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Incrementar a Competitividade das Empresas Através das Feiras: um conjunto de artigos

Enhancing Companies' Competitivity Through Trade Fairs: a set of articles

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Tese apresentada à Universidade de Aveiro para cumprimento dos requisitos necessários à obtenção do grau de Doutor em Ciências Económicas e Empresariais, ramo Gestão, realizada sob a orientação científica da Doutora Vera Teixeira Vale, Professora-Auxiliar do Departamento de Economia, Gestão, Engenharia Industrial e Turismo da Universidade de Aveiro, e do Doutor Vítor Teixeira Moutinho, Professor-Auxiliar, docente do Departamento de Gestão e Economia da Universidade da Beira Interior.

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Key words Trade Fairs, Trade Shows, Trade Fair Intelligence, Entrepreneurial Orientation.

Abstract

Trade Fairs are a marketing tool that offers networking, entrepreneurship, export, sales, and high-quality information opportunities. In practice, trade fairs are systems of multiple exchanges between participants. In a trade fair context, all companies/exhibitors try to remain profitable and outperform their competitors while facing diverse challenges.

This study demonstrates how exhibitors' intelligence activities and entrepreneurial orientation can generate results and improve their competitiveness. Thus, the present dissertation groups together a set of studies that can be used by exhibitors to make their participation in such events successful, improving their position in the market.

This thesis consists of four scientific essays organized in six chapters. The present Introduction focuses first on the argumentation of the study and explains the methodologies used. Chapter 1 seeks to examine the role of Trade Fair Intelligence Activities within the perspective of exhibitors. Chapter 2 shows that Entrepreneurial Orientation emerged from the literature as an excellent determinant for the development of business competence. The purpose of this particular research is to examine the influence of Entrepreneurial Orientation on the Network and the Exhibitor's Performance. Chapter 3 studies specifically a dimension of Entrepreneurial Orientation: product innovation. The purpose of this particular research is to examine the relationship between product innovation and network, and their export performance in a trade fair context within the exhibitor's perspective, more concretely SMEs (Small and Medium

Enterprises). Chapter 4 examines the impact of the exhibitors' sales force proactiveness (another dimension of Entrepreneurial Orientation) on their network capability and sales performance. Lastly, the present dissertation ends with general conclusions, where contributions, implications and general limitations are discussed. The conclusion ends with suggestions for future research.

Generally, the research shows that Intelligence Activities and the practices that characterize Entrepreneurial Orientation can occur in parallel in a trade fair context. During trade fairs there are several sources of information (customers, product and market) that can be observed, collected and analysed. Intelligence activities in a trade fair context can provide insights not available elsewhere, that warn of potential marketing threats and opportunities, thus contributing to the competitiveness of the company/exhibitor.

The examination of entrepreneurial orientation in trade fairs' context revealed that the exhibitor, when thinking and behaving in an entrepreneurial way (Innovativeness; Proactiveness; Risk-Taking; Competitiveness; Autonomy), improves business performance, especially when network capabilities are well developed. The study also highlights the dimensions of innovation and proactivity with implications for short-term financial return (sales performance) and long-term business growth (export performance).

Although research studies have been carried out on success factors for exhibitors, this study is a pioneer in addressing intelligence activities and entrepreneurial orientation in a trade fair context, as factors of success and competitiveness for exhibitors. The research becomes even more relevant when considering the current economic dynamism shaped by the rapidly changing technological, social, political and economic environment. Therefore, based on these aspects, this study can be considered new and original.

Palavras-chave Feiras, *Intelligence*, Orientação Empreendedora.

Resumo

As feiras são uma ferramenta de marketing que proporcionam oportunidades únicas de *Networking*, empreendedorismo, exportação, vendas e informações de alta qualidade. Na prática, as feiras são sistemas de múltiplas trocas entre os participantes. Em contexto de feiras, todas as empresas / expositores lutam pela lucratividade e tentam superar os seus concorrentes, mas geralmente enfrentam diversos desafios. O presente estudo demonstra como as atividades *intelligence dos expositores* e sua *orientação empreendedora* podem gerar resultados e melhorar a competitividade dos expositores. Dessa forma, a presente dissertação agrupa um conjunto de estudos que podem ser utilizados pelos expositores para que a sua participação nesses eventos seja bem-sucedida, melhorando seu posicionamento no mercado.

Esta tese é composta por quatro artigos científicos organizados em quatro capítulos. A Introdução concentra-se na argumentação do estudo e na explicação das metodologias utilizadas. O capítulo 1 procura analisar o papel das atividades *Intelligence* nas feiras e na perspetiva dos expositores. O capítulo 2 mostra que a Orientação Empresarial emergiu da literatura como um excelente determinante para o desenvolvimento de competências empresariais. O objetivo desta pesquisa é analisar a influência da Orientação Empreendedora na *networking* e na *performance* do Expositor. O capítulo 3 estuda em particular uma dimensão da Orientação Empreendedora: Inovação de Produtos. O objetivo desta pesquisa é examinar a relação entre Inovação de Produtos, *Networking* e a sua *performanc*e exportadora em contexto de feiras e na perspetiva do expositor, mais concretamente das

PME (Pequenas e Médias Empresas). O capítulo 4 examina o impacto da proatividade da força de vendas (outra dimensão da Orientação Empreendedora) dos expositores na sua capacidade de *Networking* e na *performance* das Vendas.

Finalmente, a presente dissertação termina com as conclusões gerais, onde se discute as contribuições, as implicações e as limitações gerais. A conclusão finda com sugestões para pesquisas futuras.

De uma maneira geral, a pesquisa mostra que as atividades de Inteligência e as práticas que caracterizam a Orientação Empreendedora podem ocorrer paralelamente em contexto de feiras. Durante as feiras existem várias fontes de informação (clientes, produto e mercado) que podem ser observadas, recolhidas e analisadas. As atividades *Intelligence* em contexto de feira podem fornecer perceções não disponíveis noutras fontes. Estas atividades de *Intelligence* alertam sobre potenciais ameaças de marketing e oportunidades que contribuem para a competitividade da empresa/expositor.

O estudo da Orientação Empreendedora em contexto da feira revelou que o expositor, ao pensar e se comportar de forma empreendedora (inovação; proatividade; propensão ao risco; competitividade; autonomia) melhora o desempenho dos negócios, especialmente quando os recursos de *networking* são bem desenvolvidos. O estudo também destaca as dimensões da Inovação e Proatividade com implicações no retorno financeiro de curto prazo (desempenho de vendas) e no crescimento dos negócios a longo prazo (desempenho das exportações).

Apesar de existirem diversas pesquisas sobre fatores de sucesso para expositores, este estudo é pioneiro em abordar as atividades *Intelligence* e a Orientação Empreendedora em contexto de feira como fatores de sucesso e competitividade para os expositores. A pesquisa torna-se ainda mais relevante quando se considera o atual dinamismo do mundo dos negócios, marcado por um ambiente tecnológico, social, político e económico em rápida mudança. Portanto, com base nesses aspetos, este estudo pode ser considerado novo e original.

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Introduction

This document represents an academic work within the scope of Public Examinations, to obtain the degree of Philosophy Doctor in Economic and Business Sciences by the University of Aveiro, with a specialization - Management.

This thesis addresses the following topic: "Enhancing Companies' Competitivity Through Trade Fairs: a set of articles"

1. INTRODUCTION

Trade fairs are probably, alongside direct selling, the oldest marketing tool in the world (Silva, 2014). Throughout history, trade fairs have always faced great challenges and always responded with the necessary adaptations. Despite historical developments, trade fairs continue to be privileged spaces for physical promotion of products/services and for face-to-face contact between exhibitors and visitors. Possibly for this reason, trade fairs are one of the most complete marketing opportunities to consolidate business relationships. However, in recent years, trade fairs have ceased to be events of merely transactional interactions (Sarmento & Simões, 2018; Tafesse & Skallerud, 2017), for there is a functional multiplicity that can allow simultaneous interactions: transactional, informational, symbolic, and cultural (Tafesse & Skallerud, 2015).

Therefore, the challenges for exhibiting companies require the ability to adapt quickly and these changes should drive more relevant interactions. Thus, this thesis consists of four related empirical studies (original papers), which aim to study trade fairs as a multiplicity of exchanges tool and source of competitiveness for companies. However, each chapter is independent, with its own objectives and review of the literature, methodology, data, and results and implications.

Introduction presents the research rationale, provides a summary of the research methods used in each article and briefly discusses the main findings of the four studies. Chapter 1 studies trade fairs as a tool for exchanging information, but more specifically this research seeks to examine the role of Trade Fair Intelligence Activities within the perspective of exhibitors. Chapter 2 addresses the Entrepreneurial Orientation as an excellent determinant for the development of business competence. So, the purpose of this research in particular is to examine the influence of Entrepreneurial Orientation on the Network, and the Exhibitor's Performance. Chapter 3 studies specifically a dimension of Entrepreneurial Orientation: product innovation. The purpose of this research in particular is to examine the relationship between product innovation and network, and their export performance in the trade fair context

and within the exhibitor's perspective, more concretely SMEs (Small and Medium Enterprises). Chapter 4 presents a study that examines the impact of the exhibitors' sales force proactiveness (another dimension of Entrepreneurial Orientation) on their network capability and sales performance, with special emphasis on SME with limited resources. Lastly, the dissertation presents the general conclusions, discusses contributions, implications and general limitations. The conclusion ends with suggestions for future research.

2. BACKGROUND TO THE RESEARCH

2.1 Business competitiveness

The current world of business is uncertain, complex and competitive (Clegg et al., 2019) and this scenario requires companies to define and sustain a competitive advantage, which is a critical strategic factor to enable a superior performance of the company (Kaleka & Morgan, 2017). Competitiveness is linked to the development of a competitive advantage (Lafuente et al., 2020). The company's competitiveness is the "*capacity to compete in a specific market, to increase its market share, to enter international markets by exporting, and to achieve sustainable growth and profitability*" (Cetindamar & Kilitcioglu, 2013, p. 20). So, a company's competitiveness is its economic strength against their rivals in the global market (Chao-Hung & Li-Chang, 2010), it is also their ability to act and react in a competitive environment (Maune, 2014). In practice, a company's competitiveness determines its ability to conquer new markets, to outperform competitors and to grow (Falciola et al., 2020), and is reflected in its financial and non-financial performance (Maune, 2014).

Consequently, trade fairs play a strategic role in the creation and development of international networks and knowledge to obtain competitive advantage (Evers & Knight, 2008; Locatelli et al., 2019; Monreal-Pérez & Geldres-Weiss, 2020). Generally, networking is a highly flexible process, generating opportunities that create competitiveness (Gupta & Chauhan, 2020; Husain et al., 2016) and access to international markets (Evers & Knight, 2008; Gupta & Chauhan, 2020).

2.2 Trade fairs – conceptualisation

In general, trade fairs are very important activities "*to the global economic development and to companies*", but "*more research is needed to better understand the field and its evolution*" (Sarmento & Simões, 2018, p. 154), when in fact, despite the importance of trade fairs, there is still a shortage of research on the subject (Shi et al., 2020).

Trade fairs[1] are events that bring together in a single location, a group of experts and business people, such as sellers, buyers, suppliers, distributors and intermediaries (Black, 1986). These events are excellent marketing tools, which allow to generate leads, sales, promote new products, help build the brand, maintain customer loyalty, share information and knowledge, among other advantages (Sarmento & Simões, 2018). The "*trade show feature three inter-related groups of actors – the show organizer, exhibitors and visitors. Each plays an important role in delivering value*" (Gopalakrishna et al., 2019, p. 100), consequently, Lin et al. (2018) designated it as the visitor–exhibitor–organizer (VEO) framework.

The exhibitors are the ones who physically exhibit their products and/or services to visitors, under the guidance of a specific organizing entity (Sarmento & Farhangmehr, 2016; Silva, 2014). The trade fair organizer has the responsibility to plan and promote the event, presenting various activities for the participants, offering opportunities for social interaction and networking (Bauer & Borodako, 2019; Gopalakrishna et al., 2019; Jin, et al., 2012; Sarmento et al., 2015). Visitors are all the people who enter the trade fair floor and interact with the exhibitors (Gopalakrishna et al., 2019; Gottlieb et al., 2014; Haon et al., 2020), during the opening hours and period of the event (Silva, 2014). Visitors can assume different figures, such as buyers, importers, distributors, wholesalers, opinion leaders or others (Monreal-Pérez & Geldres-Weiss, 2020). Rittichainuwat and Mair (2012) classify visitors into two clusters: group of buyers (whose major motivation is purchasing) and non-buyers or total visitors, which can be suppliers, competitors and firms in related fields, press, consultants, public institutions, among others.

2.3 The multiplicity of exchanges in the trade fair context

The three parties (exhibitors, organizer and visitors) are equally essential for the functioning of a trade fair (Gopalakrishna et al., 2019), because their involvement allows the development of horizontal (between competitors) and vertical (between companies

[1] The terms trade fair, trade show and exhibition are similar concepts (Bettis-Outland, Johnston, & Wilson, 2012; Fenich, 2016), although in European literature the term trade fair is more frequent and in American literature the trade show term is used more often. Thus, in this thesis the "trade fair" will be the preferred term, except in citations and chapters/papers where American English was used.

at different levels in the value chain) interactions to gain competitive advantages (Zhong & Luo, 2018). In fact, trade fairs facilitate the simultaneity of multiple exchanges: transactional, informational, symbolic, and cultural (Tafesse & Skallerud, 2015), so trade fairs include both selling and non-selling functions (Bello, 1992; Li, 2020).

Transactional exchanges at trade fairs involve direct exchange (Money, Goods, Services, Information, Technology) between exhibitors (sellers) and visitors (buyers). The swap of information involves transferring and sharing of data between trade fair participants through interaction (contact face to face) and activities (seminars, demonstrations, tests, etc.) at trade fairs (Tafesse & Skallerud, 2015). Trade fairs are also events that offer socializing opportunities. Social exchange involves social interaction (Affection, Status, Information) and relational marketing (long-term relationships, loyalty) among trade fair participants. The symbolic exchange (Status, Information, Services, Goods) takes place between two participants in trade fairs (for example: exhibitor and visitors) with strategic interests in influencing the perception of each other's image (Tafesse & Skallerud, 2015). Trade fairs also provide opportunities for contact with participants from different cultures. This cultural interaction can be revealed by the exchange of cultural values, norms, customs between the participants. The cultural exchanges in trade fair context happen especially at international and regional trade fairs (Tafesse & Skallerud, 2015).

Therefore, trade fairs are an industry in constant change. However, with this multiplicity of exchanges typical of trade fairs (Tafesse & Skallerud, 2015), its relevance for creating experiences, building personal contacts, and establishing trusting relationships also grows. Change is on the way and more research is needed to support trade fair stakeholders in shaping this change process (Bauer & Borodako, 2019).

2.4 Research setting

Trade fairs are an important driver for the quality of the relationship and development between exhibitors and visitors (Sarmento et al., 2015), yet there are substantial differences between the preferences of one and the other (Haon et al., 2020). If on one hand, the main objectives of the exhibitor are to show, promote and/or market his products and services to visitors (Haon et al., 2020), on the other hand,

trade fair visitors can have multiple attendance motivations, including purchasing, gathering information, searching for trends, among others (Rittichainuwat & Mair, 2012). Nevertheless, regardless of the differences in interest, visitors are particularly interested in the contents of the exhibition (Jung, 2005; Sarmento & Farhangmehr, 2016), namely the exhibitors' value offer (Gopalakrishna et al., 2019). In fact, it is the group of exhibitors that gives shape and corporeality to a trade fair, consequently, its size (variety of exhibitors) and the content of the exhibition, such as the presentation of innovations, are critical factors for the survival of any trade fair (He et al., 2020).

