(SO1 / DEDUCTIVE)</td>
</tr>
<tr>
<td>Paraguay nowadays? / Como vocês têm percebido o interesse de empresas</td>
<td></td>
</tr>
<tr>
<td>têxteis brasileiras pelo Paraguai hoje?</td>
<td></td>
</tr>
<tr>
<td>Q9: Why have Brazilian textile companies started to install operations</td>
<td>(SO1 / DEDUCTIVE)</td>
</tr>
<tr>
<td>and produce in Paraguay? / Por que empresas têxteis brasileiras têm</td>
<td></td>
</tr>
<tr>
<td>começado a se instalar e produzir no Paraguai? Por que elas buscam o</td>
<td></td>
</tr>
<tr>
<td>Paraguai?</td>
<td></td>
</tr>
<tr>
<td>Q10: What is the impact of the arrival of foreign companies in</td>
<td>(SO1 / DEDUCTIVE)</td>
</tr>
<tr>
<td>Paraguay, especially the Brazilian ones? / Qual o impacto da chegada de</td>
<td></td>
</tr>
<tr>
<td>empresas estrangeiras no Paraguai, principalmente as brasileiras?</td>
<td></td>
</tr>
<tr>
<td>Q11: What is your opinion about the “maquila regime” in Paraguay? / Qual</td>
<td>(SO1 / DEDUCTIVE)</td>
</tr>
<tr>
<td>sua opinião sobre o regime de maquila paraguai?</td>
<td></td>
</tr>
</tbody>
</table>
Interview protocol D (pg. 3/3)

Did anything call my attention during the interview?

What insights did I have during the interview?

Recommendations for future interviewees

Other field notes
APPENDIX 3

Interview protocol – Complement 1A

Date: ____/____/____  Time: _______________  Place:_________________

Interviewee’s name:___________________________  Position:________________

Please rank the institutions below according to the degree of relationship that __________________ have with them (1 = greater relationship / 12 = less relationship) / Por favor, classifique as instituições abaixo de acordo com o grau de relacionamento que a __________________ tem com elas (1 = maior relacionamento / 12 = menor relacionamento).

☐ Secretaria Executiva do CNIME (MIC)
  Frequency/ Frequência: ______________________

☐ VUE – Ventanilla Única de Exportación (MIC)
  Frequency/ Frequência: ______________________

☐ Diretoria de Comércio Exterior (MIC)
  Frequency/ Frequência: ______________________

☐ Sub-Secretaria de Tributação (Ministério da Fazenda)
  Frequency/ Frequência: ______________________

☐ Diretoria Nacional de Aduanas / Alfândega (Ministério da Fazenda)
  Frequency/ Frequência: ______________________

☐ Instituto de Previdência Social (IPS)
  Frequency/ Frequência: ______________________

☐ Ministério do Trabalho, Emprego e Seguridade Social
  Frequency/ Frequência: ______________________

☐ Prefeitura local
  Frequency/ Frequência: ______________________

☐ Ministério do Ambiente e Desenvolvimento Sustentável (SEAM)
  Frequency/ Frequência: ______________________

☐ Instituto Nacional de Tecnologia, Normatização e Metrologia (INTN)
  Frequency/ Frequência: ______________________

☐ Associação Industrial dos Confeccionistas do Paraguai (AICP)
  Frequency/ Frequência: ______________________

☐ União Industrial Paraguaia (UIP)
  Frequency/ Frequência: ______________________
Interview protocol – Complement 1B

Date: ____/____/____  Time: _______________  Place:_______________
Interviewee’s name:___________________________  Position:_______________

Please indicate with an X which institutions influence the day-to-day operation of _______________ and if, in your opinion, such impact is either positive, negative or indifferent.

Por favor, indique com um X quais instituições influenciam o dia a dia da operação da _______________ e se, na sua visão, o impacto delas é positivo, negativo ou neutro.

