SMEs foreign establishment decision-making: a multiple-case research of internationalisation strategies in the metallurgy and metal-mechanic industry

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Abstract: This research aims to untangle the decision-making of Portuguese firms in their selection of overseas host-markets. Herein, a theoretical review will cover both the decision-making and internationalisation theory. Restricted to a target population of SMEs, the empirical testing is focused on the areas of risk-perception and the pace of commitment, and is therefore, a multiple case design comprising a representative sample of the different segments of the sector. The research follows a post-positivistic rationale aligned with its descriptive-evaluative purpose, combining the collection of contrived data and subsequent manipulation in a sequential explanatory mixed methods logic. Quantitative data from documentary analysis, is proceeded by qualitative data from interviews to the strategic apex of the case-firms, coded through content analysis. Results demonstrate that commitment decisions follow distinctive risk-profiles, influenced by a dyad of Ricardian comparative-advantage factors and public policy' practices impacting directly on cross-border establishment decisions.

Keywords: decision-making; foreign establishment; internationalisation; commitment; market-entry; pace of commitment; risk; transnationality index; TNI.

Reference to this paper should be made as follows: Abrantes, B.F., Preto, M.T. and António, N. (2020) 'SMEs foreign establishment decision-making: a multiple-case research of internationalisation strategies in the metallurgy and metal-mechanic industry', *Int. J. Management and Decision Making*, Vol. 19, No. 3, pp.364–390.

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1 Introduction

The internationalisation-related research has historically centred on large-firms rather than small and medium enterprises (SMEs) (Ciravegna et al., 2019; Wolff and Pett, 2004). Conversely, this research has its foci upon the internationalisation of SMEs regardless of the classification of the internationalisers (entrepreneurial, serendipitous or strategic), and their decision-making towards market-entry. In fact, this research emphasises dissimilar *market-entry modes* (MEMs), and internationalisation strategies in the light of Zahra and George's (2002) key-dimensions of degree, scope and speed of internationalisation (Schwens et al., 2018; Schellenberg et al., 2018). Moreover, this research pursues a fairly unexplored research gap, since prior studies on the internationalisation of SMEs, namely, those within the context of Portuguese firms in transactional economic sectors are quite scarce. This would include in the ones on the metal-mechanic industry (MMI), even though SMEs constitute the backbone of the MMI, representing the vast majority of the companies in the sector.

1.1 Initial problematisation and research aims

Official data from Statistics Portugal (2015) and AICEP (2017) indicate that Portuguese firms concentrate on markets of greater proximity to the Euro-zone, as exports to Spain, France and Germany account for 46.9% of all international trade, while direct investment to Spain and Netherlands accounts for 58% of the overall. Surprisingly, data also demonstrates that the Maghreb countries, despite their geographic proximity remain

unexplored. On the other hand, countries of greater geographical distance, even though members of the community of Portuguese-speaking African countries and/or members of the Community of Portuguese-Speaking Countries (CPLP), demonstrate elements of both, trade and foreign direct investment (FDI).

Such data led to the extrapolation of internationalisation patterns and subsequent initial problem-shaping for its comprehension. Firstly, within the context of the Portuguese firms, internationalisation decisions seem to follow a binary-based decisional algorithm that 'juggles' only these two variables, i.e., geographical distance (GD) and psychic distance (PD). Secondly, official data reveals, that the Portuguese firms that compete in the foreign markets mostly are confined to both, geographical and psychic proximity. This scenario led us to focus on the topic of internationalisation paradigms of Portuguese firms (IPPFs) and to focus on this particular angle (foreign establishment) restricted to the subset of SMEs, and thereafter formulate the subsequent problem statement: *the asphyxiation of international activities determined by a biased decisional architecture of choice*.

Therefore, in order to explore this initial problematisation, and to fulfil the current gap and deliver a meaningful contribution to the industry (MMI), a set of goals were then formulated: aim 1 (A1) to unravel the internationalisation paradigm of the participating SMEs; aim 2 (A2) to illuminate the rationale for the GD or PD foreign establishment; and, aim 3 (A3) to grasp the adherence of the MMI firms to the NMC. A general aim (A1) attempts to uncover the reasons for the establishment of firms across borders, while the remaining aims (A2 and A3) provide cumulative insights for a broader response to the previous ones. Based on these, a theoretical review is divided in two parts. The first addresses the complexity of decision-making and the complexity of the business environment (BE). The second part, centres itself on internationalisation models, travelling through the spectrum of neoclassic to post-modern. In the empirical part, a multiple case research design (type 4) is conducted upon four Portuguese SMEs of the MMI. A sequential explanatory mixed methods approach combines quants data of market entry, with exploratory qual data from open interviews to the strategic apex of these participating firms. Quants manipulation refers to the extent of market commitment (C), uncertainty-perception (U) and maximum tolerance to risk (R) of the MMI, and the qualitative data (qual) through content analysis (CA), follows the general analytical procedure of Miles and Huberman (1984) and the Weber's (1990) protocol applied to an axial codification system of internationalisation patterns (Strauss and Corbin, 1998; Gioia et al., 2013). Subsequently both were triangulated for confirmatory purposes. A broad overview of different internationalisation stages and of the different tempos through which firms operate unravels a heterogeneity in foreign commitment, despite, equivalent risk-perception profiles. The liaison to GD and PD is confirmed as a key component in decision-making. However, commitment is not a binary model of distance-weighting, as initially is misjudged at the problem-scoping, but a multifactorial equation accounting for three components of, competition traits are intertwined with public policies, for determining casuistically country-specific entry, pace and extent of commitment.

1.2 Background description

The Portuguese MMI it is not immune to the current sluggish growth of western economies, and the global interdependence of the markets. Hence, a national model of competitiveness (NMC) posits the concentration of equity investments in the

transactional industries and the structural re-adaptation of their firms to accommodate market volatility (Bento, 2010; Silva and Teixeira, 2013). This NMC's business philosophy reiterates the sophistication of business-models and portfolios, through a higher knowledge-base and technology incorporation in market competition. Although, the international business (IB) paradigms of the MMI firms seem to be fostered by a range of other factors and are not compliant solely to the NMC rationale or to the GD/PD phenomena.

Prior research on this sector and on this country has identified the case of the firm ADIRA where the main factors influencing moving abroad were the effective size of the market connected with a national crisis (Menéres, 2015). The firm pursued a risk-avoidance (RA) investment path with preference for markets of a closer cultural and linguistic proximity in the South American region, kick-started by a joint-venture in Brazil. Another study, claimed the virtues of vertical integration over a sourcing model in the middle-sized firm COLEP, materialised in a more positive balance of benefits/ hazards than the first model. It is grounded on higher internal efficiency, surpassing the mere transactional costs' benefits (Ferreira et al., 2008). In addition, Pereira (2016) observed other SMEs of the Portuguese MMI (SANOFI and ARUM) and argued that internationalisation is a phenomenon which is path dependent of inward internationalisation. Here, referring to the importance of cooperation, networking, and relationship-building strategies, the author posits inbound activities (e.g., as procurement and purchasing), which may influence the outward trade and foreign investment. Across the border, Zayas (2001) emphasises the importance of technological advances undertaken in Spain namely in more technological segments (e.g., fabrication of motor engines) which were decisive for the capturing of external investment, and subsequent external growth. On the contrary, fewer technological products such as basic iron and steel and metallic parts lost dynamism, due to the internal competition-base of local and multinational companies (MNCs). A deficit of technological change in the Spanish market has been compensated by the large-scale importation of technology, with the country maintaining a dependence on foreign acquisitions for technological upgrading.