Particularly, in the exhibitor's perspective, trade fairs allow marketing actions through the interaction between various experts (Black, 1986; Sarmento & Simões, 2018). Bettis-Outland et al. (2020) describe to "micro" vs "macro" network positions. A micro position consists of a basic exhibitor/visitor interaction; but when this interaction expands to include a supplier, competitor, analyst, among others, the exhibitor/visitor interaction evolves from a micro-network to a macro-network. Therefore, trade fairs offer both opportunities for market analysis and customer engagement (Li, 2020). Generally, a successful business relationship between company/customers helps to compete in a competitive market (Gupta et al., 2016). For instance, companies without international experience can use trade fairs to overcome this obstacle and increase their competitiveness (Monreal-Pérez & Geldres-Weiss, 2020), because trade fairs give companies the possibility to understand international competitors and to investigate possible distribution channels (Kellezi, 2014). Precisely, exhibiting companies are keen in marketing actions, networking, reputation, and information gathering potential (Nayak, 2019; Qi et al., 2018).

The currently rapid change in technological, social, political and economic environment generates several additional avenues for future research on participation in trade fairs (Shi et al., 2020). In fact, in the current context, trade fairs continue to be an important marketing tool (Gerschewski et al., 2019), but they are also a constant challenge, demanding and expensive action (Nayak, 2019). Trade fairs are strategic means of exchange by which companies establish a variety of exchange relationships (transactional, informational, social, symbolic and cultural) to meet their respective organisational goals and objectives (Tafesse & Skallerud, 2015). For this reason, despite the existing opportunities, trade fairs increasingly demand a competent participation (Nayak, 2019). Nowadays, all companies strive to remain profitable and outperform

their competitors but face different internal and external challenges (Eidizadeh et al., 2017). Thus, recent studies recommend research on potential ways to make trade fairs successful, because change is a reality and research will be vital for trade fairs and event industry stakeholders (Bauer & Borodako, 2019). That said, current challenges pose questions related to the success of the exhibitor's participation and its competitiveness.

In general, recent studies demonstrate that regardless of the context, the competitiveness of companies can arise through knowledge and innovation (Akcigit & Liu, 2016; Chatzoglou & Chatzoudes, 2018; Urbancová, 2013). Therefore, these ideas corroborate in part with two trends highlighted by literature: intelligence activities and entrepreneurial orientation.

From the business' perspective, intelligence activities are techniques and processes whereby a company can collect and analyse data/information from a turbulent environment to detect an opportunity and minimize threats (Cheng et al., 2020). Concomitantly, trade fairs are vital sources of intelligence activities that help companies make competitive decisions (Hlee et al., 2017; Li, 2020). Information is a key resource for better decision-making (Caseiro & Coelho, 2019) and intelligence activities also enhances a business' competitiveness (Nyanga et al., 2019).

Entrepreneurial orientation is a posture or an attribute of the management style that favours change and entrepreneurship (Tajeddini et al., 2020), adopting a multidimensional approach: innovativeness, risk-taking, proactiveness, competitiveness and autonomy (Fadda, 2018). Entrepreneurial Orientation is one of the key elements that can lead to a successful business performance in highly uncertain business conditions (Cho & Lee, 2018; Martins & Rialp, 2013; Tajeddini et al., 2020), and be associated with social and business networks (Tajeddini et al., 2020), like trade fairs, where many rival firms are engaging (Association of the German Trade Fair Industry [AUMA], 2019; Maskell, 2014) and buyers/sellers interact and develop networking (Locatelli et al., 2019).

Therefore, intelligence activities and entrepreneurial orientation can offer a complementary perspective for the exhibitor, because an increase in intelligence activities can help to raise entrepreneurial practices and vice versa (Boso et al., 2013). In fact, the literature suggests a positive and significant relationship between intelligence activities and entrepreneurial orientation on account of the use of information due to Intelligence activities which can support the dimensions of entrepreneurial orientation (Caseiro & Coelho, 2018). On the other hand, the dynamics of entrepreneurial orientation can help to mine information (Boso et al., 2013; Keh et al., 2007).

So, the parallel study about intelligence activities and entrepreneurial orientation in the trade fair context is a relevant investigation, mainly due to the competitive and dynamic environment of trade fairs. Overall, companies need to acquire resources/ information from their external environment and transform them into intelligence as well as to explore the opportunities provided by the environment (Caseiro & Coelho, 2019). Currently, the major challenge that organisations face is how to compete in rapidly changing environments (Dubey et al., 2020), thus entrepreneurial orientation is a critical factor as it positively influences specific strategic decisions (Rosenbusch et al., 2013; Tajeddini et al., 2020), especially in uncertain and complex environments (Cho & Lee, 2018; Martins & Rialp, 2013; Tajeddini et al., 2020).

Within the entrepreneurial orientation concept, the literature also highlights the importance of product innovation and the proactiveness of exhibitors in a trade fair context.

"I*nnovation is a new or improved good or service that differs significantly from the firm's previous goods or services and that has been introduced on the market*" (OECD/Eurostat, 2018, p. 70). In relation to product innovation, trade fairs play an important role in promoting innovation and consequently, generating business networks (Chu & Chiu, 2013; Dawson et al., 2014; Kim & Mazumdar, 2016; Bathelt, 2017; Golfetto & Rinallo, 2017). Above all, because there is a time delay between product awareness and the adoption process (Anand et al., 2016). Thus, companies can use trade fairs to test, communicate and raise awareness of product innovations on the market (Bathelt, 2017).

Proactiveness is a character trait (Gerschewski et al., 2016) which results in anticipatory behavior that seeks market opportunities (Fadda, 2018; Ruiz-Ortega et al., 2021) ahead of competition (Rezaei & Ortt, 2018). The literature emphasizes that proactiveness is an excellent resource for competitive situations with high levels of uncertainty (Varela et al., 2019) such as trade fairs, which are highly competitive environments (Maskell, 2014).

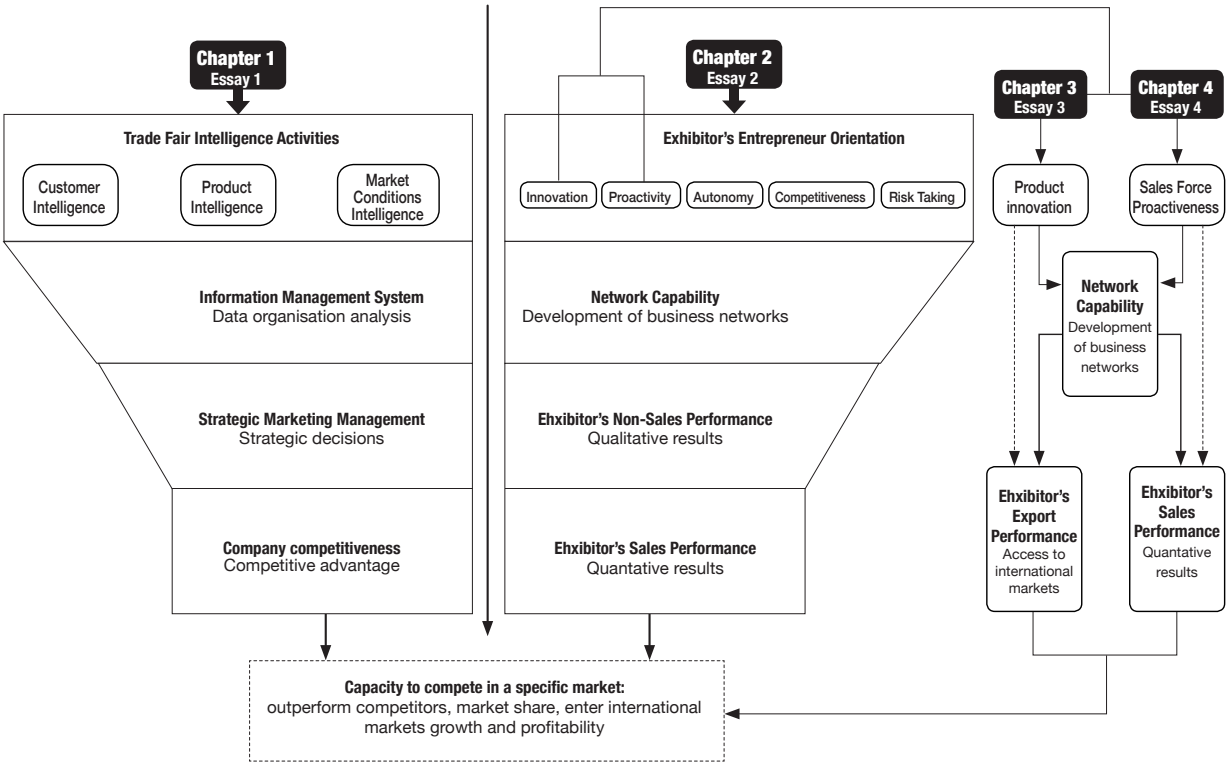
Accordingly, the interrelated content of discussions previously presented supports the need for new studies based on intelligence activities and entrepreneurial orientation.

Figure 1 shows the dissertation research framework. This combination captures the effects of intelligence activities and entrepreneurial orientation on the company's competitiveness in trade fair context. As shown in Figure 1, intelligence activities and

entrepreneurial orientation are two of the exhibitors' operations that can happen in parallel in the trade fair context. In practice, it reveals a funnel that illustrates connections of how intelligence activities and entrepreneurial orientation work (key processes and their interactions) in a trade fair context. The next chapters (respectively 1 and 2) examine the models of intelligence activities and entrepreneurial orientation in detail. Then, chapters 3 and 4 also highlight two approaches related to entrepreneurial orientation, specifically the role of product innovation and the productiveness of the exhibitors' sales force, as suggested by the literature (Dawson et al., 2014; Kim & Mazumdar, 2016; Varela et al., 2019).

In general, the next four chapters cover approaches related to the exhibitors' participation at trade fairs, highlighting key elements for sustainable and competitive management of companies in the trade fair context.

Figure 1 - Dissertation research framework



Source: Own elaboration

3. RESEARCH OBJECTIVES

The general objective of this dissertation is to study trade fairs from the exhibitor's perspective, outlining multiple exchange elements that can provide a competitive position. Based on the general purpose of this research and the specificity of the discussion presented in previous topics, the specific questions are:

- How can the exhibitor's intelligence activities contribute to its competitiveness?
- How can the entrepreneurial orientation of the exhibitor contribute to its competitiveness?
- How can the exhibitor's product innovation contribute to its competitiveness?
- How can the exhibitor's proactiveness contribute to its competitiveness?

In this sense, this dissertation presents four essays that examine intelligence activities, entrepreneurial orientation, and in particular product innovation and proactiveness as competitive forces for the exhibitor. These essays increase the relevance of the themes to practice, by examining in more detail their use by companies in the trade fair context.

4. OUTLINE OF THE FOUR ESSAYS

The four essays in this dissertation explore an integrated approach to trade fairs as an instrument of competitiveness for exhibitors. Trade fairs are events that offer marketing opportunities (Locatelli et al., 2019) but there is also a lot of rivalry among exhibitors (AUMA, 2019; Maskell, 2014) and those are expensive events (Nayak, 2019). Therefore, participating in trade fairs requires a lot of effort and thus it becomes important that such events are successful (Nayak, 2019). In addition, trade fairs are affected by a currently rapid change in technological, social, political and economic environment (Shi et al., 2020). In today's dynamic business context, there is a hybridisation that can allow simultaneous interactions: transactional, informational, symbolic, and cultural (Tafesse & Skallerud, 2015). As a result of these challenges and multiplicity of exchanges, companies are facing difficulties to engage and outperform competitors (Eidizadeh et al., 2017). Hence, the present dissertation deals with intelligence activities and entrepreneurial orientation as competitive drives for exhibitors (Nyanga et al., 2019; Tajeddini et al., 2020).

The study of intelligence activities and entrepreneurial orientation is relevant because the ability to exploit external information is a critical component of entrepreneurial capabilities (Caseiro & Coelho, 2019; Cepeda-Carrion et al., 2012). Intelligence activities and entrepreneurial orientation are drivers for companies/exhibitors to adapt to the dynamism and complex environment of today's business and trade fairs, in order to obtain results and improve their positions (Cho & Lee, 2018; Hlee et al., 2017; Li, 2020; Martins & Rialp, 2013; Tajeddini et al., 2020).

The present dissertation juxtaposes the trade fair as a driver for the exhibitors' competitiveness. This discussion will be central facet of the various essays that make up the thesis. The dissertation body comprises four independent essays, but which discuss a common vision from the perspective of exhibitors and how they can achieve results and gain competitiveness.

4.1 ESSAY 1 - Trade Fairs as an Intelligence Process: the Perspective of Companies/Exhibitors

Trade fairs are an excellent source of information and data to exhibitors/companies (De Martino & Magnotti, 2018; Gębarowski & Wiażewicz, 2014; Herbig et al., 1998; Reychav, 2009; Zieliński & Leszczynski, 2011), and one of five primary exchange functions: information sharing (Tafesse & Skallerud, 2015). Emphasizing trade fairs as a source of information (Reychav, 2009), accessing it is an essential resource and must be taken into consideration in any decision about the company's strategy (Giebels et al., 2015). So, this article seeks to examine the role of Trade Fair Intelligence Activities from the exhibitors' perspective. Hlee et al. (2017), Ratajczak (2007), Søilen (2010) and Søilen (2013) introduce the concept of trade fairs' intelligence as a process of collecting, organizing, and analysing information from trade fairs that can be used to make critical decisions. The literature review suggests that trade fair Intelligence Activities can happen in three dimensions: Product Intelligence, Customer Intelligence and Market Condition Intelligence. Therefore, the study was able to test if those three factors (Customer Intelligence, Product Intelligence, Market Condition Intelligence) are part of a composite of "Trade Fair Intelligence Activities" of the exhibitors. In addition, the literature review allows to create a conceptual model, which considers the constructs (Customer Intelligence, Product Intelligence, Market Conditions Intelligence, Trade Fair Intelligence, Information Management, Strategic Marketing Management and Company Competitiveness), their effects and the development of hypotheses. In short, this conceptual model can bring new knowledge and help solve the gap, by presenting a Trade Fair Intelligence Process which facilitates the construction of competitive advantages for exhibitors.

The study methodology has a quantitative profile and comprises the development of a questionnaire aiming to test the hypotheses and the conceptual model. The questionnaire focuses on the dynamics of trade fairs as a source of marketing intelligence for exhibiting companies, 418 complete response/questionnaires were collected. Data analysis happened in two parts. First, an Exploratory Factor Analysis (EFA) was applied through the SPSS software. The key purpose of the EFA is to define the underlying structure among the variables in the analysis (Hair et al., 2014).

In the second part, a Structural Equation Modelling (SEM) was used, allowing path analysis and Confirmatory Factor Analysis (CFA) (Marôco, 2014; Byrne, 2016). AMOS-SEM was the selected software because this study is about theoretical tests and does not intend to develop or construct theories, so as Roldán and Sánchez-Franco (2012) suggest, the AMOS-SEM is the indicated software for these studies.

SEM is used to determine if a particular model is valid and allows the association of several measures to a single latent construction (Hair et al., 2014; Marôco, 2014). Also, using Maximum Likelihood Estimation allows estimating the measurement model and structural model. Then, model fit indexes were examined for model fit, and the hypotheses were also tested (Hair et al., 2014).

The results show that a holistic approach to trade fairs exists as an intelligence process from the perspective of exhibitors. So, the three factors Customer Intelligence, Product Intelligence, Market Conditions Intelligence are an integral part of the Trade Fair Intelligence Activities. The results reveal a trajectory of tasks that exhibitors can perform to provide the best solutions/decisions towards competitiveness. This trajectory begins with Trade Fair Intelligence Activities, and these activities nourish the company's Information Management System. This Information Management System plays an essential role in finding solutions and exploring opportunities, allowing the exhibitor to have good quality and reliable information, in adequate quantity and at the right time, so it develops knowledge for a successful Strategic Marketing Management. This information/knowledge binomial is a determining factor for the competitiveness of the company/exhibitor.

In short, trade fairs can provide an intelligence process which can play a key role in accessing information, extracting and applying knowledge, vital for increasing the companies' competitiveness. In practical matters, the results reveal implications for exhibitors, trade fair organizers and visitors, though especially for exhibitors because the study clarifies the mechanism of intelligence activities for them.