☐ Secretaria Executiva do CNIME (MIC)
  Impacto / Impact: ___________________

☐ VUE – Ventanilla Única de Exportación (MIC)
  Impacto / Impact: ___________________

☐ Diretoria de Comércio Exterior (MIC)
  Impacto / Impact: ___________________

☐ Sub-Secretaria de Tributação (Ministério da Fazenda)
  Impacto / Impact: ___________________

☐ Diretoria Nacional de Aduanas / Alfândega (Ministério da Fazenda)
  Impacto / Impact: ___________________

☐ Instituto de Previdência Social (IPS)
  Impacto / Impact: ___________________

☐ Ministério do Trabalho, Emprego e Seguridade Social
  Impacto / Impact: ___________________

☐ Prefeitura local
  Impacto / Impact: ___________________

☐ Ministério do Ambiente e Desenvolvimento Sustentável (SEAM)
  Impacto / Impact: ___________________

☐ Instituto Nacional de Tecnologia, Normatização e Metrologia (INTN)
  Impacto / Impact: ___________________

☐ Associação Industrial dos Confeccionistas do Paraguai (AICP)
  Impacto / Impact: ___________________

☐ União Industrial Paraguaia (UIP)
  Impacto / Impact: ___________________
Interview protocol – Complement 2

Date: ___/___/____  Time: _____________  Place: _____________
Interviewee’s name: ________________________  Position: _____________

Please indicate your production chain (stages involved in the production of your product) below / Por favor, indique a sua cadeia produtiva (etapas envolvidas na produção do seu produto) abaixo:
Interview protocol – Complement 3

Date: ____/____/____  Time: _______________  Place:_______________
Interviewee’s name:__________________________  Position:________________

Please indicate which competitiveness factors\(^1\) below are related to the operation of
_______________ / Por favor, indique quais os fatores de competitividade abaixo estão
relacionados à operação da ____________.

☐ Innovation / Inovação
☐ Business sophistication / Sofisticação do negócio
☐ Market size / Tamanho de mercado
☐ Other markets access / Acesso a outros mercados
☐ Technology access / Acesso à tecnologia
☐ Costs of production / Custos de produção
☐ Labor market (efficiency and/or flexibility) / Mercado de trabalho (eficiência e/ou
flexibilidade)
☐ Skilled labor (higher education and training) / Mão de obra qualificada (melhor
educação e treinamento)
☐ Stability of the macroeconomic environment / Estabilidade do ambiente
macroeconômico
☐ Better infrastructure / Melhor infraestrutura
☐ Institutional environment / Ambiente institucional

\(^1\) Obtained from “The Global Competitiveness Index framework” of “The Global Competitiveness Report 2017-2018” and adjusted accordingly.
### APPENDIX 4

**Main features**

- **Textile industry**: capital intensive (machinery), requires abundant water and electricity.
- **Apparel industry**: labor intensive (workforce is easily trained and moved around), demands less capital investments. It faces a lack of national inputs and raw materials, which are imported. It is a very dynamic sector and has attracted lots of investments in the installation and expansion of factories lately, especially through maquila companies. Factories are mostly concentrated in Asunción and surroundings.
- **Black market and smuggling**: still an issue for the sector, mainly impacting the apparel industry.
- **Large companies**: although small in number and low in labor absorption, they concentrate almost half of the sectorial revenue.
- **Exports concentration** in terms of goods (20 goods account for 87% of exports; cotton represented 25%) and destinations (Brazil, Argentina, China and Uruguay correspond to 75% of exports, and only Mercosul 68% of them).
- **Imports concentrated** from Brazil and China.
- **Tradition in the cultivation and exports of cotton**, which has been replaced by the soybean for the last three decades. It was associated with family farming for a long time. Today, it coexists with both organic cotton and transgenic cotton (permitted in Paraguay since 2012).
- **Manufacturas de Pilar S.A**: the largest player in the market (producer of large-scale textiles), it is considered the only vertically integrated textile company in the country. Surrounding it there is a cluster dedicated to the production of cotton, textiles and clothing.
- **The sector faces a strong competition worldwide** due to Asian countries (low wage costs and abundant labor force).
- **The short-term socio-economic impact** of the textile-apparel industry in Paraguay is of more than 35,000 direct jobs.
- **Apparel sector**: one of the main sectors to receive Brazilian investments (capital)
- **Maquiladoras** of the apparel sector are focused on the elaboration of semi-finished goods to exports. There is a shortage of national inputs and raw materials, which are imported from Brazil and China.

**Reference**

Pena (2014).