2 Literature review

2.1 Decision-making and environmental complexity

Relatively simplicity in decision-making are single criterion problems, as the choice among alternatives is circumscribed to the highest rating of the unique selection criterion. These contrast though with the multiple criteria decision-making (MCDM) which increase the complexity of decisions due to the weighting of criteria, preference dependence and criteria conflicts (Antoniou and Aretoulis, 2018). Moreover, managerial decision-making is asserted by behavioural researchers as lacking in full rationality (Tversky and Kahneman, 1979). From the beginning, decisions are indiscriminately biased due to the cognitive limitations of human beings intertwined with scenarios of partial information (Simon, 1979). Invariably, individuals fall into an endowment effect, as they tend to value intuitively some factors over others, according to the extent of possessed pre-established knowledge over both (Thaler and Ganser, 2015). In consequence, decisions are intended to be rationalised and supposedly objective, while decision-makers might not necessarily be so. However, Moshkovich and Mechitov

(2017) assert that the inevitable weighting of alternatives and the establishment of preferences as to the decision of the relative criteria importance and attractiveness of alternatives, involves in turn the performing of antithetical comparisons, selection and prioritisation.

In this sense, the breadth of criteria may hinder the purpose of human objectivity; and additionally, configure a difficult-to-measure or intangibility of some decisional components with unclear design and a subsequent difficulty in comprehension. Furthermore, the layers of analysis of such topics may comprise of a plethora of mechanisms of cognition, ranging from criteria definition, information gathering, interpretation of data, prioritisation, management of options, until the judgment-making (Saaty, 2008; Blumenthal, 1977; Cyert and March, 1963). Thus, decision-weighting has an inherent dimension of gains and losses, referring to the risks to probable outcomes and indisputable complexity (Alessandri et al., 2018). This type of perspective with its inherent flaws primary focus on economic goals, has its foundations in the behavioural agency model (BAM) which posits that attitudes regarding risk are dependent on the framing of positive and negative problems and the salience of reference points.

In addition, decision-makers are loss-averse and this gamble balances though gains and losses comprising inevitably both dimensions, which means that strategic decisions rarely involve either win-win or lose-lose potential outcomes, but instead, encounter a risk return trade-off of mixed gain and loss of value, in which the reference points for future decisions are the near-past and present accountability of earnings (Alessandri et al., 2018).

Yet, decision complexity lays not solely in the process, i.e., intrinsic complexity, but in the unpredictability of the surrounding ecosystem (extrinsic complexity). This interplay of both dimensions, the object of cognition and the outer realm refers to an intricate combination of decision dilemmas (Grant, 2016). Thus, bottom-line executive business decisions, with regard to foreign-entry market selection may be outlined as a Quintilian hexametric dilemma (what to internationalise; where to, how to, when to, and why to).

The extrinsic complexity hitherto unexplored, definable as an unpredictable ecosystem of direct and indirect forces broadening the decisional challenges, it accounts cumulatively three different categories of environment challenges:

1 industry-related (direct) forces

2 social forces

3 irreconcilable academic perspectives between scholars.

First, at industry-level these refer to: growing interdependence of value systems and value chains; volatility of life-cycles and business relations; growing knowledge-based hyper-competition; excess capacity of some firms; commoditisation of products/services; intra-industrial convergence/divergence of industries; the unprecedented number of mergers and acquisitions; constant technological disruptive advancements; platform-based competition; banalisation of black-swan occurrences; and, the accelerated growth of new digital ventures evolving towards the uprise of a second economy (Arthurs, 2011; Silva and Teixeira, 2013). The second category of environmental dilemmas are the social forces: the appeal of sustainable triple bottom-line business archetypes; anti-globalisation movements; the judgment of social legitimacy of the organisations; the increasing demand for value sharing of economic rents; and, the

demand for shifting profit-orientation towards options-orientation. Finally, a third category relates to the research and contribution of academics, defying organisational practices as business research evolves and new internationalisation models are conceptualised and constantly tested.

2.2 Internationalisation and market-entry

The notion of internationalisation encompasses the building of insidership within a web of general relations (Yamin and Kurt, 2017). This definition incorporates the embryonic stage of internationalisation (market-entry) which comprises entry-decisional challenges with dichotomous contours regarding the equation of the components of risk and pace. Such challenges refer to the *MEM* as governance options of firm-level structural agreement for deploying business and operations abroad and their initial establishment overseas (Schellenberg et al., 2018). However, the benefits and challenges for the internationalisers are associated with a risk-return trade off, as a gamble between gains and losses for the firm's social-economic wealth (SEW) varying with the strategic choice of the internationalisation models which are determinant for the maximisation of present and near-future economic rents (Alessandri et al., 2018).

The accounting of entry-decisions seems to be guided, as to the perception of risk, by extrinsic drives related to the morphologic attributes of the network of relationships (Yamin and Kurt, 2017). Thus, a set of societal and environmental aspects, such as culture, technology, government regulations and industrial structure are mostly accounted on the foreign-market analysability (Álvarez et al., 2016). Here, the national and industrial barriers related to aspects such as foreign equity limits, discriminatory licensing practices, controls on foreign management, threat of nationalisation and other political risks are among the most substantial risks, in which relational capital supports the mitigation of bumpy market-entries and facilitates its continuity, namely by supporting on the evaluation of potential partners and strengthening contractual agreements (Yayla et al., 2018). Hence, both structure and positional factors determine the extent of: the relational capital; firm's influence; and power distribution; which in turn dictate the type of affiliation and depth of insidership/outsidership in a marketplace, and institute the 'foreignness' tag of exclusion and/or entry-failure of the firm (Yamin and Kurt, 2017). Conversely, significant levels of relational capital are perceived as enhancers of strategic flexibility for entry, expansion, exit and re-entry under turbulent conditions (Yayla et al., 2018).

The traditional *outside-in* logic of internationalisation which is seriously focused on the foreign location attractiveness of the network and the willing to override the liability of foreignness at the entry-stage, tends to ignore the *inside-on* potential to explore the willingness of the insiders to establish relations with new-entrants and the increasing fragmentation of the values chains (Álvarez et al., 2016). In this model (inside-on) the emphasises is on *market orientation*, as an organisational mindset towards the stakeholders needs (Yayla et al., 2018). Here, is relevant the foci upon the cognitive intrinsic drives of internationalisation, namely the bundle of organisational capabilities to a country-specific context, with which it leverages an interactive process of learning of mutual benefit with the network insiders, where the social capital exchanged (knowledge-disseminated) leads to higher relationship building, which mitigates the

liability of foreignness and the outsidership of the firm, and elicits network-relations beyond country-specificities (Yamin and Kurt, 2017).