This study is a pioneer in the approach presented on the exhibitors' intelligence activities. However, the present study also has its limitations, for example it did not include the role of information technology or other exhibitor's resources, as well as it does not explore the characteristics of the data (explicit or tacit), so future research is suggested.

4.2 ESSAY 2 — What is the value of Entrepreneurial Orientation on the network and performance? An examination in trade fair context

Entrepreneurial Orientation emerged from the literature as an excellent determinant for the development of business competence (Al Mamun & Muniady, 2019; Hooi et al., 2016; Martins & Rialp, 2013; Mantok et al., 2019; Rezvani et al., 2019). Entrepreneurial Orientation is a general strategic posture towards entrepreneurship (Gupta & Alka, 2015). Entrepreneurship is an act of innovation that involves empowering the existing resources of a new wealth-producing capacity (Drucker, 1985). Particularly, Entrepreneurial Orientation can be an excellent resource for companies to operate in a competitive environment (Martins & Rialp, 2013) such as trade fairs, where many rival firms are engaging (AUMA, 2019; Maskell, 2014).

So, this article aims to conduct an empirical study designing a comprehensive model, considering Entrepreneurial Orientation as a tool that can enhance the Exhibitor's Performance. The model allows to examine the influence of Entrepreneurial Orientation on the Network and the Exhibitor's Performance. The Entrepreneurial Orientation is seen as a highly competitive factor for the company, which can foster its trade fair business.

The literature review allowed the development of a conceptual model as well as the formulation of hypotheses. The conceptual model details the relationships between constructs that deserve observation (Hair et al., 2014). The concept "construct" in business and social science research, describes an idea, entity, or theoretical concept (Karsay, 2017). The constructs that make up the conceptual model are: (i) Entrepreneurial Orientation and its dimensions (subconstructs - Innovativeness; Proactiveness; Risk-Taking; Competitiveness; Autonomy), (ii) Network Capability, (iii) Exhibitor's Sales Performance, and (iv) Exhibitor's Non-Sales Performance.

A survey-based quantitative approach was adopted, including a questionnaire (n=362) applied to companies participating in trade fairs. To arrive at results, the study developed Structural Equations Modelling (SEM) techniques, using SPSS 24 and AMOS 20 software.

First step, an Exploratory Factor Analysis (EFA) was applied through the SPSS software. Throughout EFA, the theoretically interpretable and substantial factors must

be maintained (Kim & Mueller, 1978). So, Entrepreneurial Orientation (Innovativeness; Proactiveness; Risk-Taking; Competitiveness; Autonomy); Network Capability; Exhibitor's Non-Sales Performance; and Exhibitor's Sales Performance, were assessed.

Second step, through the AMOS-SEM software, the Confirmatory Factor Analysis (CFA) was performed, in order to evaluate the path or relationships between constructs (Marôco, 2014; Byrne, 2016).

The study demonstrates positive impacts of Entrepreneurial Orientation on Network Capability and consequent Exhibitor's Non-Sales Performance, and Exhibitor's Sales Performance. The study offers a process which the results highlight, like innovativeness, proactivity, risk-taking, competitiveness and autonomy (dimensions of the Entrepreneurial Orientation), as a mix of important ingredients for the exhibitor's networking. The networking promotes intangible results (Non-Sales Performance) that can generate sales (Sales Performance). Therefore, the results show that trade fairs offer an unparalleled opportunity for face-to-face interactions with a wide array of potential customers (Locatelli et al., 2019; Sarmento et al., 2015). Thus, based on this study, Entrepreneurial Orientation emerges as a resource or an excellence catalyst for exhibitors to operate successfully in competitive environments (Martins & Rialp, 2013) like trade fairs (AUMA, 2019; Maskell, 2014).

The study is the first research to apply the Entrepreneurial Orientation in the trade fair context, and it also presents a relationship between Non-Sales Performance and Sales Performance. However, the study has limitations, for example the research was carried out mainly on Portuguese companies, restricting its generalisation. Moreover, the Exhibitor's Performance was measured based on the exhibitors' level of satisfaction and not on real sales results.

4.3 ESSAY 3 — **What are the effects of product innovation and network on export performance? Evidence for industrial SME from trade fairs, considering home-country context**

OECD (2019) highlights two challenges for SMEs (Small Medium Enterprises): the capacity to innovate and the capacity to export. Consequently, trade fairs help to

improve both challenges. Trade fairs play an important role in promoting innovation and therefore generating business networks (Bathelt, 2017; Bettis-Outland et al., 2010; Chu & Chiu, 2013; Dawson et al., 2014; Golfetto & Rinallo, 2017; Kim & Mazumdar, 2016; Kirchgeorg et al., 2010; Santos & Mendonça, 2014). Also, trade fairs offer a unique advantage for smaller companies in accessing exports through the generated contacts or business networks (Geldres-Weiss & Monreal-Pérez, 2018; Gerschewski et al., 2019; Gerschewski et al., 2020; Li & Shrestha, 2013; Measson & Campbell-Hunt, 2015; Monreal-Pérez & Geldres-Weiss, 2020; Seringhaus & Rosson, 1994; Silva, 2014). The purpose of this article is to examine the relationship between product innovation and network, and the SMEs' export performance, particularly in trade fair context. Moreover, this article conducts a comparative study among services/industrial SMEs (Small Medium Enterprises) and considers the home-country context (Lindner et al., 2018). Innovation and internationalisation are stagnant themes in the recent literature on trade fairs, so they require to be renewed (Tafesse & Skallerud, 2017).

The empirical study includes a survey with 341 SME respondents, separated into both industrial/producer and service/other. The literature review motivates this comparative study because in general it shows that trade fairs can help industrial companies manage the process of developing new products (Bello & Barczak, 1990; Bathelt, 2017; Golfetto & Rinallo, 2017). As for service companies, its intangible nature implies more emphasis on personal interactions (Erramilli, 1992).

A conceptual model was developed based on the literature review, which establishes a relationship between product innovation, network and export performance. The model was examined from three different perspectives: Model A encompasses all surveyed SMEs, Model B includes only industrial/producer SMEs, Model C comprises service/other SMEs. Data analysis happened in two steps.

The first step included the Structural Equation Model (SEM) and the assessment of hypotheses (Hair et al., 2014) from three different perspectives. A bootstrap resampling method was used to estimate the indirect effect of "product innovation" on "export performance" (Marôco, 2014), also from three different perspectives. Thus, it was possible to make a comparative analysis between models.

In the second step, the Ordered Logit Model (OLM) was used to study relationships between control variables and the criteria variable Export Performance. The inclusion of control variables adds knowledge to the conclusions (Lu & White, 2014). The Ordered

Logistic Model is appropriate for ordinal dependent variables because it considers the ceiling and floor effects and avoids the use of subjectively chosen scores, attributed to categories (Lu, 1999; Hanushek & Jackson, 2013).

The SEM's results confirm a conceptual model about a dynamic trajectory that SMEs, mainly industrial/producer, can take advantage of: Innovate to Networking and Networking to Export. The study also reveals, through the OLM, two catalysts for the success of the SME's export performance: export experience and continued participation in trade fairs. Finally, the OLM's results reveal that size is not relevant, so trade fairs are marketing tools accessible to any company, regardless of their size.

The study offers important implications for SME. The results reveal that presenting product innovations at trade fairs is a useful tool for SMEs to create networks, which facilitates their export performance, especially for Industrial SMEs residing in small economies such as Portugal. This study is also relevant for business associations of Industrial SMEs and/or public or semi-public SME promotion agencies.

This article contributes to the literature on trade fairs, suggesting an INE (Innovation, Networking, Export) framework to reflect on the participation in international trade fairs. So, this research especially combines product innovations, network and export performance in a particular context - for SME in international trade fairs. The study also considers the SMEs' home-country context, which is rarely deemed in this type of studies. Ultimately, through the comparative study, it provides insightful implications for Industrial SMEs on improving export performance as of trade fairs by leveraging innovation and networking.

4.4 ESSAY 4 — **Examining the relationship between sales force proactiveness, network capability and sales performance: evidence from international trade fairs**

The staff present at a trade fair has a very important role in the success of the exhibitor (Tafesse & Korneliussen, 2012; Haon et al., 2020), but usually this recruitment for trade fairs is not ideal, thus affecting sales and the exhibitors' results (Haon et al., 2020). So, it remains to be identified and examined a factor related to the exhibitor's sales force, which at trade fairs can contribute to improve marketing performance or

the exhibitor's effectiveness (Tafesse & Korneliussen, 2012; Fang & Ding, 2020) in a manner that drives the best outcomes, namely generating leads and negotiating sales (Haon et al., 2020). SMEs are often forced to optimize costs due to limited resources, especially the ones from countries with low competitiveness. Accordingly, it is important to prioritize factors that really bring results in a trade fair context. The sales force proactiveness is discussed as an outcome driver which is accessible to any SME, regardless of available resources.

Moreover, it is necessary to recover the most profitable view of trade fairs. Precisely, the focal orientation of trade fairs as sales tools seems to have changed over the years, as revealed by the literature reviews (Sarmento & Simões, 2018; Tafesse & Skallerud, 2017). Furthermore, trade fairs are very expensive and managers usually struggle to create a strong business case for these activities (Brown et al., 2017), so it becomes essential that such events be commercially successful (Nayak, 2019).

In this sense, proactiveness stands out as an important resource for the success of job tasks (Mallin, 2016; Kraus et al., 2018; Varela et al., 2019). Proactiveness is an anticipatory behavior that seeks market opportunities (Fadda, 2018; Mason et al., 2015; Ruiz-Ortega et al., 2021) ahead of competition (Rezaei & Ortt, 2018). In other words, proactiveness refers to the ability to anticipate market changes, in particular customer trends (Fadda, 2018). Notably, proactive behavior is very relevant in jobs that involve a certain degree of uncertainty as is the case with the salespeople's function (Tajeddini et al., 2020; Varela et al., 2019), because "*salespeople are obliged to interact with customers whose needs are constantly changing*" (Varela et al., 2019, p. 189). Proactiveness (one of the Entrepreneurial Orientation dimensions) is a great resource not only for tasks in high uncertainty environments, but also for situations associated with social and business networks (Tajeddini et al., 2020) such as trade fairs, which are highly competitive environments (Maskell, 2014) and with multiple socialisation opportunities (Sarmento et al., 2015).

Thus, this research aims to test a conceptual model, in trade fair context, that examines the effects of the Sales Force Proactiveness on the main sales force role during trade fairs, specifically generating contacts/leads (Network Capacity) and prospect sales (Sales Performance), but in a particular context: SME with limited resources and from less competitive countries.

A quantitative study was applied and the analysis used data from 362 Portuguese SMEs/exhibitors. The statistical programs SPSS 24.0 and AMOS 20.0 were used for data analysis, which involved Structural Equation Modelling (SEM) to test the general model and hypotheses (Hair et al., 2014; Marôco, 2014). Initially, an analysis was made about correlations of observable variables (items) organized into factors (constructs) (Hair et al., 2014; Marôco, 2014). Subsequently, Structural Equation Modelling (SEM) using AMOS was employed, which allowed to provide the quantitative test of a theoretical model hypothesized by the researcher (Hair et al., 2014; Mâroco, 2014). This operation implies testing the measurement psychometric properties involved Confirmatory Factor Analysis (CFA), using Maximum Likelihood Estimation (Hair et al., 2014; Marôco, 2014). Then, the bootstrap resampling method was used to estimate the indirect effect of the "Sales Force Proactiveness" on the "Exhibitor's Sales Performance" (Marôco, 2014).

Finally, the Ordered Logit Model was used to assess the effects of the control variable "frequency of participation in trade fairs" on each indicator of the exhibitors' sales performance (amount, profit and return on investment). In fact, "*when the response variable of interest is ordinal, it is advisable to use a specific model such as the ordered logit model*" (Grilli & Rampichini, 2014, p. 4510). The STATA was the software used in the analysis according to the Ordered Logit Model (Liu, 2015; Williams, 2016).

The results show that the proactivity of the sales force influences the network (Network Capability) and sales performance (profit, sales amount and return on investment), also revealing that continuous participation in trade fairs contributes to sales performance. The findings have implications on how trade fair exhibitors can better employ their sales force strategies and improve their sales effectiveness and return on investment. Therefore, sales force proactivity can be an especially useful factor for small companies/exhibitors, because they are often forced to optimize costs due to limited resources (Fang & Ding, 2020). Participating in a trade fair is an ongoing process and the exhibitor's experience is a key factor to overcome difficulties (Li, 2020) and to accomplish specific goals more efficiently (Kang & Schrier, 2011), mainly profit, sales amount, and ROI objectives.

The study has its limitations, such as the sample, constituted by a majority of Portuguese companies, which limits its generalisation. Another limitation is the measurement of the sales performance, which is based on the exhibitors' level of satisfaction, although it would be more appropriate to evaluate real sales results. Ultimately, the study does not consider the factors that motivate proactiveness, so future studies may apply an examination of these factors in the trade fair context.

This study also suggests some insightful directions for future research.

5. METHODOLOGIES

All the essays that shape the thesis present a quantitative methodology and also used a questionnaire as a research instrument. The questionnaire survey is *"a technique for gathering statistical information about the attributes, attitudes or actions of a population by administering standardized questions to some or all of its members"* (Buckingham & Saunders, 2004, pp. 13).

The used data analysis technique will depend on the study design and involves the identification and measurement of variation in a set of variables (Hair et al., 2014). Thus, the essays that compose this thesis essentially use two quantitative techniques: Structural Equation Modelling and Ordered Logit Model. The next topics explain these methodologies.

5.1 Structural Equation Modelling

Structural Equation Modelling is a generalized modelling technique, which is used to test the validity of theoretical models that define causal, hypothetical relationships between variables (Marôco, 2014). Structural Equation Modelling *"provides the appropriate and most efficient estimation technique for a series of separate multiple regression equations estimated simultaneously"* (Hair et al., 2014, pp. 19), using analysis of covariance structures to explain causality among constructs (Cooper & Schindler, 2013). In practice, Structural Equation Modelling comprises a set of multivariate techniques, but which are confirmatory rather than exploratory to test whether the models fit the data (Byrne, 2016). Thus, two basic components are required: (1) the structural model, and (2) the measurement model (Hair et al., 2014). The structural model is the path model, which shows the causal and correlational links among latent variables in a theoretical model. The measurement model refers to the implicit or explicit models that examine the relationship between the latent variables and their indicators or measures (Hair et al., 2014).

Currently, Structural Equation Modelling is extremely popular in social and human sciences (Marôco, 2014), particularly when applied by marketing and business

(Martínez-López et al., 2013). The main reasons are the advantages it offers to research (Marôco, 2014), specifically because the Structural Equation Modelling allows *"to assess empirically new theoretical proposals articulated by means of complex models"* (Martínez-López et al., 2013, p. 115). Nunkoo and Ramkissoon (2012) highlight as advantages: (1) modelling of measurement errors and unexplained variances, (2) simultaneous testing of relationships, (3) ability to link both micro and macro perspectives, and (4) best-fitting model and theory development. However, Nunkoo and Ramkissoon (2012) also point out limitations such as: (1) difficulty in choosing and using SEM software packages, (2) complexity and ambiguity, (3) limited use in exploratory research, and (4) inability to model 'truly' categorical variables. Nonetheless, in general, Structural Equation Modelling is a mature and successful methodology in marketing and business research (Kim et al., 2015; Martínez-López et al., 2013; McQuitty & Wolf, 2013), because it is a particularly suitable technique for evaluating multiple relationships between observed and latent variables (Hair et al., 2014; McQuitty & Wolf, 2013). Even, essays that use Structural Equation Modelling also tend to be better evaluated and scrutinized in the review, so applying this methodology can have indirect benefits (Babin et al., 2008).

5.1.1 Importance of theory

A model must be developed with underlying theory (Hair et al., 2014). Proper application of Structural Equation Modelling depends largely on theory, where each step of the analysis is based on theoretical reasoning (Nunkoo & Ramkissoon, 2012). Generally, theory is a primary objective of academic research and Structural Equation Modelling analysis must be dictated, first, by a strong theoretical basis (Hair et al., 2014).