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<table>
<thead>
<tr>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>AICP (2018b).</td>
</tr>
<tr>
<td>Trepowski, Martinez, and Romero (2014).</td>
</tr>
</tbody>
</table>

Table: Textile-apparel industry additional characteristics.
Source: elaborated by the author based.
# APPENDIX 5

## A) Paraguay

### A1) Competitive advantages (+)

<table>
<thead>
<tr>
<th>Number</th>
<th>Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+) FA1</td>
<td>Low social charges (thus, low cost of labor) (Rediex, 2018; Trepowski, Martinez, &amp; Romero, 2014).</td>
</tr>
<tr>
<td>(+) FA2</td>
<td>Cheap industrial electricity due to surplus production (BID, 2018; Cerqueira César, 2016; Masi &amp; Borda, 2011; Rediex, 2018; The Wall Street Journal, 2017; Trepowski, Martinez &amp; Romero, 2014).</td>
</tr>
<tr>
<td>(+) FA3</td>
<td>Low tax burden (thus, low tax pressure) – tax revenues in Paraguay have been lower than those in almost all other South American countries. VAT of 10% and income tax to companies of 10% too. Simplified tax structure and no regional taxes (BID, 2014, 2018; Cerqueira César, 2016; Encyclopedia Britannica, 2018; Heritage, 2018; Masi &amp; Borda, 2011; Rediex, 2018; Trepowski, Martinez, &amp; Romero, 2014).</td>
</tr>
<tr>
<td>(+) FA4</td>
<td>Possibility of exporters to recover VAT incurred in the acquisition of goods and services directly or indirectly applied to the exports’ operations (CEMAP, 2018; Rediex, 2018).</td>
</tr>
<tr>
<td>(+) FA5</td>
<td>Flexible rules for issuance of the certificate of origin for exports (label “Made in Paraguay”) – Paraguay is the only Mercosul country to require just 40% of regional added value over the cost of final products manufactured in the country, which means that the other 60% can be composed by extra-regional inputs (CNIME, 2018a; CEMAP, 2018).</td>
</tr>
<tr>
<td>(+) FA6</td>
<td>Facilitated investments due to other regimes for FDI attraction besides Maquila, such as Law 60/90 and Law 523/95 of Free Zones. Favorable investment climate (BID, 2014; IOS, 2017; Masi &amp; Borda, 2011; Rediex, 2018; Trepowski, Martinez, &amp; Romero, 2014).</td>
</tr>
<tr>
<td>(+) FA7</td>
<td>Positive and favorable macroeconomic scenario – average growth of 4.6% in the last 10 years, inflation under control, stable currency and one of the lowest external debt level in Latin America. Exemplar fiscal health and government debt (BID, 2014, 2018; Cerqueira César, 2016; Heritage, 2018; Rediex, 2018; World Economic Forum, 2017).</td>
</tr>
<tr>
<td>(+) FA8</td>
<td>Low trade protectionism and higher degree of economic freedom compared to the largest markets in South America – Brazil and Argentina. Paraguay is the 5th freest country in South America, behind Chile, Uruguay, Colombia and Peru, and its overall score is above the regional and the world ones (Cerqueira César, 2016; Heritage, 2018; Masi &amp; Borda, 2011).</td>
</tr>
<tr>
<td>(+) FA9</td>
<td>Short-term political stability and good prospects for the next couple of years.</td>
</tr>
<tr>
<td>(+) FB10</td>
<td>Young and abundant workforce with high potential for employability – 66% of the population is under 35 years (BID, 2018; Masi &amp; Borda, 2011; Rediex, 2018).</td>
</tr>
<tr>
<td>(+) FB11</td>
<td>Flexible labor legislation – some labor relations are agreed between employer and employee and different formats of staff hiring (by day, task, specific service, etc.) are possible. The weekly workload is of 48 hours. Companies can establish their own benefit policies. Maternity leave of only 6 weeks, paternity leave of only 2 days, 12-business-day vacation for employees with up to 5 years in the same company (30 business days for those with more than 10 years) – even though these last benefits provided by law can be considered very restrictive for workers, they contribute to competitiveness from the employer’s point of view (Cerqueira César, 2016; IOS, 2017).</td>
</tr>
<tr>
<td>(+) FB12</td>
<td>Urban population growth – migration of the rural labor force to urban areas (BID, 2018; CIA, 2018; Masi &amp; Borda, 2011).</td>
</tr>
<tr>
<td>(+) FB13</td>
<td>Low union pressure.</td>
</tr>
</tbody>
</table>
Facilitated entry into European markets due to SGP+.

Proximity to the largest markets in South America – Brazil and Argentina – and open access to them due to Mercosul.

Central geographic position, what facilitates the creation of a distribution hub for Latin America.

Competitive disadvantages

The minimum wage is relatively high for the region.