As for timing of internationalisation, the firm is classified as to the pace of foreign-entry as a fast or slow-internationaliser [Lukason and Vissak, (2016), p.68]. Fast, as early-global spreaders, slow as incremental-design followers, associated with a constructivist logic of international-establishment. We would argue however for a much more complex approach. First, the dynamism of the markets cannot be simplified to a binary decision in terms of a velocity-factor. Second, pace is not a discrete variable, instead is determined by uncertainty and risk-perception (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977). Third, market-entry (and MEM) is not dictated solely by market knowledge ability and external context, but dependent upon internal determinants of the firm, observed in the models of advantage-exploitation (e.g., the eclectic paradigm), or hybrid strategies of stabilisation-growth (e.g., the Casino model) (Håkanson and Kappen, 2017; Dunning, 1991). Four, the disparate nature of the economic activity across industries encounters dissimilar cross-border challenges, such as, to the transactional costs-structures, resources pre-emption, comparative-advantage position, and/or value-addition (Grant, 2016). Finally, as argued by Schellenberg et al. (2018), firms are confronted, with regard to MEMs options, with a plethora of theorisations, of eclectic nature, from multiple research fields hindering the decisional processes as to the adoption of an internationalisation model. Therefore, here we reduce them to a more manageable number of categories (Table 1).

Table 1 Clustering of internationalisation models

Perspective	*Models/authors*
Process	I-models; U-model; integrative model; casino model (Andersen, 1993; Johanson and Vahlne, 1977; Welch and Luostarinen, 1988, in Lukason and Vissak, 2016; Håkanson and Kappen, 2017)
Network and entrepreneurship (N&E)	Network approach; finish model; business network internationalisation process model; entrepreneurial process model; effectuation process (Johanson and Mattson, 1988; Coviello and Munro, 1995; Holmlund and Kock, 1998; Johanson and Vahlne, 2009; Schweizer et al., 2010; Sarasvathy, 2001)
Capabilisation and competitive advantage (C&CA)	MBE evolution model; dynamic internationalisation capabilities model (Prange and Verdier, 2011); global capabilisation model; OLI model; effectuation process (Vahlne and Johanson, 2013; Griffith and Harvey, 2001; Dunning, 2001)
Nonlinear (NL)	Serial nonlinearity (Lukason and Vissak; 2016; Vissak and Francioni, 2013)
Born-global (BG)	BGs/born-again global (Sheppard and McNaughton, 2012; Gabrielsson et al., 2008)

Source: Own elaboration

The process perspective rests upon a rationale of RA which moderates market commitment decisions. At the root of this perspective is the Uppsala model which in the 1970s testing the Swedish firms observed a gradualist pattern in their positioning abroad related with the mitigation of risk (Cyert and March, 1963; Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977). This Uppsala model (or U-model) outlines an external establishment by stages towards risk-taking, articulating a system of

relations between knowledge (K), perceived risk (R) and uncertainty (U). The choice of foreign markets is centred in the ones with higher psychic and geographical proximity for avoiding risk. Market commitment starts with less risk through occasional exports; then having a representative for managing a more relatively stable framework contracts; then the establishment of a sales subsidiary; and finally, a production subsidiary. This incrementalism equates proximity, in which firms established from more familiar and closer to more distant and unfamiliar ones. However, the appearance of other models, more accelerated and less dependent on risk-control, challenged the U-model (Henrekson and Johansson, 2010; Kim and Maugbourne, 2011; Gabrielsson et al., 2008; Holmlund et al., 2007; Coviello, 2006; Zahra et al., 2000; Oviatt and McDougall, 1999). The quest for novelty in markets challenged the U-model, with alternative approaches emerging, the I-models and an integrative model (Johanson and Vahlne, 2003; Gemser et al., 2004; Sørenson, 1997).

The network perspective refers to as an upsurge of other forms of establishment, repositioning, and expansion, as industrial clusters, business-networks or digital/ platform-based models) rejecting the process perspective to envision borderless business-relations, driven by an entrepreneurial mindset (Håkansson and Ford, 2002; Johanson and Vahlne, 2003). Risks in foreign markets were devalued in place of relationship and trust-building development, further opportunity-seeking, and formation of social capital and intellectual capital stocks (Roza et al., 2011; Tiwana et al., 2010; Schweizer et al., 2010; Ågerfalk and Fitzgerald, 2008; Johanson and Vahlne, 2006; Sarasvathy, 2001; Sørenson, 1997; Morgan and Hunt, 1994; Porter, 1985). The intra-firm mechanisms of cooperation such as the Chinese *Guanxi* has reinforced the virtues of the network competition mode (Johanson and Mattson, 1988; Coviello and Munro, 1995; Holmlund and Kock, 1998; Forsgren, 2002; Cross and Prusak, 2002; Coviello, 2006; Holmlund et al., 2007; Schweizer et al., 2010).

There are many scholars asserting an internationalisation model grounded on capabilisation and advantage-formation. Some argue the virtues of developing within the firm, capability-bundles for attaining competitive advantages as a mediator for international success. Others, emphasise the importance of the control, and the pre-emption of external resources (Baillie et al., 2013; Gassman and Keup, 2007; Prange and Verdier, 2011). It is also advocated a cross-observation of resources and capabilities (R&C) of the firm and its competitors to pinpoint the potential for ownership, location and internalisation (OLI) CAs' formation, as described by Dunning's (2001) eclectic paradigm, and/or to identify subsequent Ricardian revealed comparative advantages (RCAs) (Widodo, 2009). Resource-based theorists contend that CAs are attained by the formation of valuable, rare, hard-to-imitate and non-substitutability (VRIN) of R&Cs (Grant, 2016; Dunning, 2001; Barney, 1991). Yet, some theorists advocate an internationalisation logic based on dynamic capabilities (DCs) which have higher propensity for long-lasting CAs as they are able to reconfigure or renew themselves and influence third parties (combinative capabilisation). Yet, Prange and Verdier (2011) argue that long-term advantages in international competition requires ambidexterity, in which, the firm is required to be able to manage international exploitation processes and international exploration processes, which are dependent on the possession of threshold capabilities and consolidation capabilities in the first (international exploitation processes), and value-adding and disruption capabilities in the latter (international exploration processes) (Prange and Verdier, 2011).