5.1.2 Importance of sample size

The analytical analysis of Structural Equation Modelling generally derives from a sample (Kline, 2016). Consequently, the analytical findings of Structural Equation Modelling from a larger sample tend to produce more reliable statistical results

(Kim et al., 2015). Opinions on the minimum sample size are diverse (Hair et al., 2014). Generally, sample size guidelines are as follows: (1) large, n > 200 cases; (2) medium, n = approximately 150 cases; and (3) small, n < 100 cases (Kim et al., 2015). To obtain statistically stable estimates and less sampling errors, the literature recommends that researchers have 200 observations to provide a solid basis for the estimation (Hair et al., 2014; Kim et al., 2015).

Additionally, Kim et al. (2015) state that there are no absolute standards in relation to the item-respondent ratio, however different proportions are suggested (for example, 1 item =5 answer, 1 item =10 answer or 1 item = 20 answer). However, it is believed that in Structural Equation Modelling, a proportion less than 1 item = 5 answer may not be able to produce accurate results (Bentler & Chou, 1987; Kim et al., 2015).

Finally, it is important to note that the sample size issue goes beyond being able to estimate a model. The sample size must be adequate to represent the population of interest (Hair et al., 2014).

Hence, in the four essays present in this thesis, the samples contain more than 300 responses and significantly exceed the item-respondents proportion, as well as the sample started from an organized and updated list of companies participating in international trade fairs from credible sources, as mentioned in each article. Thus, it is believed that the samples used effectively represent the population of interest.

5.1.3. Variable types

One of the unique characteristics of Structural Equation Modelling is the possibility of simultaneously considering several types of variables (Marôco, 2014). Table 1 describes the main characteristics of using variables in Structural Equation Modelling.

Table 1 - Variable types

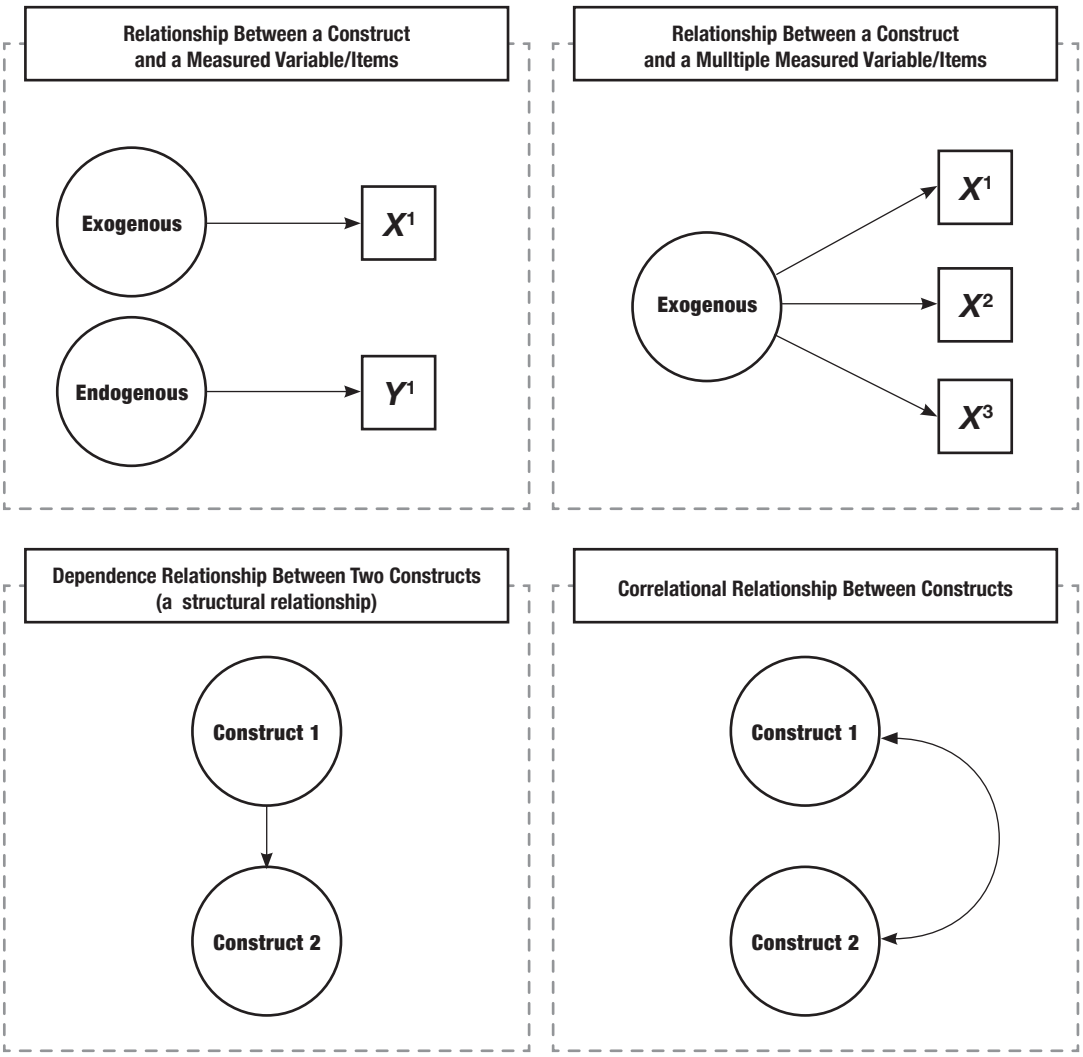
Variable types	Considerations
Manifest variables or observed variables	A variable or factor that can be directly measured or observed (Marôco, 2014).
Latent variable, factor, or construct	A latent variable cannot be measured directly but can be represented or measured by one or more variables (indicators). Together, the answers to these questions give a reasonably accurate measure of the latent variable (Hair *et al.*, 2014). These variables are generally estimated by psychometric scales consisting of a set of items or indicators (Marôco, 2014). Usually, the concept "construct" in business and social science research describes an idea, entity, or theoretical concept (Karsay, 2017).
Independent or exogenous variables	An independent or exogenous variable, sometimes also called a predictor variable, is a variable that is being manipulated to observe the effect on a dependent variable (Hair et al., 2014).
Independent or endogenous variables	The dependent variable results depend on how the independent variable is manipulated (Byrne, 2016).
Control variables	A control variable is any factor that is controlled or held constant during the search. Control variables are not included in the analysis, but for which differences are expected or proposed (Hair et, al., 2014).

Source: Own elaboration

5.1.4 Structural Relationships

A structural model involves specifying structural relationships between latent constructs (Hair et al., 2014). Figure 2 illustrates common types of theoretical relationships in a Structural Equation Modelling.

Figure 2 - Types of theoretical relationships



Source: Own elaboration adapted from Hair et al. (2014)

5.1.5 Structural Equation Modelling steps

The Structural Equation Modelling procedure requires that some steps/questions be carried out/treated before its real application. (Hair et al., 2014). Figure 2 shows the necessary steps, which must be performed before applying Structural Equation Modelling.

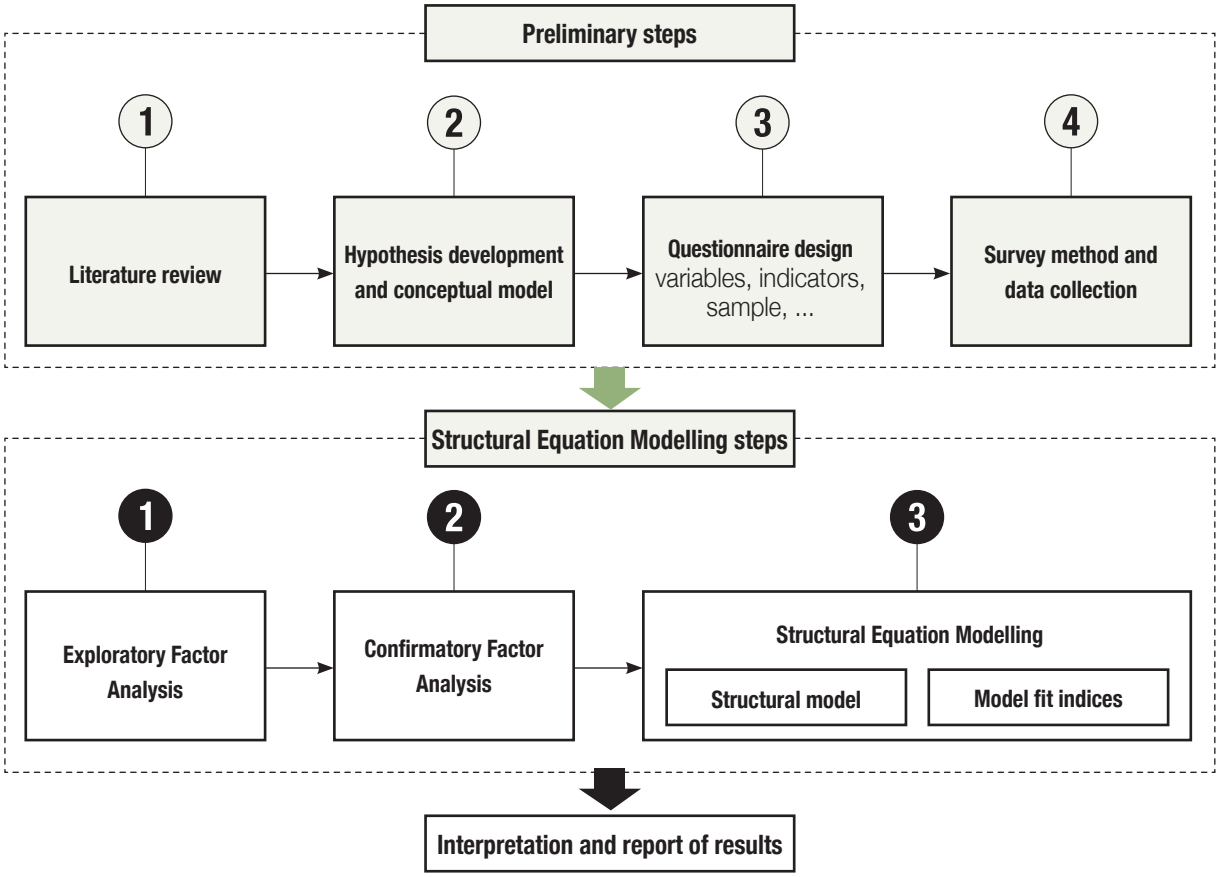
- **Literature review**: The quality of the Structural Equation Modelling results depends on the validity of the ideas/theories developed by the researcher

(Kline, 2016). Because this statistical methodology takes a confirmatory approach (i.e., hypothesis testing) on a structural theory related to some phenomenon (Byrne, 2016; Kline, 2016). In all instances, Structural Equation Modelling must be supported by substantive theoretical bases (Hair et al., 2014). Conversely, if a structural model fits the data without theoretical sense, that model is irrelevant (Millsap, 2007).

- In the four essays, a literature review was developed according to the objectives of each research.
- **Hypothesis development and conceptual model**: Normally, the literature review analyses theory that represents "causal" processes or possible interrelationships between the different variables or constructs (Byrne, 2016; Kline, 2016). These interrelationships between constructs describe the possible effects (positive or negative) which correspond to hypotheses (Kline, 2016). Usually, each hypothesis represents a specific relationship that must be specified (Hair et al., 2014). Therefore, in each article of the thesis, the hypotheses were duly supported by the theory.
- **Questionnaire design** (variables, indicators, sample, …): The questionnaire is a research tool (Buckingham & Saunders, 2004) and must be properly designed to meet the objectives of the study (Kline, 2016). During the development of the questionnaire, it is very important that the indicator variables and measurement scales are clearly defined, as well as the selection of an appropriate sample (Bourke et al., 2016; Hair et al., 2014; Kline, 2016).
- In the questionnaires used in the four essays, nominal and ordinal scales were also used to measure responses. Nominal scales are a nomenclature scale, where variables are simply "named" or labelled, in no specific order. A nominal scale can assign numbers, but those numbers have no quantitative meaning, they are just for labelling categories (Hair et al., 2014). These scales were used mainly in questions about the characterisation of the respondent companies/exhibitors such as the type of company, for example.
- In ordinal scales, variables can be ordered or classified in relation to the quantity of attribute possessed. The numbers used in ordinal scales are not quantitative because they indicate only relative positions in an ordered series. The order of values is what is important and significant for the evaluation of responses (Hair et al., 2014). Ordinal scales were used in questionnaires to measure responses to constructs, using Likert-type scales with five categories, generally ranging from "1= strongly disagree" to "5 = strongly agree" (Hair et al., 2014).

- Each questionnaire used in the essays of this thesis was constructed based on a literature review and with the support of trade fair experts and academics (Hair et al., 2014), as described in each article.
- **Survey method and data collection**: The choice of the survey method to be used is a fundamental step in the general research process. Dell'Olio et al. (2018) suggest as survey methods: postal surveys, telephone surveys, online surveys, and traveller intercept surveys. For the four essays, the online surveys' method was selected, which is gaining popularity because of its advantages (Evans & Mathur, 2018; Dell'Olio et al., 2018). The advantages that stand out are: (1) Greater convenience for the respondent, as he can respond according to his availability and convenience; (2) Possibility of assistance and visual supports, which can help the interviewee to give reliable answers; (3) Speedier response and raw data are quickly available for processing; (4) Excellent cost/benefit, as the whole process is more automatic (Dell'Olio et al., 2018). However, the following disadvantages are highlighted: (1) Lack of an interviewer present to help the interviewee understand the questions; (2) Limited access or coverage bias, because in order to participate correctly in the survey, it is required access to a computer, smartphone or similar with internet connection; (3) Finally, online surveys can create bias from auto selection, as not all individuals can be motivated or able to surf the Internet (Dell'Olio et al., 2018; Tanner, 2018). In fact, the sample is one of the main challenges of the online survey, since not all individuals have access to the Internet, which limits the generalisation of the results (Tanner, 2018). One way to minimize these disadvantages is to build an organized database and constantly update it, as well as adopt the best practices of online research (Evans & Mathur, 2018). Thus, underlying each article, databases of companies participating in international fairs were constantly built and updated from various credible national and international sources available by the main trade fairs' organizers, especially in Europe (UFI, 2020), such as Excel (United Kingdom), Exponor (Portugal), FIL (Portugal), IFEMA (Spain), Messe Frankfurt (Germany), among others. Therefore, the four essays were based on a simple random sample obtained from a complete and updated list (Han et al., 2012), in this case of the exhibitors participating in trade fairs. *"In a simple random sample, each member of the population is equally likely to be included in the sample and every possible sample is equally likely to be selected"* (Smith, 2015, pp. 139).