Low quality of the electric power supply – the percentage of companies reporting electricity cuts is 83%, whereas Latin America and the Caribbean average is 62.5% – and transmission and distribution networks are not appropriate. Government controls electricity tariffs through a state-owned enterprise (ANDE). The quality of electricity supply ranks 119 out of 137 countries.

Tax exemptions and incentives to promote the industrialization have benefited only a limited number of companies (Masi & Borda, 2011).

VAT recovery is in the format of Tax Credits, i.e. the company first pays for it, and later obtain a tax relief.

Smuggling, large black market and lack of corruption-free environment for businesses deter many foreign investors from entering into Paraguay, as well as the excessive Government bureaucracy. Some regulatory gaps restrict the investors protection.

Paraguay is still a commodity-based market vulnerable to international prices. Banking system is vulnerable, capital and financial markets are underdeveloped and operations financing costs remain high. Public debt has been recently expanded to finance infrastructure improvements. Lack of long-term financing.

Few agreements with external partners, especially outside the region – by 2015, the country had only 13 trade agreements with regional partners and 2 outside the region, with India and Israel. Paraguay is still considered moderately free and ranks only 82nd in the world.

Guaranteed stability for workers with 10 years or more of uninterrupted work with the same employer – employees can only be fired for some specific reasons.
(-) FB12. Many cities still linked to rural cycles though. Large informal sector in the labor market – by 2015, about 80% of the economically active workforce were underemployed, one of the highest rates in Latin America and the Caribbean – with lack of minimum wage payment and impact to both social security system and coverage of labor laws (BID, 2014, 2018; Cerqueira César, 2016; CIA, 2018; Heritage, 2018; IOS, 2017; Library of Congress, 2005; Masi, 2016).

(-) FB13. It is required registration of unions and a 300-worker minimum to form it. Still, the number of unions is not low – around 1,600 and 15% of workers are members of them (Library of Congress, 2005).

(-) FB14. High costs of international access as a consequence of geographic condition (BID, 2014).

(-) FB15. Considerable dependency of those markets and vulnerability to any adverse events in them. The informal trade along the border with Argentina and Brazil remains a problem. Besides, the Paraguayan market is very small to absorb production surpluses (BID, 2014, 2018; Masi & Borda, 2011).

(-) FB16. Logistics and infrastructure are very restrictive and deficient – Paraguay shows one of the lowest qualities of transport and logistics infrastructure in Latin America and the Caribbean. “Infrastructure” dimension ranks 118 out of 137 countries in the world (BID, 2014, 2018; CIA, 2018; Heritage, 2018; Masi & Borda, 2011; World Economic Forum, 2017).

- Lowest road density in the region and only 10% of the network is paved. Quality of roads ranks 131 out of 137 countries (BID, 2014, 2018; Encyclopedia Britannica, 2018; World Economic Forum, 2017).
- Low intermodal integration (BID, 2018; Trepowski, Martinez, & Romero, 2014).
- River dependence for outflow to the sea and navigability and regulation of waterways issues (BID, 2018).
- Dependence on land transits and fluvio-maritime transshipment operations in neighboring countries due to central, but isolated geographic position (BID, 2014).
- Existence of only 11 airports, out of which just 2 are suitable for international economic activity. Quality of air transport infrastructure ranks 132 out of 137 countries (BID, 2018; World Economic Forum, 2017).

B) “Maquila regime”

B1) Competitive advantages (+)

(+) FB1. Suspension of all taxes and duties, through a temporary admission process, on imports of raw materials, inputs and capital good (BID, 2018; CEMAP, 2018; Rediex, 2018).

(+) FB2. Low tax burden on the value added to production within the Paraguayan territory – one single tax of only 1% (BID, 2018; CEMAP, 2018; Rediex, 2018).

(+) FB3. Exemption from any other national, departmental or municipal taxes, such as some custom taxes, consular fees, port (50%) and airport taxes, etc. (CEMAP, 2018; Rediex, 2018).

(+) FB4. Exoneration of specific taxes, such as patents to industries, construction tax related to the industrial plant approved in the Maquila Program, etc. (CEMAP, 2018; Rediex, 2018).

(+) FB5. Flexibility to access other Paraguayan incentives (such as Law 60/90) simultaneously to the “Maquila regime”, which does not require exclusive framing.

B2) Competitive disadvantages (-)

(-) FB1. Prior assumption for DNA is requested in the form of mortgage guarantee, pledge, bank guarantee, cash, insurance policies or warrant (CNIME, 2018; Decree of 2000; Maquila Law of 1997; Rediex, 2018).