At the opposite end of the process perspective appears the fast (or early) internationalisers, i.e., the born-global (BG) firms, with a universal market potential realised through worldwide entrepreneurial-driver actions, and although more exposed to uncertainty, risk, requiring higher adaptation to routines and process in their new environments (Ciravegna et al., 2019; Schwens et al., 2018; Gabrielsson et al., 2008). At an entry-stage, these BGs not constrained to incrementalism, are classified as firms with an external vocation to other continents representing 1/2 of their revenue (Luostarinen and Gabrielsson, 2006). In this group would be included SMEs only those with remarkable features. First is the dependence of a resource-base (internal or external resources) at all categories of BG-SMEs (i.e., the pure global market visionaries; the born-again globals; the inward internationalisers, and more slowly internationalised SMEs) to attain both, global geographical coverage and business success (Oviatt and McDougall, 1999). Second, the range of international coverage of BG-SMEs is affected by the *Smithian* and *Ricardian* absolute and relative comparative advantages (dimension and location) of the home-market and its economy (Gabrielsson et al., 2008). Despite being influential, the latter macro-economic competing theories are not deterministic forces, as recent research conducted by Ciravegna et al. (2019, p.328) have argued that "…market size is an important driver, it does not per se explain that firms will internationalize early or intensively." Moreover, as firms are primarily driven by economic goals, the trade-off between SEW and financial wealth of the internationalisation is regarded as a critical factor in shaping foreign establishment (Alessandri et al., 2018). Such a positive relation between international performance and the degree of internationalisation, which is also advocated by other authors, or even between related variables such as productivity and global market presence (Schwens et al., 2018; Ribau et al., 2018; Li et al., 2012). Nevertheless, factors such as size and location shape the typology of BGs, through a dual path of function-orientation or image-orientation. Function-oriented BGs pursue an expansion path across a large number of markets, while the image-oriented BGs target fewer but rather advanced economies (Jin et al., 2018). In such a context, international performance is argued also to be markedly influenced by the moderating role of the organisation's structure (or it lack) (Alessandri et al., 2018). The *true-BGs* are the successful performers, regardless of being either function or image-driven, who are able to keep their international growth-path either independently or through mergers and acquisitions in a process termed of *multinationalisation* or *micro-multinational* governance, while the BGs with limited success or failure tend to de-internationalise, retreat to the domestic market, or attempt to remarket as a BAG following in BG theory a reestablishment chain similar to the process perspective, as follows:

1 initial retreat to domestic-market

2 collection of support and re-dimension resource allocation

3 later return to internationalisation (implying as strategic shift to a global market vision repositioning and a foundation upon a process-like model) (Ciravegna et al., 2019; Gabrielsson et al., 2008).

Jin et al.'s (2018) research on seven Korean MNCs from the consumer goods industries seem to confirm this strategic change, since the post-entry growth patterns of these firms

account for risk-sensitivity aspects comparable to the PD and liability of outsidership phenomena.

Until this point, the MEM has portrayed an evolutionary or path dependent internationalisation antagonising with the accelerated internationalisation, providing a coherent (and arguably) rather polarised outlook of the existing entry-modes with regard to the velocity-factor, which is intertwined with a heterogeneous palette of options in terms of risk. Although, the non-linear perspective enlarged the breadth of strategic decisions and made more complex by the MEM options. Within the process perspective, a recent model (Casino model) argues that some firms deliberately implement strategies combining periods of stabilisation with periods of market development, as a wave-like pattern logic with a sinusoidal function (Håkanson and Kappen, 2017); however, the serial nonlinearity (SNL) argues an alternative approach. Here, internationalisation decisions are cumulatively sensitive to its own resource-base, to structure configurations, and to the activity knowledge. Moreover, they account for market specificities and attractiveness. In this sense, SNL resembles 'smart waves' of more unpredictable selective commitment within a portfolio of already established and prospective markets, in which various models imply the diverse usage of multiple combinations of MEM and post-entry patterns (Jin et al., 2018).

3 Methodology

The Portuguese MMI has recently grown 0.2% in 2016 resulting in an annual turnover of 14.596 million Euros being the largest national exporter of domestic products (AIMMAP, n.d.). The sector encompasses 9.7 thousand companies, the majority of which are micro and small companies (72%) and accounts for 2% of the totality of companies in the country, justifying the approach of this research (SMEs). In the year 2015, with a gross revenue of 14.53 million euros the sector already represented already 7% of the all turnover generated in the secondary sector, employing 6% of the total active population in the country and weighted one fourth of the aggregate of the manufacturing industries. The variation of the number of companies remains almost unaffected (grew by 0.1%) and since the difference between the birth and death rates continued below 1%, which is in line with all the manufacturing industries.

Table 2 Distribution per segments

Segment	*Firms*		*Revenue*		*Employment*	
	f	*%*	*f**	*%*	*f'***	*%*
Basic metallurgic	291	3	1.598	11	4.05	4.8
Metallic and electrical products	8,749.4	90.2	7.701	53	60.73	72
Transport equipment	659.6	6.8	5.231	36	19.57	23.2

Notes: *billion of Euros (€); **thousand of employees.

Source: BdP (2017)

As can be seen from Table 2, the segment of metallic and electrical production sector represents the majority of the firms in the sector accounting for more than 1/2 of the turnover and almost 3/4 of the total employment. The transport equipment sector far

behind the prior, it represents 6.8% (the double of the basic metallurgic sector) and accounts for more than 1/3 of the sector revenue and almost 1/4 of employability. The sector exhibits a clear positive evolution with the earnings before interest, tax, depreciations and amortisations (EBITDA) showing a 28% rise from 2011 to 2015 with the exports representing in total 62% with an 8% upturn from the previous report (BdP, 2017).

A set of four small and medium-sized firms (Fn) constituted our targeted sample units (Guest et al., 2016; Saunders et al., 2009). With an aggregate annual revenue of 134.91 million Euros, these firms account for almost 1% (0.93%) of the revenue of the sector. Moreover, represent 0.04% of the organisational ecology in all segments, employing an aggregate of 350 people, 1.10% of the total active population of the MMI. The participating firms are distributed as follows: F1, F2 and F3 corresponding to segment 2 (metallic and electric products), while F4 to segment 3 (transportation equipment) (BdP, 2017). Two firm are medium-enterprises (F1 and F2) and the other two small-enterprises (F3 and F4). This distribution of small and medium case-firms follows the recommendations of sampling representativeness (Guest et al., 2016; Saunders et al., 2009). Table 3 shows information about the location and equity of all four firms.

Table 3 List of partaking firms

No.	*Location/headquarters**	*Equity*
F1	PT112 – *Cávado* Region	12.5 M€
F2	PT112 – *Cávado* Region	30 K €
F3	ES300 – *Madrid* Region	17.99 M€
F4	PT112 – *Cávado* Region	60 K €

Notes: *classification of nomenclature for territorial units for statistics (NUTS) (Eurostat, 2008; Statistics Portugal, 2015).

Source: Own elaboration

Based on the MMI's background data, the theoretical review and the research objectives, a set of operational research questions (RQs) were drawn of it: how is the internationalisation paradigm of the MMI? (RQ1); how do geographical distance (GD) and/or PD factors account for foreign establishment? (RQ2); are firms compliant to the NMC? (RQ3). Here the RQ1 aims to respond to the pace and typology of market commitment. RQ2 and RQ3 respectively to the risk-perception proxy, and to the sophistication of cross-border's competition. Taken together, these RQs seek further understanding on the IPPF's phenomenon, which constitutes the general aim of this investigation. In order to test RQ2 and RQ3 a collection of firm-specific data is undertaken, related to three parameters of the transnationality indexes (TNIs), from which two parameters (assets and employees) are utilised to determine the commitment-level. Subsequently, the TNIs and ratios of commitment, uncertainty and maximum tolerance to risk of the participating are then traced. Consequently, these tools are then combined with complex macro-environmental data. The latter accounts for the Ricardian national comparative advantage, comprised of the RCA and the revealed exporting advantage (RXA) of the national industry as ratios of international competitiveness. In this sense, primary and secondary data, firms (F1–F4) is cross-referenced to conduct a further discussion with regards with the RQs and aims.

4 Data analysis

4.1 Transnationality indexes

As can be seen from Table 4, primary data collected within these firms (F1–F4) focused on the standard internationalisation profile data, comprising the allocation of assets and employees abroad, and the obtained revenue.