Figure 3 - The basic steps of the Structural Equation Modelling



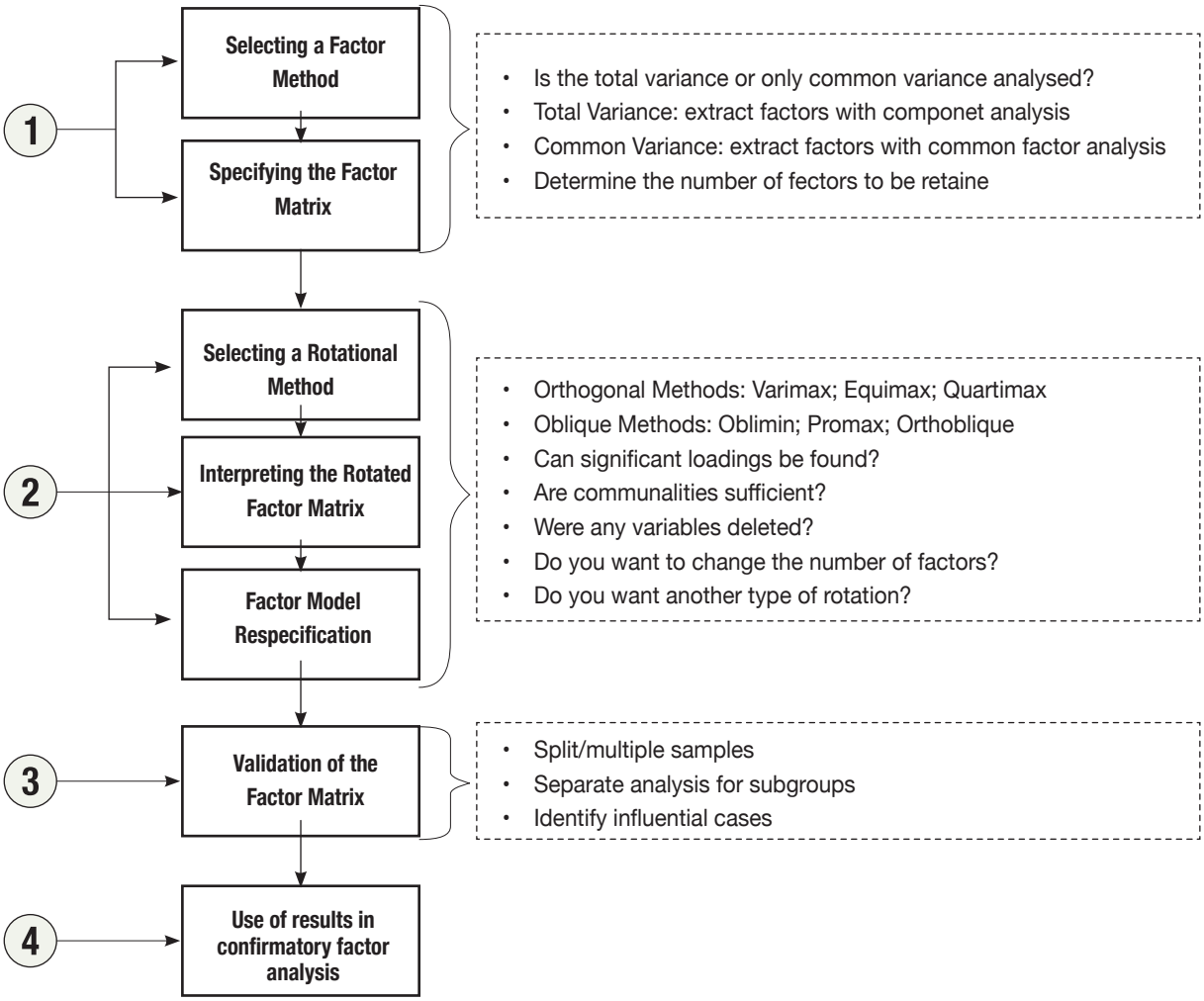
Source: Own elaboration adapted from Hair et al. (2014)

After carrying out all the preliminary steps mentioned above, the data collected is now prepared for further statistical analysis and for conducting the Structural Equation Modelling (Hair et al., 2010). Figure 3 also reveals the basic steps that are normally performed within the framework of Structural Equation Modelling (Byrne, 2016; Hair et al., 2014; Kline, 2016; Marôco, 2014).

Exploratory Factor Analysis: The main objective of an exploratory factor analysis is to define the underlying structure between the variables in the analysis (Hair et al., 2014), and does not require a prior specification of the number of factors (Kline, 2016). It is an exploratory method and a preliminary step that must be applied when there is no prior information on the factorial structure that can explain the correlation with the manifest variables (Byrne, 2016; Marôco, 2014). In practice, exploratory factor analysis provides a preliminary view of the relationships between the measured variables and the corresponding constructs

(Byrne, 2016; Hair et al., 2014; Kline, 2016; Marôco, 2014). Figure 4 summarizes the main steps of the Exploratory Factor Analysis.

Figure 4 - The basic steps of the Exploratory Factor Analysis



Source: Own elaboration adapted from Hair et al. (2014)

Generally, in the exploratory factor analysis the researcher should normally select how many factors to include in the model (Hair et al., 2014) and then, the researcher must select a rotation option that allows factors to covariate when the objective is to analyse correlated factors (Kline, 2016). The purpose of rotation in exploratory factor analysis is to increase the interpretability of the retained factors (Kline, 2016). The most popular method is VARIMAX rotation (Hair et al., 2014; Kline, 2016), hence this rotation method focusing on simplifying the columns in a factor matrix (Hair et al., 2014). So, the VARIMAX method was used in the four essays of this dissertation.

When the factorial matrix is extracted, the analysis must be made on the interpretation of the corresponding factors. The factor loadings indicate the degree of association between the variable/item and the factor/construct. An optimal structure is considered when all variables have high loadings only on a single factor. So, the variables with communalities smaller than the value 0.5 are the candidates for deletion, which means an insufficient level of explanation (Hair et al., 2014).

In the exploratory factor analysis, the so-called Bartlett's test of sphericity can also be applied, which investigates the statistical significance of the correlations between the variables (Hair et al., 2014). Another test that can be included in the exploratory factor analysis, is the so-called Kaiser-Meyer-Olkin test (KMO) that verifies the adequacy of the application of factor analysis. The KMO measures the strength of the intercorrelations and a value of 0.6 is normally considered the minimum acceptable value that allows the factorial analysis to be applied (Hair et al., 2014).

In this phase, the data normality of each item is often also assessed, for instance through the values of Skewness and Kurtosis. Skewness is a measure of symmetry and kurtosis is a measure of data flattening to a normal distribution (Brown, 2006). When using SEM, the acceptable values of skewness must be between ±3, and the appropriate kurtosis must be in the range of ±10 (Brown, 2006; Zhou & Abdullah, 2017). So, data sets with high skewness means an asymmetric distribution and high kurtosis tend to have heavy tails, or outliers.

Confirmatory Factor Analysis: Confirmatory factor analysis is normally considered as the intermediate stage of the Structural Equation Modelling project (Hair et al., 2014). Generally, confirmatory factor analysis is used to assess the quality of fit of a theoretical measurement model to the correlational structure observed between manifest variables (items) (Marôco, 2014). Therefore, the confirmatory factor analysis technique implies that the researcher specifies in advance the number of factors, and the correspondence between factors and indicators/items (Hair et al., 2014; Kline, 2016). Confirmatory factor analysis focuses exclusively on the link between factors and their measured variables, within the Structural Equation Modelling framework (Byrne, 2016), in other words, it represents what is called the measurement model within the Structural Equation Modeling (Byrne, 2016); Marôco, 2014).

During the confirmatory factor analysis, the researcher must analyse the reliability of the constructs. One of the most used measures to assess the reliability or internal consistency of the construct is Cronbach's Alpha (Byrne, 2016; Hair et al., 2014; Kline, 2016; Marôco, 2014). In general, Cronbach's alpha ≥ 0.70 is considered an indicator of appropriate reliability (Hair et al., 2014).

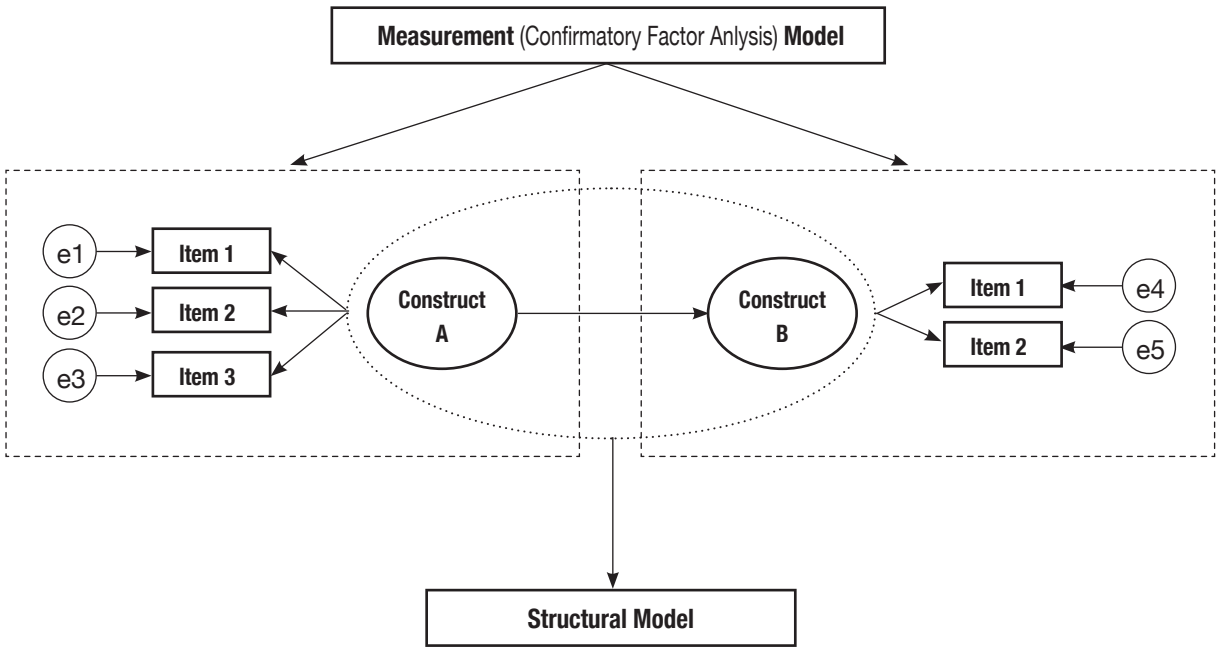
Another task of confirmatory factor analysis is to evaluate the construct's validity, highlighting convergent and discriminant validity (Marôco, 2014). Convergent validity is when the items that make up the construct have positive and high correlations with each other. Discriminant validity and an estimate of validity that refers to the absence of significant correlation with other measures that assess constructs which are theoretically not related to the variable under study (Marôco, 2014). The following measures, which are usually applied to verify the validity and the reliability are: Composite Reliability (CR); Average Variance Extracted (AVE); Maximum Shared Variance (MSV), and Average Shared Variance (ASV) (Hair et al., 2014). Hair et al. (2014) suggest as limits for these values the following: CR > 0.7; AVE > 0.5; MSV < AVE; ASV < AVE. These results indicate an acceptable level of one-dimensionality and convergent validity (Hair et al., 2014). Finally, the square roots of the AVE measures must be superior to all the correlations among all the constructs, and this data guarantees the discriminant validity (Fornell & Larcker, 1981; Roldán & Sánchez-Franco, 2012).

- **Structural Equation Modelling**: This methodology is a class of statistical models that seek to explain the relationships between the multiple variables (Hair et al., 2014). Therefore, Structural Equation Modelling reveals all the relationships between the constructs (the dependent and independent variables) that are involved in the analysis (Byrne, 2016; Hair et al., 2014; Kline, 2016; Marôco, 2014). In practice, Structural Equation Modelling examines the structure of interrelations expressed in a set of equations, like a system of multiple regression equations (Hair et al., 2014).

  Usually, Structural Equation Modelling can be disintegrated into two submodels: a measurement model and a structural model (Byrne, 2016). The measurement model represents the Confirmatory Factor Analysis model described above, which defines relationships between observed and unobserved variables (Byrne, 2016). The structural model defines relationships between constructs.

Consequently, it specifies the way in which certain latent variables influence or cause direct or indirect effects on the values of other latent variables present in the structural model (Byrne, 2016). Figure 5 represents the complementarity of the measurement model and structural model.

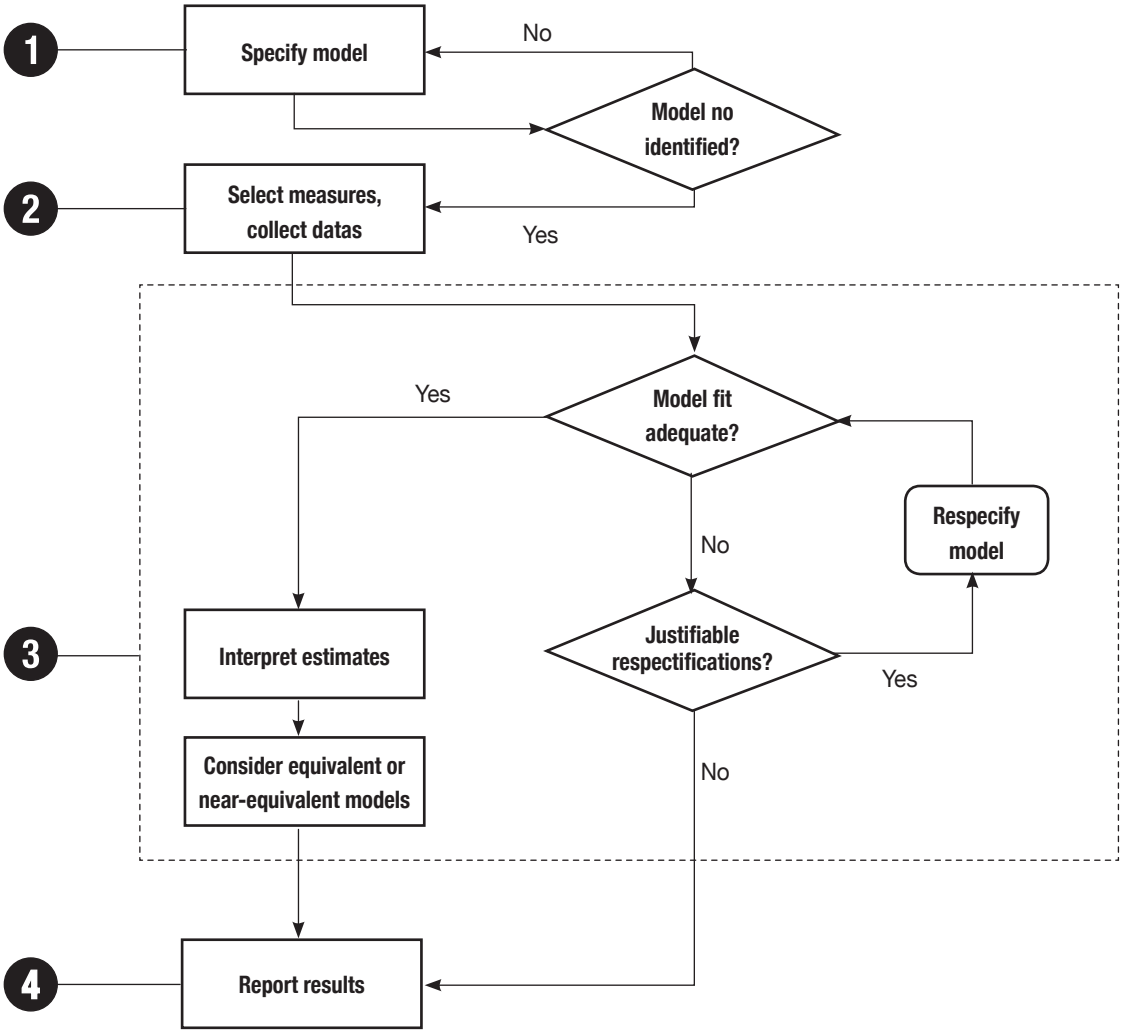
Figure 5 – Measurement model and structural model



Source: Own elaboration adapted from Byrne (2016, pp. 13)

Therefore, the next step is to specify the model, which means the definition of all causal paths between variables based on theory and basic theoretical knowledge (Byrne, 2016; Hair et al., 2014; Kline, 2016; Marôco, 2014). Figure 6 presents basic steps of Structural Equation Modelling.

Figure 6 - Basic steps of Structural Equation Modelling



Source: Own elaboration adapted from Hair et al. (2014); Kline (2016)

The design of Structural Equation Modelling begins based on the indicator variables and the hypothetical conceptual model supported by the literature (Hair et al., 2014; Kline, 2016). Then, the appropriate estimation method must be chosen to achieve a successful verification of the model. In Structural Equation Modelling, the most widely used criterion is the maximum likelihood algorithm (Byrne, 2016). This step consists of evaluating the fit of the model, which means determining how well the model explains the data (Kline, 2016). Often, an initial structural equation model does not quite fit the data (Kline, 2016). At this point the researcher must analyse whether the specification of the original model can be justified and proceeds to analyse the data, otherwise he can try to adjust the

model (Kline, 2016). Thus, the researcher can consult the modification indices which provide important diagnostic information. Modification indices allow identifying problematic indicator variables, thereby indicators/items with potential for cross-loading (Byrne, 2016; Hair et al., 2014). Typically, modification indices of approximately "4.0" or more, suggest that the fit could be significantly improved (Hair et al., 2014).