C) Textile-apparel sector

<table>
<thead>
<tr>
<th>C1) Competitive advantages (+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+) FC1_ Tradition, historical importance to Paraguay and dynamism – it is still the third most relevant sector for the national manufacturing activity (Masi, 2016; AICP, 2018b).</td>
</tr>
<tr>
<td>(+) FC2_ Representativeness in terms of industrial units (21% of the total in 2010) and labor generation (13% of the total industrial workforce in 2010), reflecting the appeal to both entrepreneurs and workers (Decree of 2016; Masi, 2016).</td>
</tr>
<tr>
<td>(+) FC3_ Contact with products, raw material and inputs from all over the world, which can circulate within the national market due to Paraguay trade opening (Vargas, 2012).</td>
</tr>
<tr>
<td>(+) FC4_ Among the sectors with preferential access to European Union due to SGP+, the textile-apparel stands out – import tariffs decrease from 12% to 0% and it represented 18% of the total imports made by the Common Market in 2015 (Rediex, 2018).</td>
</tr>
<tr>
<td>(+) FC5_ Open access to the largest markets in South America – Brazil and Argentina (Vargas, 2012).</td>
</tr>
<tr>
<td>(+) FC6_ Sectorial coordination and representativeness through AICP.</td>
</tr>
<tr>
<td>(+) FC7_ Industrial competitiveness enhanced by Decree Nº 4746 from 2016.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C2) Competitive disadvantages (-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(-) FC1_ Drop in the participation of the textile-apparel sector in industrial GDP – 3 percentage points in 10 years – at the same time that other industries have gained space, such as the agri-food (Masi, 2016).</td>
</tr>
<tr>
<td>(-) FC2_ Fall in the interest in industrial jobs by labor force.</td>
</tr>
<tr>
<td>(-) FC3_ The sector is deeply impacted by smuggling and black market. Still, its mindset is more oriented to imports than exports (Masi, 2016; Vargas, 2012).</td>
</tr>
<tr>
<td>(-) FC4_ Few bilateral trade agreements promoting textile products with the rest of the world. Paraguay is dependent on SGP+ and still “closed” within Mercosul – even though it admits unilateral concessions of countries without compromising reciprocity (Vargas, 2012).</td>
</tr>
<tr>
<td>(-) FC5_ Lack of stronger State impulse and focus on sectoral exports (Vargas, 2012).</td>
</tr>
<tr>
<td>(-) FC7_ Lack of law enforcement and involvement of institutions. Some benefits still need to be put into practice.</td>
</tr>
</tbody>
</table>

Table: Full list of competitive advantages and disadvantages in Paraguay, “Maquila regime” and Paraguayan textile-apparel sector.
### APPENDIX 6

| Interviewee | BPA | BPA | BPI | BPI | BPI | BPI | BPI | BPI | BPI | BPI | BPI | BPI | BPI | BPI | BPI | BPI | BPI | BPI | BPI | BPI | BPI | BPI | TOTAL |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| ACP         | X   | X   | X   | X   | X   | X   | X   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 7    |
| BCP         | X   | X   | X   | X   | X   | X   | X   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 5    |
| COPB        | X   | X   | X   | X   | X   | X   | X   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 6    |
| CTDAP       |     |     |     |     |     |     |     | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 1    |
| CEMAP       |     |     |     |     |     |     |     |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 8    |
| CNMME       |     |     |     |     |     |     |     |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | 11   |
| DNA         |     |     |     |     |     |     |     |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    | 9    |
| DOCE        |     |     |     |     |     |     |     |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    | 3    |
| DINA/IRA    | X   | X   | X   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 3    |
| Embajada de la República del Paraguay |     |     |     |     |     |     |     | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 1    |
| INTPN       |     |     |     |     |     |     |     |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 7    |
| IPS         |     |     |     |     |     |     |     |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    |    | 8    |
| MAG         |     |     |     |     |     |     |     |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    |    | 7    |
| MGC         | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |    |    |    |    |    |    |    |    |    |    |    | 17   |
| Ministerio de Hacienda |     |     |     |     |     |     |     |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |    |    | 16   |
| MEC         |     |     |     |     |     |     |     |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |    |    | 1    |
| MGE         |     |     |     |     |     |     |     |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    |    | 4    |
| MISPRES     | X   | X   | X   |    |    |    |    |     |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    | 5    |
| MINSA      |     |     |     |     |     |     |     |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    | 7    |
| Prefectura  |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    | 3    |
| REDDIX      | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   | X   |    |    |    |    |    |    |    |    |    |    |    | 10   |
| SEMA        | X   | X   | X   |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    | 7    |
| Secretaría Ejecutiva del CNMME |     |     |     |     |     |     |     |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    |    | 2    |
| SENAESA     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    | X  |    |    |    |    |    |    |    | 1    |
| SET         |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    |    | 4    |
| SINAFOCAL  |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    |    | 1    |
| SNIIP       |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    |    | 5    |
| STP         |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    | X  |    |    |    | 3    |
| SUACE       | X   | X   | X   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 4    |
| UEP         |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 6    |
| UVE         |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 7    |