Table 4 Allocation of resources and TNIs (F1–F4) of 2016 – millions of Euro (M €)

Firm	*Aa*	*TA*	*Ra*	*TR*	*Ea*	*TE*	*Parameters (n)*	*TNI*
F1	-	33.44	15.78	38.88	-	122	3	0.14
F2	-	94.18	57.94	89.28	-	185	3	0.22
F3	4.7	4.7	6.39	10.91	-	3	3	0.53
F4	-	2.59	2.1	3.04	3	40	3	0.26

Source: Own elaboration

According to the primary data obtained and combined with the usage of INDEG's (2014) RIEP or IRPC – Internationalization Ranking of the Portuguese Companies as a framework for observing the current commitment of the firm towards international markets, the TNI was calculated as to the participating firms to obtain their external representativeness profile in relation to other firms, as follows:

$$TNI_{(Fn)} = \frac{(Aa / TA) + (Ra / TR) + (Ea / TE)}{P} \quad (1)$$

At the TNI it was weighted the *assets abroad* (*Aa*), the *total assets* (*TA*), the *revenue abroad* (*Ra*), the *total revenue* of the firm per year (*TR*), the number of *employees abroad* (*Ea*) with a permanent offshore work location, and the *total employees* (*TE*) of the firm, and the number of parameters (*p*) of analysis being measured. For measuring the three parameters of the TNI calculation we used the data from the last civil year of 2016, taking into account the active, the operational cash-flows and employees.

Table 5 TNI – analysis of sample results and the RIEP

Factors	*Sample*				*RIEP*	
	F1	*F2*	*F3*	*F4*	*∑ (μ)*	*10 (x̄)*
TNI	0.14	0.22	0.53	0.26	-	-
Mean	0.29		0.33	0.73		

Notes: Based on the technical report of RIEP for the year 2016. The μ represents the population of firms assessed in RIEP's ranking. The '10' ($\bar{x}$) the average result of top ten companies with highest TNI.

Source: Own elaboration

Looking at the TNI ratios (Table 5) the results demonstrate a balance in ratios. First, the mean (F1–F4) of TNIs registers at a result below 42.42% of the average of the RIEP universe of 2016. Second, F1 accounts a ratio below the barrier of 0.20. This is an indicator of a low external market drive because the TNI ratios that are equal or below 0.20 uncover a domestic market-orientation (Collinson et al., 2017). Second, the cases F2

and F4 exhibit a TNI ratio of 0.22 and 0.26 respectively that is 10% and 30% respectively higher than the minimum breadth of 0.20. Third, F1 reveals a TNI of 0.14 which is 30.00% below the thresholds of 0.20 (which divides the low and moderate international orientation) and 57% below the average of the RIEP. Considering the six parameters of Table 4 (Ea; Ta; Ra; Ta; EA; TE) within the three dimensions (assets, revenue and employability), the results displayed in Table 5 are in firm F1 quite evident of an accentuated adherence to the transactional mode of internationalisation due to null AA and EA results and simultaneously the lowest RA/TR of 40,59%. The other two cases (F2 and F4) reveal low levels of investment abroad in AA and EA indicators, although the indexes are above the barrier of 0.20 due to a higher dependence of RA/TR. Thus, despite the RA figures of F1, and its presence in four different markets, the TNI indicator prescribes a symptom of procrastination of its external commitment. Therefore, it is critical to comprehend why the F1 with a high exposition and dependence on the external markets in its TR results is above 40%, may score low in TNI. A similar reflection can be extended to the other partaking firms. Therefore, it is critical to analyse the risk profile of the firms and their pace of commitment overseas.

4.2 Risk-level profiling and pace of commitment

For the determining the sensitivity to risk of the participating firms it was considered their current presence on the external markets at the entry phase (establishment) and the withdrawal phase (abandonment) (Johanson and Vahlne, 1977; Johanson and Wiedersheim-Paul, 1975). The foreign countries' entry dates are described below at the graphs containing the foreign establishments of F1–F4 through the use of the *Casino* model. Remarkably, the four sampled firms did not register any figures at the abandonment phase so far. For this purpose, a five-point *Likert* scale was used to illuminate the pair distance of local-host market and classifying it in terms of GD and PD, since these variables are determinants of market uncertainty (U) perception, which crossed with elements from the TNI index to determine market commitment (C) does allow the comprehension of the risk profile of each individual firm, as described below in these expressions:

$$\boxed{R_{(Fn)} = (Ui \cdot Ci)} \tag{2}$$

$$\boxed{C_{(Fn)} = \left[(Aa / A) + (Ea / TE)\right]} \tag{3}$$

and

$$\boxed{U_{(Fn)} = \sum (GD + PD) * n} \tag{4}$$

Thus, the internationalisation profile according to the risk perception profile of each firm, is determined by the following:

$$\boxed{R_{(Fn)} = \left[\left((Aa / A) + (Ea / TE)\right) + \sum (GPr + PPr) * n\right]} \tag{5}$$

The test adopted a proximity-perception scale equivalent to a Likert scale of five points with the measurement units varying from a polarity of very low (1-VL) and very high

(5-VH) with the descriptors of the MUs described at the Table 6. The range of the scale comprises a transitive principle where one is lower than two and three bigger than four and so forth. The measurement of host-markets per firm (F1–F4) it complies to the GD and PD dimensions.

Table 6 Classification of market-risk perception (GD/PD)

Factor	*Geo distance (GD)*				*Psychic distance (PD)*			
	F1	*F2*	*F3*	*F4*	*F1*	*F2*	*F3*	*F4*
Risk-level								
Very-high (VH)	-	1	-	1	-	2	-	2
High (H)	-	3	5	5	5	11	-	11
Medium (M)	-	1	-	1	-	1	5	5
Low (L)	4	10	-	10	-	-	-	-
Very low (VL)	1	1	3	4	-	3	-	3

Notes: GD (VH – share physical borders; H – within same administrative region, no physical border, border with a VH GD market; and/or possessing maritime border; M-physical border with a high GD market); L (others at the same administrative region); VL (rest of the countries); PD (VH – Portuguese-speaking countries or part of the *CPLP*); H – formal engagement with, as an EU state-member; M-countries with similar language – Spanish – members of the Iberian-American Community of Nations; L – low formal engagement or past vestiges with the Portuguese diaspora or Lusophone culture; VL – very limited formal/administrative engagement with the country and/or null vestiges of connection to the country.

Source: Own elaboration

The results in Table 6 reveal that F1 give preference to markets of high geographical and proximity, while F2 falls under the category of mostly low proximity but with a high PD. Inversely, F3 reveals no dependence whatsoever on GD and a moderate PD, and F4 reveals a predominance of L in GD and H in PD. The whole sample illuminates that the four cases fit the L tier in GD, and the H in PD, which means that companies give higher importance to markets of relative proximity and account for, at a moderate-low level the historical, cultural and linguistic connectivity to their host-markets. Moreover, we have correlated the market-risk perception using the GD and PD, and the TNI scores of the parameters AA, TA, EA and TE to obtain, respectively, an uncertainty (U) and a (market) commitment (C) ratio of the firms, following the U-model. For this purpose, we have used the results of the scale (as summarily displayed in Table 6), considering the GD and PD of each market (according to the scale) and obtained in Table 7.