In practical terms, a specification search is an empirical trial and error approach that uses model diagnostics to suggest changes to the model (Byrne, 2016; Hair et al., 2014). In fact, when the researcher makes changes based on any diagnostic indicator, he is performing a type of specification search (Hair et al., 2014; Kline, 2016). However, it is not recommended to make changes to the model based only on the modification indices, therefore the researcher must pay attention to the theory, the sample, among other indicators (Hair et al., 2014).

Accordingly, table 2 summarizes the main indicators of the model fit, as well as the respective values recommended by the authors.

Table 2 — Model fit indicators

Model fit indicators	Recommendations	References
X^2/DF (X^2 - chi-square; DF - degrees of freedom)	X^2/DF = 1.00-5.00	Kline (2016)
CFI - Comparative Fit Index	CFI > 0.90	Jöreskog & Sörbom (1993)
NFI - Normed-Fit Index	NFI > 0.90	Garver & Mentzer (1999)
TLI - Tucker Lewis Index or NNFI - Non-Normed Fit Index	TLI > 0.95	Tucker & Lewis (1973)
IFI - Incremental Fit Index	IFI > 0.95	Bollen (1989)
GFI - Goodness of Fit Index	GFI > 0.90	Jöreskog & Sörbom (1984)
RFI – Relative fit index	RFI > 0.90	Hair *et al.* (2014)
RMR - Root Mean Square Residual	RMR < 0.05	Schumacker & Lomax (2004)
RMSEA - Root Mean Square Error of Approximation	RMSEA < 0.05 - very good; RMSEA 0.05 > 0.08 – good	Hair *et al.* (2014); Kline (2016)
PNFI - Parsimonious Normed Fit Index	PNFI >0.5	Mulaik, James, Van Alstine, Bennet, Lind & Stilwell (1989)
PGFI - Parsimony Goodness-of-Fit Index	PGFI > 0.5	Mulaik *et al.* (1989)

Source: Own elaboration

The final step is meant to accurately and completely describe the analysis of the results of the model fit (Kline, 2016). It should be noted that the result of the Confirmatory Factor Analysis is related to the measurement part of the Structural Equation Modelling which describes the loads of the indicator variables in the corresponding latent factors (Byrne, 2016; Hair et al., 2014; Kline, 2016; Marôco, 2014). Finally, once the quality of the model's fit to the data is real, the researcher can check/consult the "Regression Weights" table (using AMOS terminology). These parameters represent the structural (i.e., causal) paths in the model (Byrne, 2016). So, the researcher can test the validity of a causal structure through the significance of the trajectories/paths, which normally correspond to the hypotheses theoretically supported before applying the methodology (Byrne, 2016).

5.1.6 Structural Equation Modelling software

In parallel with the development and democratisation of the Structural Equation Modelling, the appearance and development of specific software arises (Marôco, 2014). In fact, software has been a factor in the development of Structural Equation Modelling because it is very important for its agility and precision process (Marôco, 2014). Currently, the software used in Structural Equation Modelling is mainly: LISREL-Linear Structural Relations; AMOS-Analysis of Moments Structures (Byrne, 2016; Hair Jr et al., 2014; Kline, 2016; Marôco, 2014); and PLS-Partial Least Squares (Hair Jr et al., 2014).

LISREL-Linear Structural Relations was the first software for Structural Equation Modeling (launched in the 70s) and was configured to investigate linear structural relationships (Marôco, 2014). LISREL is usually preferred by researchers familiar with the programming language (Marôco, 2014). However, it is very sensitive for samples below 200 observations (Marôco, 2014).

PLS-Partial Least Squares is a more growing software released in 2005. This software is popular because it has a friendly user interface and advanced reporting features (Hair Jr et al. 2017). But PLS software is not suitable for large sample surveys (Hair Jr et al., 2017).

AMOS-Analysis of Moments Structures as well as the SPSS-Statistical Package for the Social Sciences are both statistical software developed by IBM (IBM, 2020). The AMOS software helps to examine the hypothetical relationship between the variables, and the researcher does not need complicated syntax or programming language to operate the software (Byrne, 2016). However, AMOS requires very tedious work and is not appropriate for small samples (Byrne, 2016).

AMOS was the software used in the four essays, first because the samples were large, since they contained more than 300 observations (Byrne, 2016). Second, for the sake of convenience since AMOS is linked to SPSS and has a more accessible language than LISREL (Marôco, 2014), and third because it is an effective, accurate, efficient, and widely used/accepted software by researchers and reviewers (Byrne, 2016).

5.2 Ordered Logit Model

Ordered Logit Model (OLM) is a relevant methodology to capture the sources of influence (independent or control variables) that explain an ordinal variable (dependent variable), considering the measurement uncertainty of such data (McCullagh, 1980; Lu, 1999; Hanushek & Jackson, 2013).

The OLM is appropriate for ordinal dependent variables (Lu, 1999; Hanushek & Jackson, 2013; Grilli & Rampichini, 2014), because it provides a degree of conceptual clarity about logistic regression models for ordinal results (Fullerton, 2009).

So, OLM is a specific advisable model and more robust than traditionally used models, such as a linear regression model (Grilli & Rampichini, 2014). Linear regression does not consider the discrete nature of the data and treats the difference between response levels equally (for instance, difference between 1 and 2 likewise as the difference between 3 and 2), when, in fact, there is nothing that requires it (Lu, 1999). Therefore, this methodology is appropriate when the dependent variable is discrete ordered (Lu, 1999; Grilli & Rampichini, 2014).

OLM is developed from a linear relationship between a continuous latent variable: $P\_i = P(Y = i / x)$ and a vector of regressors: $\exp(\alpha\text{-}\beta\text{^T } X), \ldots J = 1, \ldots, 5$ (Lu, 1999). For example, suppose someone answers a questionnaire to report a certain level of satisfaction with a brand (1 - totally dissatisfied to 5 - totally satisfied). This methodology aims to analyse how well this response can be predicted by the responses to other questions (for example purchase frequency).

5.2.1 Proportional Odds Model (POM) and the Generalized Logit Model (GLM)

Based on a set of predictors, the binary logistic regression model estimates the chances of response for a dichotomous variable, which can be defined as (Liu & Koirala, 2012):

$$In\,(Y`) = logit\left[\pi\left(\underline{X}\right)\right] = In\left(\frac{\pi\left(\underline{X}\right)}{1-\pi\left(\underline{X}\right)}\right) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_p X_p$$

However, in OLM, normally the result variable has more than two levels. The OLM is also often called the POM (Williams, 2016), which involves adjusting a set of equations for cumulative distribution probabilities of the response categories (Liu & Koirala, 2012), so this ordinal logistic regression model can be expressed in logit form (Liu & Koirala, 2012):

$$In\,(Y`) = logit\left[\pi(X)\right] = In\left(\frac{\pi(X)}{1-\pi(X)}\right) = \alpha_j + \left(-\beta_1 X_1 - \beta_2 X_2 - \cdots - \beta_p X_p\right)$$

Therefore, $\pi(\underline{X}) = \pi(Y \leq j \mid X_1, X_2, \cdots, Xp)$ is the probability of being at or below category *j*, given a set of predictors. The $j = 1,2,\cdots,j\text{-}1$ and α_j are the cut points, when *j* categories exist, the POM estimates *J-1* cut points. The β_1, β_2,$\cdots\beta_p$ are logit coefficients.

In practice, POM is used "*to estimate the cumulative probability of being at or below a particular level of a response variable*" (Liu & Koirala, 2012, p. 242). In other words, based on POM, the researcher can dichotomise it at *j* and get a set of *j-1* logistic models..

Nonetheless, "*the common slope assumption in the POM is not always reasonable*" (Lu, 1999, p. 272) because POM defines that the relationship between the predictors and the chances that an answer is in the next higher order category, is the same, regardless of the categories that are being analysed/compared (Williams, 2016). So, this situation is described as proportional odds assumptions, but this assumption is hard to meet in real data (Williams, 2016). For example, when there are 5 categories in a model, 4 of which can meet proportional odds assumptions and only one of them cannot (Williams, 2016). In sort, the POM comes from the assumption that they are the same.

In other words, "*if this assumption does not hold based on the score test, alternative models that allow the odds ratio to change with respect to response categories should be applied*" (Lu, 1999, p. 272). Thus, the proportional odds assumptions can be assessed by the Brant test (Brant, 1990), which provides the chi-square test for each predictor. Therefore, if the chance is greater than its alpha level, data set satisfies this proportional odds assumption (Brant, 1990).

To estimate the *ln(odds)* of being in category j^{th} or below it, the POM can be rewritten as the following form (Liu & Koirala, 2012):

$$\begin{aligned} & logit\left[\pi\left(Y \leq j|X_1, X_2, \cdots, X_p\right)\right] \\ & = In\left(\frac{\pi\left(Y \leq j|X_1, X_2, \cdots, X_p\right)}{\pi\left(Y > j|X_1, X_2, \cdots, X_p\right)}\right) \\ & = \alpha_j + \left(-\beta_1 X_1 - \beta_2 X_2 - \cdots - \beta_p X_p\right) \end{aligned}$$

According to Liu & Koirala (2012), the model above forecasts cumulative logits in the response categories j^{th}, which can then be used to calculate the estimated cumulative odds and the cumulative probabilities being in category or below it. But it should be noted that different software (e.g., STATA; SAS) can estimate parameters differently and the OLM can be stated in different ways (Liu & Koirala, 2012).

Even so, to overcome POM limitations, the application of Generalized Logit Model (GLM) is suggested (Lu, 1999; Williams, 2016), because GLM is a more flexible model whose premises are not violated (Williams, 2016). The model is expressed as (Liu & Koirala, 2012):

$$\begin{aligned} In(Y_j`) &= In\left(\frac{\pi_j\left(\underline{X}\right)}{1 - \pi_j\left(\underline{X}\right)}\right) \\ &= \alpha_j + \left(\beta_{1j} X_1 + \beta_{2j} X_2 + \cdots + \beta_{pj} X_p\right) \end{aligned}$$

Liu and Koirala (2012) warn that the model above can also be expressed in another way, as proposed by Williams (2006):

$$\begin{aligned} & logit\left[\pi\left(Y > j|X_1, X_2, \cdots, X_p\right)\right] \\ & = In\left(\frac{\pi\left(Y > j|X_1, X_2, \cdots, X_p\right)}{\pi\left(Y \leq j|X_1, X_2, \cdots, X_p\right)}\right) \\ & = \alpha_j + \left(\beta_{1j} X_1 + \beta_{2j} X_2 + \cdots + \beta_{pj} X_p\right) \end{aligned}$$

In both equations αj are the intercepts or cutpoints, and $\beta_{1j},\beta_{2j},\cdots,\beta_{pj}$ are logit coefficients *j-1* (Liu & Koirala, 2012). Williams' (2016) gologit2 is inspired by Fu's (1999) gologit program. This model is more parsimonious and easier to interpret because it offers an alternative when estimating partial proportional probability models (Liu & Koirala, 2012).

The GLM considers that all the effects of the explanatory variables may alter among each of the cutpoints, in other words GLM considers that at least one of the coefficients for a predictor varies across categories (Liu & Koirala, 2012).

Hence, in practice, first the investigator must analyse whether the assumption of POM is unsustainable (verified through the Brant test). If so, the investigator can use the GLM proposed by Fu (1999) for a preliminary analysis. Then, the investigator should use the model proposed by Williams (2006) because it is more robust and allows a more accurate analysis (Liu & Koirala, 2012).

In short, GLM follows multinomial logistic regression algorithms. Generally, when the dependent variable has more than two outcome categories, GLM is recommended because, in reality, the POM assumption is often violated by the data (Williams, 2016).

This methodology was applied particularly in this study, namely in chapters 3 and 4 which allowed to analyse the effects of control variables on the criteria variables. This model, despite its robustness and being known since the 70/80s, is rarely used by marketing or management studies. Thus, the use of this methodology may also contribute to the originality of this dissertation.

5.2.2 Software for Ordered Logit Model

Statistical software as SAS, SPSS and Stata allow to apply ordinal regression analysis (Liu & Koirala, 2012). However, Williams' (2016) gologit2 program for Stata is a powerful extension and can estimate GLM and POM, as well as other methodologies (Liu & Koirala, 2012).

Therefore, STATA is the software indicated for OLM. In the present study, the OLM and GLM methodology applied in the essays relating to chapters 3 and 4, utilized STATA to estimate the respective analysis data.

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Chapter 1

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(See Appendix, p. I)

Trade Fairs as an Intelligence Process: the Perspective of Companies/Exhibitors

1. INTRODUCTION

Trade fairs and exhibitions are classified as "Business and Trade Events", for they include activities related to business with a focus on commercial operations (Getz, 2012). They are frequently used by companies as a marketing tool (Sarmento et al. 2015). The exhibitors are trade fair participants who physically exhibit their products and/or services to visitors, under the guidance of an organising entity (Lin, 2016; Silva, 2014).

Trade fairs are a privileged space for interaction between the buyer/visitor and seller/exhibitor (Silva, 2014), a relational interaction tool (Kirchgeorg et al., 2010), and an excellent source of information and data for exhibitors/companies (De Martino & Magnotti, 2018; Gębarowski & Wiażewicz, 2014; Herbig et al., 1998; Reychav 2009; Zieliński & Leszczynski, 2011). Trade fairs facilitate five primary exchange functions: transactional (sales), informational (information sharing), social (relational), symbolic, and cultural (Tafesse & Skallerud, 2015).

When emphasising trade fairs as a source of information (Reychav, 2009), the access to information is an essential resource and must be taken into consideration in any decision made regarding the company's strategy (Giebels et al, 2015). Therefore, the amount and quality of the collected information on the market environment will certainly influence the decision and the efficiency of business operations (Saura et al., 2019; Sook-Ling et al., 2015; Sundiman, 2018). Consequently, intelligence activities entail systematically collecting, organising, and processing information concerning the company's marketing environment, which can be used to make business-critical decisions (Ade, et al., 2017; Mandhachitara & Allapach, 2017).

This approach becomes even more crucial when considering the dynamics of companies in the current economic context, marked by globalisation and exacerbated competition (Black, 2019). Thus, trade fairs are indeed highly effective events in accessing marketing information (Bathelt & Schuldt, 2010; Bettis-Outland et al., 2012; De Martino & Magnotti, 2018; Gębarowski & Wiażewicz, 2014; Proszowska, 2018; Reychav, 2009; Zieliński & Leszczynski, 2011) and new markets (Herbig et al.,1998; Measson & Colin, 2015). From this perspective, this study is pertinent in order to demonstrate the importance of intelligence activities in the trade fair context to promote competitiveness. Despite some studies about trade fairs as an intelligence tool (Hlee et al., 2017; Ratajczak, 2007; Søilen, 2010; Søilen, 2013), this topic has been consistently neglected in marketing

research (Li & Bathelt, 2017), especially when gathering information about customers, competitors, the market, among others (Søilen, 2010). The main reason is that studies on trade fairs have traditionally been strongly focused on exhibitors, clients, and relationships (Sarmento & Simões, 2018), instead of studying other approaches such as a cognitive, information, experience tool, among others. Therefore, knowledge/ information in the context of trade fairs deserves further study (Li & Bathelt, 2017). Namely, recent systematic review papers about trade fairs, such as Sarmento & Simões (2018), Tafesse & Skallerud (2017) suggest: research about trade fairs as a process of information exchange, knowledge, and learning among participants, as future studies. Accordingly, trade fairs need to be analysed through a perspective that integrates trade and information (Li & Bathelt, 2017).

Thus, this article offers a holistic approach to trade fairs as an intelligence process from the exhibitors' perspective. This study has two main objectives: the identification of the main sources of information necessary for exhibitors and the proposal of a conceptual structure that describes the trade fair intelligence process of the exhibitors.

The remainder of the paper is structured as follows: The article first examines the research literature to identify and understand existing knowledge relevant to activities' intelligence in the trade fair context, as well as identify operations of the trade fair intelligence process of the exhibitors. The following section describes the methodology adopted in empirical research, as well as the conceptual model and hypotheses formulation. The next section presents the results, discussion, findings and implications; thereafter, the main conclusions of the study are presented.

2. THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

2.1 Trade Fairs as a Source of Information

Jamil (2013) reports that one of the most relevant phases of intelligence activities is the collection of data and information. In regard to this matter, trade fairs are an excellent source of information and data for exhibitors and companies (Bathelt & Schuldt, 2010; Bettis-Outland et al., 2012; De Martino & Magnotti, 2018; Gębarowski & Wiażewicz, 2014; Herbig et al., 1998; Palumbo, 2008; Proszowska, 2018; Zieliński & Leszczynski, 2011), because trade fairs enable the interactive gathering of information concerning the industry, customers, markets, products/services, competitors, and technology trends (Borghini et al., 2006; Herbig et al., 1998; Kellezi, 2014; Maskell, 2014; Situma, 2012; Søilen, 2013; Ummulkulthoum & Jianhua, 2018). In general, trade fairs enable networks of contacts from which exhibitors and visitors can gather information, advice and other business benefits (Kitchen, 2017). Mainly, a "trade fair environment is rich in sensorial stimuli – sounds, noises, odours, colours, signs, physical objects" (Rinallo et al., 2010, p. 252). Søilen (2010) argues that, at trade fairs, there is an excellent opportunity for the exhibitor to know what others - customers, experts, partners, journalists, influencers in general - think about the product, because of the interactivity that exists between the various participants (visitors and exhibitors). Moreover, despite the dangers of espionage, trade fairs are one of the main opportunities for gathering market information (Palumbo, 2008). They play an important role in the meeting between producers and consumers (Caber et al., 2016), being a space to transfer/distribute or create contact networks, but also a place to collect information that will then be analysed (Søilen, 2013; Measson, & Campbell-Hunt, 2015). Intensive interaction and observation at trade fairs, allows for interactive learning processes that stimulate exchange and generate knowledge (Bathelt & Schuldt, 2008). Furthermore, the trade fair organiser may also offer resources (eg, apps and websites) or services (service levels) that facilitate the efficient exchange and learning of information between the trade fair participants (Tafesse, 2014). Therefore, trade fairs provide high-quality information by gathering thousands of experts in the same space (Hlee et al., 2017) and they are useful as sources of information not only for exhibitors, but also for visitors. The visitors highlight other aspects such as experiences and knowledge, besides buying (Sarmento et al., 2015). Thus, exhibitors and visitors are two important players in the exchange of information during a trade fair (Ling-yee, 2006;

Sarmento et al., 2015); "Because trade fairs are typically conducted as a dialogue between exhibitors and visitors" (Blythe, 2002, p. 629). The interaction between participants at the trade fair is essential to the experience of exchanging information (Bettis-Outland & Guillory, 2018). However, interaction with customers is not the only type of interaction that exhibitors have during the trade fair (Bathelt & Schuldt, 2008). Direct and indirect contact with competitors, suppliers and complementary companies is also possible and represents extremely important interactions for the exchange of information (Bathelt & Schuldt, 2008). In fact, the sources of information, means, moments and opportunities to exchange information during the trade fair, are multiple (Bathelt & Schuldt, 2008; Reychav, 2009; Shih & Yang, 2019). Consequently, it is important to recognize that the collection of information during the trade fair can arise from explicit/coded data (information that can be transmitted formally and systematically), as well as from tacit data, produced by the participants' personal experience (Semertzaki, 2011). Therefore, the multiplicity of information that can be shared at a trade fair plays a significant role (Reychav, 2009), even though the hasty, flowing and highly dynamic nature of these events (Reychav, 2009) may generate some noise and confusion (Rinallo et al., 2010; Reychav, 2009).

Trade fairs can generate a sense of disorientation due to the confusion of crowds, and so forth. This amount of environmental noise at trade fairs can be considered excessive, creating obstacles to the selection of useful information (Rinallo et al., 2010). This difficulty in gathering information can even provoke different expectations among exhibitors and visitors (Alias & Othman, 2018). Hereby, it is important to study how the exhibitor can structure the information gathering operation at trade fairs. It should be noted that previous studies are not clear on how exhibitors can collect and analyse information (intelligence activities) from various sources (consumers, customers, market, etc.) in a trade fair context. Consequently, the present study will try to provide the missing information, presenting a set of insights about how the exhibitors can structure and operate their collection and analysis of information in a trade fair context, especially for its rich and varied sources of information.

2.2 Intelligence Activities in Trade Fair Context

Trade fairs allow exhibitors to gather information from various sources (Hlee et al., 2017). Consequently, Hlee et al. (2017), Ratajczak (2007), Søilen (2010) and Søilen (2013)

introduce the concept of trade fair intelligence as a process of collecting, organising, and analysing information from trade fairs that can be used to make critical decisions.

Søilen (2010) argues that the main intelligence activity at a trade fair is the product itself, because exhibitors have an exceptional opportunity to see it demonstrated. Nevertheless, there are other equally relevant sources of marketing information that trade fairs provide, for instance, the collection of information from visitors (Alias & Othman, 2018; Hlee et al., 2017; Søilen, 2013), which may be classified as customer intelligence (Rouhani et al., 2012). Customer intelligence is the process of collecting data and analysing information about consumers and their actions, in order to build a strong relationship with customers, hereby being able to influence their decisions (Moore et al. 2012).

The exhibitors are also able to collect general market information (about trends, competitor, etc.), particularly about the sector they represent (Alberca et al., 2018; Herbig et al., 1998; Kellezi, 2014; Maskell, 2014; Situma, 2012; Søilen, 2013; Ummulkulthoum & Jianhua, 2018), which can be called the market condition intelligence (Rouhani et al., 2012). This market condition intelligence process provides intelligence information about the market where the company operates or wants to operate in, and allows the use of reliable information to make decisions (Hedin et al., 2011; Jamil, 2013; Mandhachitara & Allapach, 2017).

As proposed by Søilen (2010), the exhibitors may also gather information about the performance of their products/services from their target audience, i. e. visitors (Gopalakrishna et al., 2019), which can be defined as product intelligence (Rouhani et al., 2012).

Product intelligence is the process or system of collecting and analysing product information (design, manufacture, performance, etc.) (Rijsdijk et al., 2007). Therefore, customer intelligence, market condition intelligence, and product intelligence are three dimensions of the marketing information sources that trade fairs provide to exhibitors. However, it should be noted that regardless of the context, all these definitions share the same focus - collecting, organising, and analysing data and information (Rouhani et al., 2012). What differs is each one's perspective. All definitions are part of an umbrella concept which is "Business Intelligence", encompassing the analysis of data/information, both inside and outside the company (Casado, 2004; Rouhani et al., 2012; Pirttimaki, 2007; Štefániková & Masárová, 2014). In practice, the intelligence activities "seek to transform data into information and information into intelligence" (Guarda et al., 2012, p. 457).

Based on the literature, it can be said that Trade Fair Intelligence Activities (intelligence in the trade fair context) can happen in three dimensions: Product Intelligence, Customer Intelligence and Market Condition Intelligence, leading to the following hypotheses:

H1. The Customer Intelligence contributes positively as Trade Fairs Intelligence Activities of the exhibitors.

H2. The Product Intelligence contributes positively as Trade Fairs Intelligence Activities of the exhibitors.

H3. The Market Condition Intelligence contributes positively as Trade Fairs Intelligence Activities of the exhibitors.

As can be seen, exhibitors can gather a lot of vertical (market, customer, etc.) and horizontal (competitors) marketing information. Nonetheless, this marketing information also requires an Information Management System in order to control the said information (Kahraman & Çevikcan, 2011).

2.3 Information Management System of the Exhibitor

Laudon and Laudon (2019) classify information systems as a set of interrelated components that collect, manipulate, stock, and disseminate data and information to support decision making and/or provide a mechanism to achieve the company goals (Stair & George, 2012). In fact, the information management system supports decision making by providing the information at the right time, in the right way (Al-Adwan et al., 2015), improving the transparency, controllability, and performance of business management processes (Kunath & Winkler, 2019). The information management system, in particular, can be implemented in various aspects of marketing (Hakhu et al., 2013).

Therefore, if the company has up-to-date and realistic information deriving from a vast set of data, its marketing management will surely improve (Potgieter et al., 2013) because an appropriate information system can help companies make the right strategic marketing decisions (Saura et al., 2019).

Thus, trade fair intelligence feeds information systems, allowing us to suggest the following hypothesis:

H4. Trade Fair Intelligence Activities have positive effects on the Information Management System.

2.4 Strategic Marketing Management of the Exhibitor

Gnizy (2019) found that the use of a good information system improves company performance through strategic orientations. El-Omari (2019) has shown that gathering and processing proper marketing information is an important activity for companies. Inexorably, companies need the information to support their decision-making process (Cacciolatti & Lee, 2015) and help managers prepare and adjust marketing strategies (Igbaekemen, 2014).

In fact, the interaction and mutual exchange of information between the trade fair participants contribute to making them more likely to better understand each other's needs and desires (Ling-yee, 2006). Accordingly, the process of acquiring/producing knowledge based on marketing data and information, in this case obtained at trade fairs - Trade Fair Intelligence Activities – is a fundamental operation, which allows for applying this knowledge to the strategic management of the company's marketing (Jamil, 2013), in this case the exhibitor. Strategic marketing management is the process of developing strategies which involve identifying objectives, developing and implementing marketing programmes (Akhter, 2015). Company marketing management consists of structuring tasks within the overall process of marketing activities (Volodymyr, 2017). In practice, strategic marketing management means the preparation and implementation of a strategic marketing plan (Dibb et al., 2019), which needs up-to-date and organized information (information systems) regarding the market, competitors, etc. (Kotler & Armstrong, 2017). Therefore, strategic marketing management depends on marketing information management systems (El-Omari, 2019), which allow us to assess the following hypothesis:

H5. Information Management System has positive effects on Strategic Marketing Management.

Neil et al. (2012) demonstrate that the effective implementation of Strategic Marketing Management contributes towards the company's performance because the intensive use of marketing tools helps to develop the company's competitive intensity (Stavroula et. al., 2018).

2.5 Company/Exhibitor Competitiveness

The dynamic ability of collecting information, creating and using knowledge (like trade fair intelligence activities) increases a company's ability to build and sustain a competitive advantage to survive in highly turbulent and rapidly changing markets (Nemati & Khajeheian, 2018; Shih & Yang, 2019), because companies, in this instance exhibitors, can identify the niche markets, and their resources can be configured to properly exploit opportunities (Nemati & Khajeheian, 2018). Concomitantly, Sánchez-Gutiérrez et al. (2019) suggest that marketing and intelligence activities (for example, customer relationship, information management and converting data into knowledge about customer needs) have a positive effect on the company's competitiveness by creating added value (competitive advantages).

Cetindamar and Kilitcioglu (2013, p. 12) advocate that the "company competitiveness can be measured through the outcome/performance of competition, assets/factors and processes that turn the assets/factors into actual performance", because in practice, the company's competitiveness is the "capacity to compete in a specific market, to increase its market share, to enter international markets by exporting, and to achieve sustainable growth and profitability" (Cetindamar & Kilitcioglu, 2013, p. 20).

Thus, the company's competitiveness implies the creation of a competitive advantage over the competition (Sigalas et al., 2013), which reflects its ability to capture the market (Gupta et al., 2016). Competitive advantages can be the development of superior quality products or services, cost leadership and differentiation from competitors, so that customers can correspond with high satisfaction rates (Porter, 1998). Consequently, a competitive advantage may be the result of the strategic processing of data, information, and knowledge (Eidizadeh et al., 2017; Katsikea et al., 2019; Lin et al.. 2015; Roger et al., 2016) through marketing intelligence activities - collecting, organizing, and processing marketing information (Ade et al., 2017), in this case, Trade Fair Intelligence activities.

In this context, Ahmad (2015) demonstrated that the strategic and tactical use of business intelligence tools - as well as the use of information based on these activities (including trade fair intelligence) - positively influences the attainment of sustainable competitive advantages and, consequently, competitiveness.

The competitive advantage can derive from the strategic management of data, information, and knowledge/intelligence (Eidizadeh et al., 2017; Katsikea et al., 2019; Lin et al., 2015; Roger et al., 2016) as well as from the strategic marketing management, which can improve a company's competitive position (Sánchez-Gutiérrez et al., 2019). Hereby, the following hypothesis is suggested:

H6. Strategic Marketing Management has positive effects on the Company's Competitiveness

3. CONCEPTUAL MODEL

Based on the literature review and the formulation of hypotheses, Figure 1.1, which represents a conceptual model, is presented. The model considers the constructs (Customer Intelligence, Product Intelligence, Market Conditions Intelligence, Trade Fair Intelligence, Information Management, Strategic Marketing Management and Company Competitiveness), their effects and the development of hypotheses.

It should be noted, as shown in Figure 1.1, that to test the H1, H2, and H3, it was necessary to proceed with a second-order Confirmatory Factor Analysis. Second-order Confirmatory Factor Analysis is a composite of common factor configuration (Van Riel et al., 2017). Consequently, the study was able to test if the three factors (Customer Intelligence, Product Intelligence, Market Condition Intelligence) are part of a composite "Trade Fair Intelligence Activities" of the exhibitors.

In short, this conceptual model can bring about new knowledge and help solve the gap, by presenting a Trade Fair Intelligence Process which facilitates the construction of competitive advantages for exhibitors.

4. METHODOLOGY

The study methodology has a quantitative profile and comprises the development of a questionnaire aiming to test the hypotheses and the conceptual model. The questionnaire focuses on the dynamics of trade fairs as a source of marketing intelligence for exhibiting companies.

4.1 Measure - Questionnaire

The researchers used the questionnaire to collect information. The questionnaire was based on the scientific literature and the research arguments. However, the opinion/input from some industry experts (three exhibitors and two trade fair organizers) was requested. The cooperation of the said experts was positive and helped to refine details of the questionnaire. The questionnaire was written in three languages: Portuguese (the native language of the authors), English and Spanish. Translation specialists did the translation into English and Spanish.

The questionnaire had a clear and direct format and comprised two parts, starting with a presentation of the scope and objectives of the study.

The first part concerned the issues related to the empirical study, where the data obtained was used to test the research hypotheses. Table 1.1 describes the scales used to measure the various sub-constructs and constructs: Customer Intelligence, Product Intelligence, Market Conditions Intelligence (second-order subconstructs - Trade Fair Intelligence), Information Management, Marketing Management System, Company Competitiveness. All variables were measured on five-point Likert scales ranging from one (1) - strongly disagree to five (5) - strongly agree. The scales created were based on several authors (Ade et al., 2017; Akhter, 2015; Alberca et al., 2018; Dibb et al., 2019; Gopalakrishna et al., 2019; Hlee et al., 2017; Kellezi, 2014; Laudon & Laudon, 2019; Maskell, 2014; Søilen, 2010; Sigalas et al., 2013; Situma, 2012; Søilen, 2010; Søilen, 2013; Sundiman, 2018; Ummulkulthoum & Jianhua, 2018).

The second part of the questionnaire concerned the characterisation of the respondent companies, such as company type, company size (employees), trade fairs participation intensity, export volume (%) and company home country.