Table: Host-country institutions mentioned by interviewees during data collection.  
Source: elaborated by the author.
## APPENDIX 7

<table>
<thead>
<tr>
<th>Institution</th>
<th>Is it a formal institution by North (1990)?</th>
<th>Does it play a coercive role as posed by Scott (1995)?</th>
<th>Justification</th>
</tr>
</thead>
</table>
| Secretaría Ejecutiva del CNIME                   | Yes                                       | Yes                                                  | - It is a regulatory body of the “Maquila regime”.  
- It defines rules.  
- It is ensured by a legal framework (Law N° 1064 and Decree N° 9585).  
- It approves or denies imports and exports |
| DNA                                              | Yes                                       | Yes                                                  | - It regulates the entry and exit of people and goods in Paraguay.  
- It sets rules.  
- It seeks compliance with the Customs Code, what is based on a legal framework (Law N° 2422 of 2004 and Decree N° 4672 of 2005). |
| VUE                                              | Yes                                       | Yes                                                  | - It enforces exporters to be registered and execute exports procedures in it.  
- It defines rules.  
- It is ensured by a legal framework (Decree N° 7290 of 2006), which allows the application of VUE. |
| DGCE                                             | Yes                                       | Yes                                                  | - It regulates the issuance of certificate of origin.  
- It sets rules.  
- It ensures the origin of the product both to be exported and imported and the fulfillment of the origin by request of customs overseas. |
| IPS                                              | Yes                                       | Yes                                                  | - It regulates the social security system in Paraguay.  
- It defines rules.  
- It is ensured by a legal framework (Decree 17071 of 1943 and Decree-Law 1860 of 1950). |
| MTESS                                            | Yes                                       | Yes                                                  | - It is a regulatory body for labor, employment and social security issues  
- It defines rules.  
- It ensures compliance with current labor regulations and the respect of workers’ fundamental rights (MTESS, 2018). |
| INTN                                             | Yes                                       | Yes                                                  | - It is a certification body and attest conformity to national technical standards.  
- It defines rules for production and product lines.  
- It is ensured by a legal framework (Laws N° 862 of 1963 and N° 2575 of 2005). |
| SEAM                                             | Yes                                       | Yes                                                  | - It is a regulatory body for environmental issues.  
- It sets rules.  
- It issues environmental license, a mechanism to assign conformity with legal parameters. |
| Prefectura                                       | Yes                                       | Yes                                                  | - It can take on a regulatory character.  
- It sets rules.  
- It issues industrial patents and business licenses, mechanisms that may assign conformity with legal parameters. |
(continuation of Appendix 7)

| SET   | Yes | Yes | - It regulates taxation.  
|       |     |     | - It defines rules.  
|       |     |     | - It is ensured by a legal framework  

| AICP  | Yes | Yes | - It authorizes the certificates of origin,  
|       |     |     | conducting a verification process over goods, production and exports documents  
|       |     |     | – and that can be considered a regulatory role.  
|       |     |     | - Even though it does not set rules, it can be considered a compliance mechanism because it can deter the certificates of origin for exports.  
|       |     |     | - SP1_F (6): The checking process is ensured by a legal framework (Ministerial Resolution N° 234 of 1991)  

| UIP   | Yes | Yes | - It issues the certificate of origin for exports, a mechanism to assign conformity with legal parameters.  
|       |     |     | - Even though it does not set rules, it can deter the emission of certificates.  
|       |     |     | - It is legally authorized by DGCE to play that role.  

Table: Formal constrains and coercive responsibilities.  
Source: elaborated by the author based on North (1990); Scott (1995).