Data in Table 7 exhibits similar figures across the sample. Market commitment is an indicator with larger heterogeneity with firms outlining divergent levels of concentration and modes of investment. Similarly, maximum tolerable risk indicator contains different tolerance to risk exposure. F3 reveals a clear dominance of U and R, despite observing the highest uncertainty ratio. Second, the test excludes zero-scoring parameters due to the absorbent characteristic of the null values. Third, uncertainty ratios may, according to the U-model, be interpreted as *moderate* according to the U-model descriptors of risk (≥ 0.66 – high-risk); $\leq 0.66 \geq 0.33$ (moderate-risk); and ≥ 0.33 (low-risk).

Table 7 Market commitment, uncertainty and max

Factor	*Ratio*				*Units of measurement*	
	F1	*F2*	*F3*	*F4*	*Central tendency ($\bar{x}$)*	*Dispersion var. ($\sigma 2$)*
Commitment (C) ratio	0.41	0.65	1.59	0.69	0.84	0.20147
Uncertainty (U) ratio	0.58	0.66	0.7	0.65	0.65	0.00186
Max. risk-tolerance (R)	0.24	0.43	1.13	0.45	0.56	0.10980

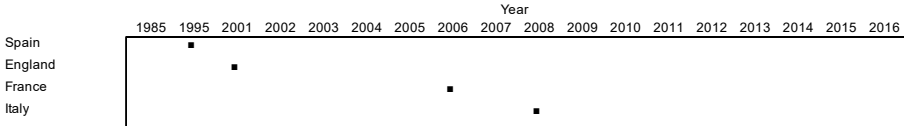
Notes: Tolerable risk (C, U and R) – sample results.

Source: Own elaboration

4.3 Patterns of foreign establishment

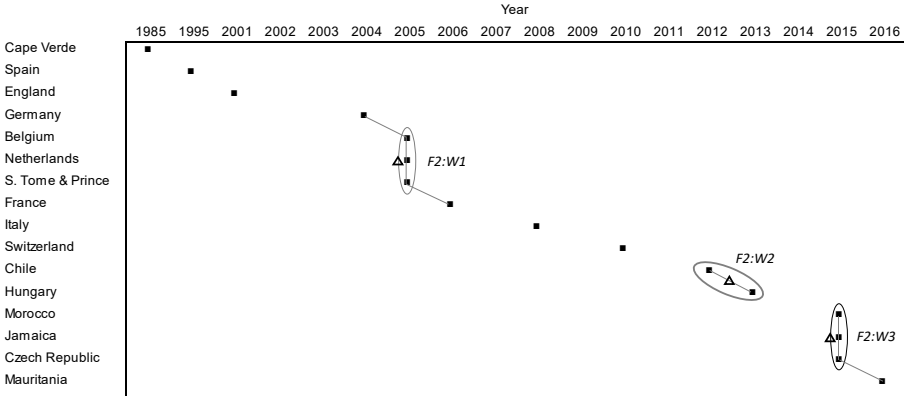
Complementarily, the replication of the *Casino* model's test allowed the comprehension of possible wave-like pattern logic lines regarding the international expansion decisions of the partaking firms. Here, it was considered the entry-year at each foreign market where the firms are represented. Figures 1, 2, 3 and 4 illustrate foreign expansion per firm, over thirty years' time length period comprised between 1985 and 2016. The dots represent entry dates and the lines (links between dots) represent a coincident date or a maximum one-year distance entry-date, signalling the adherence to a same business strategy cycle. The firm 1 (F1) it is represented in four markets, F2 in 16 markets, F3 in 5 markets and F4 in 18 markets. Waves-like patterns are marked with circles around linked dots.

Figure 1 Foreign establishments of F1



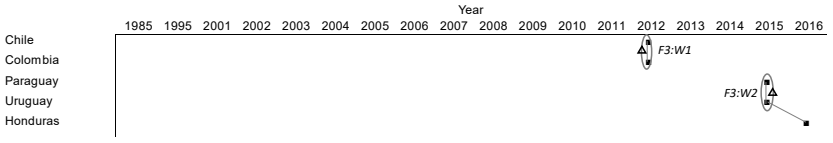
Source: Own elaboration

Figure 2 Foreign establishments of F2



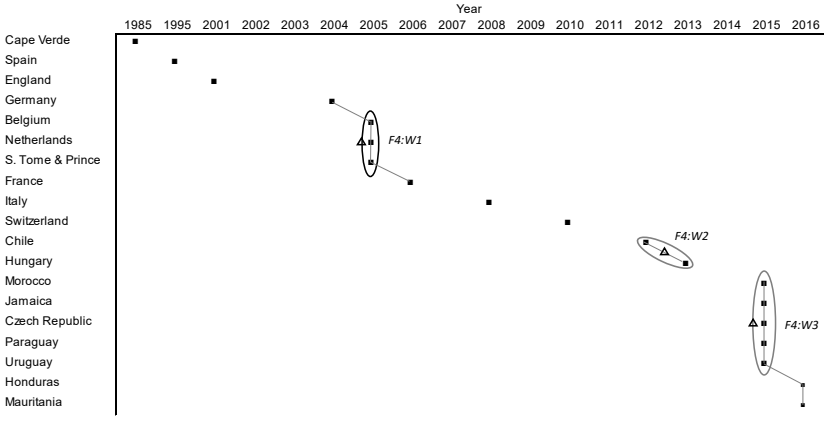
Source: Own elaboration

Figure 3 Foreign establishments of F3



Source: Own elaboration

Figure 4 Foreign establishment of F4



Source: Own elaboration

These figures uncover possible eight wave-like patterns of foreign establishments (F2 = 3; F3 = 2; F4 = 3). The firms F2 and F4 with longest international historical track, disclose higher relative frequencies (w = 3). The distance between waves for the aggregate of firms is 4.33 ($dw(x, y)$ = 4.33). The firms F2 and F4 register an average distance between waves of five years while F3 a three-year distance. At F1 it is observed null presence of wave-like patterns. The epicentre of the wave-like phenomenon is represented by the centrality points (Δ) at the coincident years or if the waves contains only non-coincident years, then the centrality point is represented by the middling point between the polar years at the opposing extreme years of the line.

Moreover, looking at the patterns of foreign establishment of the participating firms and crossing it with RCAs data against its main market destination we can observe in Table 8.

The Portuguese companies of the MMI sector seem to stumble into markets of geographical and/or psychic proximity to whom have not developed advantages, as both advantage indexes are generally lower than the majority of main markets both on trade (RXA) or by foreign investment (RCA). Looking at the Ricardian RCA ratios the Portuguese MMI sector, they exhibit an additional pressure on the selection of markets destinations, as no particular comparative advantages are perceived (RCA < 1) in contrast to other EU state-members or to the larger markets within the CPLP. Conversely, other markets within the EU and CPLP context exhibit those same RCAs. This indicates an intra-national circumstantialism of distress of the domestic-market's industry to generate competitive advantages towards other markets, which tops-up on the prior risk-related behavioural constrains attached to GD/PD phenomena.

Table 8 RCA – Portugal and other markets (MMI sector)

Categories	*Intra-EU*						*Extra-UE*	
	Portugal	*Spain*	*France*	*Germany*	*Netherlands*	*Italy*	*Angola*	*Brazil*
E – MMI (1)	1.296	7.652	1.2161	24.392	11.020	16.467	n.a.	8.230
I – MMI (2)	1.878	7.109	11.416	23.960	9.272	14.888	n.a.	185.280
E – all industries (3)	55.662	287.415	501.263	1,334.356	569.705	461.524	25.164	185.286
I – all industries (4)	67.567	309.310	573.022	1,054.891	503.414	404.445	19246	143.474
BOT – MMI	–582	543	745	432	1748	1,579	n.a.	6309
BOT – all industries	–12.005	–21.895	–71.759	284.756	66.291	57.079	5.918	41.806
EU28 – exports	1,932.349		-	-				
EU28 – imports	1,888.829		-	-				
BOT – UE28	43.520		-	-				
RCA	0.84	1.16	1.22	0.80	1.05	0.97	n.d.	3.32
RXA (EU28)	0.67	1.05	1.04	1.00	1.16	1.08	-	-

Notes: Figures expressed in millions of USD; MMI (accounts for trade of iron and steel related commodities); balance of trade accounts exports (E) and imports (I) at the same *n* year (2016).

Source: Own elaboration

4.4 Foreign establishment – meaning system

Further comprehension of quantitative data outputs from previous Subsections 4.1 and 4.2. It required an exploratory outlook into the rationale for such a perception of overseas markets and the underlying commitment. Thus, with an interpretativistic aim, researchers conducted enquiries to the seven participants from the strategic apex of the partaking firms comprised of vis-à-vis semi-structured interviews combining probe questions with prompts from an interview protocol. Audio recorded data was converted to written format (interview transcripts) and manipulated using a computer-assisted qualitative data analysis (CAQDA) software (Atlas.Ti) to provide a synchronisation of meaning to the information provided by the participants (signifiers) into the theoretical background within the strategy and internationalisation bodies of the theory (signifieds) (Gioia et al., 2013; Krippendorff, 2004).

The manipulation process obeyed to an a priori design, through the creation of a codification system with axial codes interrelating to the participant's information (signifiers) with theoretical constructs. Here, each unit of observation was marked with a quotation, signalling the signifieds and their network of associations. Any further content elucidating the internationalisation of the firm was also openly coded. The construction of the codification system complies with the Weber's (1990) protocol, as each signifier it was established correspondence to a coding unit and categories, codes were pre-tested (and assessed), the coding rules were revised, the whole text coded and finally the results were appraised. First, we generated a Word Cloud crunching the main words from to the internalisation perspectives from the literature review.

Table 9 Word clouding's interrelation to internationalisation perspectives

Word/truncation	*Perspective*	*F1*	*F2*	*F3*	*F4*
Distance	Stage/process	18	11	11	3
Know	Stage/process; network and entrepreneurship	52	18	11	5
Innovation	Network and entrepreneurial; BG	7	4	1	0
Network	Network and entrepreneurial	36	4	23	2
Opportunity	Network and entrepreneurial; BG	45	11	12	7
Proxim	Stage/process	5	4	6	4
Risk	Stage-process	28	12	7	6

Source: Own elaboration

Table 9 demonstrates the verbalisation of the manifest content across perspectives, with a predominance of the network and entrepreneurial approaches. However, this data fails to provide a cohesive link with meaning system, otherwise its usage would be decontextualised (as in the Word Cloud above). Thus, the building of this meaning system, requires further efforts on the synchronisation of meaning of the marked text content into internationalisation-related conceptions, through the conversion of signifiers into signifieds. Furthermore, the use of CA allowed the quotations signalling evidence of internationalisation patterns. The axial coding units were in Table 10.

The outputs of data were tabulated with regard to frequency of signifieds, according to the aprioristic design of axial codes. As can be seen from Table 11, the results reveal.

Table 10 CA: coding units

Code unit	*Code description*
BG	Born-global
GP	Geographical proximity
Ge	Gradualist establishment
Np	Network-playing
Oex	Opportunity-exploration
Oei	Opportunity-exploitation
PD	Psychic distance
RA	Risk-avoidance
RT	Risk-taking
Sp	Solo-playing
Wlp	Wave-like establishment

Source: Own elaboration

An average number of coding units of 90 (quotations) per firm, in total 360 (*F*), uncovers a different collaboration of the participants for the clarification of the topic (internationalisation paradigms at entry-stage): 0.3722 (F1); 0.325 (F2); 0.1778 (F3) and 0.125 (F4). Each firm accounted the following units of analysis (UAs): F1 = UA1 + UA2; F2 = UA3 + UA4; F3 = UA5 + UA6; F4 = UA7. Each UA is equivalent to a participant (P) (UA ⇔ P), and a purposive sample was composed of informants (participants) from the strategic apex of the firm (i.e., chief executive officers; general managers; chief finance officers; and head account managers). In F4, the there is a single UA, as the participant occupies a double roll.

In axial codes from CA with highest relative frequencies fall into a logic of internationalisation by opportunity development (Oex and Oei) accounting 1/2 of informants' content, followed by the geographical proximity (GP) with 13.3%, RA 13.1%, networking-playing (10.5%) and PD (10%). Conversely, the MMI industry seem to possess no RCAs against its main markets. In addition, the participating firms demonstrate low evidence of risk-taking, wave-like establishment, network-playing and/or BG deliberate modes of commitment towards foreign-markets at entry-stage.

The triangulation of data supports the existence of a RA phenomenon in the MMI both in geographical and PD, in the selection of destiny markets [see Table 4 – classification of market-risk perception (GD/PD) with F1 as the partaking firm with higher RA], confirmed by the R indicator (of maximum tolerable risk) [see 'Table 7 – market commitment, uncertainty and max. Tolerable risk (C, U and R) – sample results']; and moreover, corroborated by the TNI ratios. In fact, the data of the latter (F1) in terms of TNI uncovers a low international coverage, with the TNI < 0.20; therefore, classifiable as firm with domestic-market orientation (Gluck et al., 1980). The eight likely waves of internationalisation observable in Figures 2, 3 and 4, reveal spurious relations by its cross-observation with the CA method, as no wave-like related strategies were observed in the participants' speech, therefore not being able to confirm a strategic design of alternation of market development or growth (the wave) against other stability periods.

Table 11 Frequencies of axial coding

Code	*F1*			*F2*			*F3*			*F4*			*F1–F4*	
	N	*f′*	*f*	*n*	*f′*	*f*	*n*	*f′*	*f*	*n*	*f′*	*f*	*n*	*f*
BG	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GP	18	0.375	0.05	6	0.125	0.017	11	0.229	0.031	13	0.271	0.036	48	0.133
Ge	6	0.273	0.017	-	-	-	11	0.5	0.031	5	0.227	0.014	22	0.061
Np	20	0.526	0.056	-	-	-	15	0.395	0.042	3	0.079	0.008	38	0.105
Oex	23	0.242	0.064	31	0.326	0.087	29	0.305	0.081	12	0.126	0.033	95	0.264
Oei	28	0.378	0.078	14	0.189	0.039	32	0.432	0.089	-	-	-	74	0.206
PD	21	0.583	0.058	-	-	-	11	0.306	0.03	4	0.111	0.011	36	0.1
RA	18	0.383	0.05	13	0.277	0.036	8	0.17	0.022	8	0.170	0.022	47	0.131
RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sp	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wlp	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes: Based on an absolute frequency or $F = 360$; f' represents the relative frequency of the firm within the coding unit; and f the relative frequency over F.

Source: Own elaboration

Looking at data related with the pace of commitment, none of the companies of the MMI sector in adherent to a non-constrained internationalisation perspective, as the participating companies do not observe a worldwide coverage of markets since the initial point of international expansion in the 1980s, 1990s and 2000s. Thus, the BG or a born-again-global strategies are inexistent as the coding process through the use of CA does not trace any evidences of it; and moreover, the fraction of assets abroad over total assets (AA/TA) confirms a non-BG/BAG, and confirms a gradual global (GG) pathway shared by F2, F3 and F4, two of which (F2 and F4) with establishments beyond ten markets, and all zeroing in on the indicator of abandonment (in same cases over 30 years of commitment), uncovering, i.e., a slow and steady approach, paradigmatic of gradualists/risk-sensitive players.

5 Findings

The company with the least tolerance and exposure to risk (firm 1), is simultaneously the one with lowest pace, therefore, unsurprisingly positioned behind the others in their stage of internationalisation. This is a firm with more than thirty-years of competition abroad positioned within five markets of great proximity, which is kept in a stagnated position by choice. Conversely, with less international experience (only five years), there is another case (firm number 3) with highest risk-exposure, competing in far-distancing markets outside the European Union. Nevertheless, these firms have one thing in common. Both are constrained either by geographical or psychic proximity. The first avoids uncertainty focusing on maintaining long-term relationships and framework contracts with clients known to them for several decades. The latter is competing, as claimed by their CEO, within Latin-American Spanish-speaking markets, taking advantage of their cultural and linguistic proximity and at the same time exploring comparative and competitive advantage towards markets with less knowledge and technological levels of sophistication.

The internationalisation paradigms with regard to the market-entry stage may be clustered into three separate ones. The cluster one (C1), comprised only firm F1. On this cluster the driver of competition is predominantly: geographical proximity, solo-playing, low pace, RA. This cluster it fits the stage/process internationalisation perspective. The cluster two (C2) is composed of firms F2 and F4. These are focused on market growth, through networking-playing and opportunity-seizing, such as the firm ADIRA. Firms are sensitive to both geographical and PD. Internationalisation is also low-paced and risks are balanced with the opportunities potential. The firm fits in this cluster two perspectives: the stage/process, plus the networking and entrepreneurship perspective. The cluster three (C3) contains the firm F3. The driver of competition is market growth through opportunity exploitation of distant markets, however, guided by PD (only competing at South American markets). The company exploits research and innovation DCs as the technological sophistication of the products allows their greater expansion. The mode of competition fits the paradigms of the firms ADIRA, ARUM and SANOFI referred to at the introduction. Cluster three groups the firms adhering simultaneously to the network and entrepreneurship perspective, plus the capability and competitive-advantage perspective.

6 Conclusions

Despite the clustering (exhibited in findings) into three modes of market-entry, both similarities and differences are thereby observed when moving abroad. The differences are generally comprised within the clusters' characteristics. Then, three similarities are here pinpointed. Firstly, in relation to the purpose of external competition it be the same. Firms move abroad due to the effective size of the market. As argued by Menéres (2015) about the case of the firm ADIRA, the relative small size of the land and its geographical location (at the extreme western-edge of the European continent) are major constraints for central European firms. Portuguese firms appear to show a Smithian absolute disadvantage when competing abroad in the region. Second, this Smithian condition triggers a cumulative Ricardian comparative disadvantage, observed already at the local market, which is then conveyed abroad, as local firms face a competition-base of MNCs in the domestic-market. Secondly, is observed a universal internalisation logic and avoidance of the sourcing model (as in the case of the firm COLEP) with the exception with the inbound/outbound logistic activities. Thirdly, due to the prior (internalisation and sourcing models), it is perceived that Portuguese firms attempt to integrate two generic strategies of competition (cost-leadership and differentiation), however, the (absolute and comparative) disadvantages are asphyxiate business opportunities, and depressing profitability. Exception is firm F3 which chooses to compete by exploring research and innovation DCs. Focused on a pure strategy of performing differing activities, the firms does not face the same high transactional costs reducing its profits and/or MNCs imperialism as the sophistication of their products allows them to open several business opportunities, where the products can travel for greater distances and/or experience less competition and generate higher economic rents.

Moreover, firms do not reveal traces of the adoption of a SNL internationalisation perspective, since their market-entry despite slow-paced and risk-constrained it is steady. The commitment is kept stable and the four firms possess no de-internationalisation, or abandonment of a market, as their death rate abroad is at zero-level in all foreign-markets (even F3 with a more risk-taking approach). Similarly, it happens with the wave-like internationalisation perspective. Despite six periods of market expansion were discovered (in F2 and F4) among non-expansion periods, the qualitative data mining, did not illuminate any strategic choice of combining cycles of corporate stabilisation with cycles of growth.

Market-entry selection is clearly moderated by Smithian/Ricardian factors that influence the firm's pace/extent of external commitment and distort their risk-perception profile. This is consistent with the QDA outputs, corroborating that the IPPF (based on GD/PD) is not caused by the strategic leader's mindset of a RA in these firms. However, it is undeniable that these firms prefer higher geographical proximity in IB. Such a choice, it was found to be decisively influenced by transactional costs hazards (unlike the majority of their central European competitors) comprised of inbound and outbound logistic operations (including reverse logistics). Although, QDA also demonstrates that this surplus of budgetary costs is not attenuated by transaction cost benefits to other overseas markets, as the relative weight of the markets outside the EU is relatively small, fledgling or null.

Moreover, data manipulation also uncovered a triad of other factors determining the current paradigm of SME's internationalisation in this sector. First, a lack of participation of the Portuguese authorities in international new ventures (INVs) of private equity firms. One of the participants (from firm F2) argued that transactional cost hazards may have been mitigated through offshoring, however, national authorities seem detached from the industry development. Thus, the firm refrained itself until now from equating such an option, since the endowment of new production facilities in Central Europe (e.g., in German or Poland, as a possible solution) it encompasses a colossal financial investment to be undertaken on its own. Secondly, in the same direction there is also the absence of public policies concerning the financing of those enterprises. Governmental support of foreign investment projects, namely through their sponsorship by the national central bank or public commercial banking funds is also required in the sector, as it may also accelerate offshoring activities and accelerate foreign-market coverage. However, current public policies are circumscribed merely to stimuli of exporting activities. Thirdly, it is perceived that eventual losses of the firms through currency exchange fluctuations outside Euro-zone, both in profit losses and spot sales or framework contract losses, are not compensated by adequate public policies on a compensatory regime, or other equivalent measure, as an equivalent exchange rate adjustment system.

Regardless of the public policies, SMEs of the MMI require a corrective path towards higher technological complexification of products, processes and models, investment on further research, open innovation systems, affiliation on collaborative networks for the generation of intellectual capital as argued at the NMC and corroborated by Zayas (2001), as technological innovation is crucial for the attraction of investment and leveraging new business opportunities.

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