Table 1.1 – Survey Items

Constructs		Item code	Items	Reference
MIA	CTI	CT1	At trade fairs our organisation collects data and information about customers.	Based on Ade et al., 2017; Hlee et al., 2017; Søilen, 2013.
		CT2	At trade fairs our company organizes data and information regarding customers.	
		CT3	Our company analyses data and information regarding customers.	
		CT4	Our company uses customers-related data and information for decision-making.	
	PI	P1	At trade fairs our company collects data and information about performance of our products.	Based on Ade et al., 2017; Gopalakrishna et al.,2019; Søilen, 2010).
		P2	At trade fairs our company organizes data and information about performance of our products.	
		P3	Our company analyses data and information about performance of our products.	
		P4	Our company uses product-related data and information for decision-making.	
	MCI	MC1	At trade fairs our company collects data and information about market conditions.	Based on Ade et al., 2017; Alberca *et al.*, 2018; Kellezi, 2014; Maskell, 2014; Ummulkulthoum & Jianhua, 2018; Situma, 2012; Søilen, 2013; Sundiman, 2018.
		MC2	At trade fairs our company organizes data and information about market conditions.	
		MC3	Our company analyses data and information about market conditions.	
		MC4	Our company uses data and information related to market conditions for decision-making.	
IMS		IM1	Our company continues to create new knowledge for our information system.	Based on Laudon & Laudon, 2019; Sundiman, 2018
		IM2	Our company shares knowledge with our employees.	
		IM3	Our business has facilities to support knowledge sharing process.	
		IM4	Our company is able to support the marketing/sales decision process.	
		IM5	Our company is committed to applying the new knowledge in daily operations.	
SMM		MM1	Our company has a strategic marketing plan.	Based on Akhter, 2015; Dibb *et al.*, 2019.
		MM2	Our company programs the marketing actions to be implemented.	
		MM3	Our company sets marketing goals.	
		MM4	Our company executes the planned actions.	
		MM5	Our company continually evaluates the strategy and makes improvements.	
CC		FC1	Over the past 3 years, our company has explored every market opportunity.	Adapted from Sigalas et al., 2013 *Cronbach's α 0.84*
		FC2	Over the past 3 years, our company has fully exploited market opportunities.	
		FC3	Over the past 3 years, our company has neutralized all competitive threats.	
		FC4	Over the past 3 years, our company has completely neutralized all competitive threats.	

Source: Own elaboration

4.2 Data collection

In operational terms, the questionnaire was sent by email between the 1st and the 31st of October of 2019, addressed to marketing and/or sales managers of the companies in the relevant databases, so the interviewees had a high level of knowledge about trade fairs.

This database was created/obtained from the exhibitors lists made available by some of the main trade fairs organizers, especially in Europe (UFI, 2020), such as Excel (United Kingdom), Exponor (Portugal), FIL (Portugal), IFEMA (Spain), Messe Frankfurt (Germany), and also from trade fairs in Brazil - ExpoBrasília and São Paulo Expo.

The complete database contained 4585 companies participating in international trade fairs. This database is a convenience sampling, as the sample collection was from conveniently located sources (Edgar & Manz, 2017), in this case, international trade fair organizers, hereby being a greater operational ease.

However, all companies present in this database were equally contacted by email and each member/company was given an equal opportunity to answer the questionnaire. The survey received random responses. In the end, 418 complete responses were collected, thus recording a response rate of approximately 9.12%. Therefore, the mother database was of convenience, but the final sample consisted of a simple random sample obtained from an organized and updated database (Han et al. 2012), in this instance, from a list of exhibitors participating in trade fairs.

The sample size is adequate, given the proportion of items used (Devellis, 2012), so, the research design is applicable for the purposes and goals of the research. Lastly, it should be noted that the sample size is in line with previous studies, for instance, Caber et al. (2016), Kitchen (2017) and Gopalakrishna et al. (2019).

4.3 Data analysis

Data analysis was performed in two parts. First, EFA - Exploratory Factor Analysis was applied through the SPSS software. The key purpose of the EFA is to define the underlying structure among the variables in the analysis (Hair et al., 2010).

In the second part, SEM - Structural Equation Modelling was used, allowing path analysis and CFA - Confirmatory Factor Analysis (Marôco, 2014; Byrne, 2016). The structural equation model involving hypothesized relationships is shown in Figure 1.1.

AMOS-SEM was the selected software because this study concerns theoretical tests and does not intend to develop or construct theories, so Roldán and Sánchez-Franco (2012) suggest the AMOS-SEM is the indicated software for these studies.

SEM is used to determine if a particular model is valid and allows the association of several measures to a single latent construction (Hair et al., 2010; Mâroco, 2014). Moreover, using Maximum Likelihood Estimation allows for the estimation of the measurement model and structural model. Thereafter, model fit indexes were examined for model fit, and the hypotheses were also tested (Hair et al., 2010).

5. RESULTS and DISCUSSION

5.1 Sample characterisation

In this study, 418 complete questionnaires were collected. The answers to the questionnaires were given by employees in marketing and/or sales departments of companies participating in trade fairs. Table 1.2 presents the characteristics of the surveyed companies.

Table 1.2 – Sample Characterisation

Elements of companies' characterisation		*n*	%
Company type	Manufacturer/ Producer	261	62.4
	Service	80	19.1
	Wholesaler	31	7.4
	Retailer	16	3.8
	Importing/exporting agent	30	7.2
	Total	418	100,0
Company size (employees)	< 26	221	52.9
	26 - 50	60	14.4
	51 - 300	104	24.9
	301 - 999	20	4.8
	> 999	13	3.1
	Total	418	100.0
Participation intensity	Sporadic Participation	40	9.6
	Participation in 1 trade fair every 4 years	6	1.4
	Participation in 1 trade fair every 2 years	33	7.9
	Participation in 1 trade fair per year	83	19.9
	Participation in several trade fairs per year	256	61.2
	Total	418	100.0
Export	< 10%	145	34.7
	10% - 25%	78	18.7
	26% - 50%	60	14.4
	51% - 75%	35	8.4
	> 75%	100	23.9
	Total	418	100.0
Country	Portugal	373	89.2
	Other nationalities (14)	45	10.8
	Total	418	100.0

Source: Own elaboration

From the samples' characteristics, we can highlight that most of the companies surveyed (61.2%) are companies with high intensity of participation in trade fairs; 62.4% are manufacturers/producers; 46.7% are companies that export more than 25% of their turnover; 52.9% are companies with less than 26 employees. The sample has answers from companies of 16 nationalities, 89.2% of which are Portuguese companies.

5.2 Exploratory Factorial Analysis (EFA)

Construct validity was assessed by exploratory and confirmatory factorial analysis (SPSS 24; AMOS 20, respectively). First, exploratory factor analysis was performed using the Kaiser Normalisation Varimax rotation method and principal component analysis (Hair et al., 2010).

With the application of EFA, three distinct factors were obtained in the second-order construct – Trade Fair Intelligence Activities (TFIA) - as initially expected, i.e. Customer Intelligence (CTI); Product Intelligence (PI); Market Conditions Intelligence (MCI); also, three more constructs were obtained, as initially expected, i.e., Information Management System (IMS); Strategic Marketing Managements (MMS) and Company Competitiveness (CC). Cronbach's coefficient and KMO were applied to test the reliability of the constructs, as shown in Table 1.3.

Table 1.3 - Exploratory Factorial Analyses

Constructs		Item code	Factor loadings	Total variance explained	Construct reliability
TFIA – Trade Fair Intelligence Activities	CTI - Customer Intelligence	CT1	0.834	0.779	Cronbach's α 0.904 KMO test 0.793
		CT2	0.853		
		CT3	0.793		
		CT4	0.685		
	PI - Product Intelligence	P1	0.822	0.779	Cronbach's α 0.905 KMO test 0.824
		P2	0.799		
		P3	0.828		
		P4	0.784		
	MCI - Market Conditions Intelligence	MC1	0.818	0.820	Cronbach's α 0.927 KMO test 0.818
		MC2	0.815		
		MC3	0.838		
		MC4	0.812		
IMS - Information Management System		IM1	0.659	0.702	Cronbach's α 0.891 KMO test 0.874
		IM2	0.741		
		IM3	0.623		
		IM4	0.816		
		IM5	0.751		
SMM – Strategic Marketing Management		MM1	0.826	0.812	Cronbach's α 0.942 KMO test 0.897
		MM2	0.889		
		MM3	0.866		
		MM4	0.795		
		MM5	0.730		
CC - Company Competitiveness		FC1	0.789	0.779	Cronbach's α 0.906 KMO test 0.897
		FC2	0.796		
		FC3	0.861		
		FC4	0.868		

Extraction Method: Principal Component Analysis

Kaiser Normalisation Varimax rotation method

Kasier-Meyer-Olkin measure of sampling adequacy (KMO) = 0.899

Bartlett's test sig. 0.000.

Cronbach's α = 0.938

Total variance explained = 0.786

All factor loadings are significant at $P < 0.001$.

Source: Own elaboration

As can be seen in Table 1.3, the reliability of the constructs was high, with Cronbach's Alpha values > 0.894 and KMO values > 0.793 indicating an excellent internal consistency (Hair et al., 2010). The significant coefficients of each item reveal convergent validity in the respective construct (ranging from 0.623 to 0.889). The total variance

explained is greater than 0.702, which exceeds the threshold value of 60%, thus the total validity of the scales is reasonable (Hair et al., 2010).

Therefore, EFA provided the empirical assessment of the interrelationships between constructs, essential for applying the Confirmatory Factor Analysis (Hair et al., 2010).

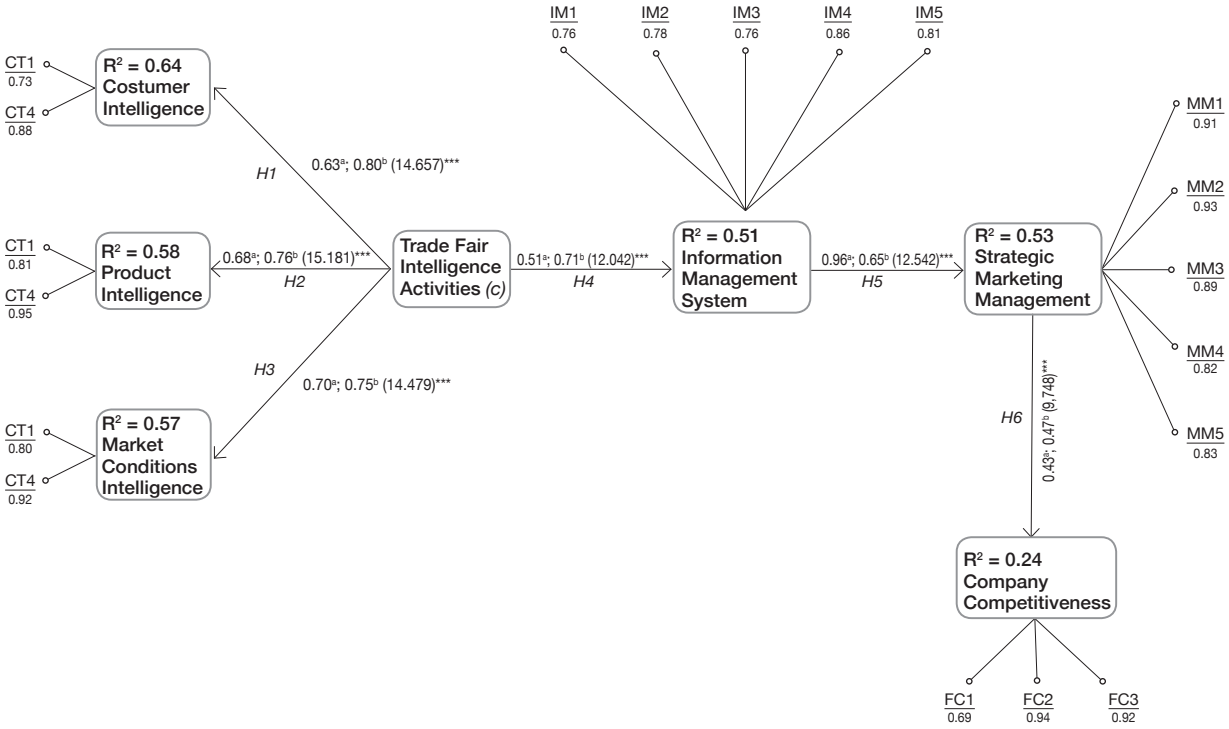
5.3 Confirmatory Factor Analysis (CFA)

CFA was applied based on the output of EFA using Amos 20. However, some items were removed because the modification option of AMOS indicated conflict between different items (Whittaker, 2012).

For the model fit, several indicators were used. Wheaton et al. (1977) suggest equation: X2/DF (X2 - chi-square; DF - degrees of freedom). Although there is no consensus about an acceptable relationship for this statistical equation, Kline (2011) recommends values X2/DF = 1,00-5,00 but Bollen (1989) is more rigorous and considers 3,00 as maximum value. CFI - comparative fit index, Joreskog and Sorbom (1993) recommend values > 0.90. NFI - normed-fit index, recommended minimum value is 0.90 (Garver & Mentzer, 1999), but Forza and Filippini (1998) consider that the value > 0.80 suggests a good fit. TLI - Tucker Lewis index, also known as Bentler-Bonett non-normed fit index – NNFI (Bentler & Bonett, 1980), Tucker and Lewis (1973) suggest that values close to 1 indicate a very good fit. IFI - incremental fit index, IFI values close to 1 indicate a very good fit (Bollen, 1989). RMSEA - root mean square error of approximation is one of the most commonly used measures to try to correct the trend of the X2 test statistic. According to Hair et al. (2010), low RMSEA values indicate better fit - very good if 0.05 or less, good between 0.05 and 0.08.

In the present study, the model is considered well fit (X2 = 425.349; DF = 146; X2/DF = 2.913; CFI = 0.952; NFI = 0.929; TLI = 0.944; IFI = 0.952 and RMSEA = 0.068). These indices indicated a good level of unidimensionality and convergent validity (see Figure 1.1 and Table 1.4). As a result, the standardized regression weights of all the items topped the minimum criterion of 0.5, see Figure 1.1 (Hair et al., 2010).

Figure 1.1 - Structural Equation Model



Fit indices: $X^2 = 425.349$; DF = 146; $X^2/DF = 2.913$; CFI = 0.952; NFI = 0.929; TLI = 0.944; IFI = 0.952 and RMSEA = 0.068

Notes: [a] Unstandardized estimates, [b] standardized estimates, (t-values) and variance extracted (R^2), $p < 0.001$(***).
(c) Second order factor

Source: Own elaboration based on AMOS

In this phase, the mean (M), standard deviation (SD), variance, reliability and validity of the constructs were also analysed, see Table 1.4.

Table 1.4 - Mean, SD, Variance, Reliability and Validity of the Constructs

Constructs		Item Code	M	SD	Loadings EFA	Loadings CFA	Total variance explained	Cronbach's alpha
TFIA	CTI	CT1	4.41	0.855	0.834	0.667	0.842	0.806
		CT4	4.32	0.896	0.793	0.682		
	PI	P3	4.03	0.977	0.828	0.718	0.886	0.851
		P4	4.15	0.942	0.784	0.753		
	MCI	MC1	4.03	0.983	0.818	0.713	0.871	0.886
		MC4	3.97	1.005	0.812	0.718		
IMS		IM1	3.97	0.938	0.659	0.677	0.702	0.891
		IM2	4.01	0.923	0.741	0.762		
		IM3	3.56	1.094	0.623	0.636		
		IM4	3.88	0.969	0.816	0.824		
		IM5	4.04	0.906	0.751	0.747		
SMM		MM1	3.51	1.163	0.826	0.833	0.812	0.942
		MM2	3.61	1.133	0.889	0.890		
		MM3	3.49	1.163	0.866	0.868		
		MM4	3.64	1.025	0.795	0.799		
		MM5	3.57	1.111	0.730	0.743		
CC		FC2	2.90	0.995	0.796	0.723	0.811	0.882
		FC3	2.58	1.001	0.861	0.895		
		FC4	2.36	1.030	0.868	0.914		

One-dimensionality and convergent validity

Indicators	Constructs			
	CC	**IMS**	**SMM**	**TFIA**
CR - Composite Reliability	0.892	0.895	0.943	0.816
AVE - Average Variance Extracted	0.737	0.631	0.768	0.596
MSV - Maximum Shared Variance	0.219	0.511	0.426	0.511
ASV - Average Shared Variance	0.139	0.361	0.282	0.256

Discriminant validity

Constructs					
	CC	**0.859**			
	IMS	0.380	**0.795**		
	SMM	0.468	0.653	**0.876**	
	TFIA	0.234	0.715	0.449	**0.772**

Diagonal elements (bold) show the square root of average variance extracted (AVE)
CTI - Customer Intelligence
PI - Product Intelligence
MCI - Market Condition Intelligence
TFIA – Trade Fair Intelligence Activities
IMS - Information Management System
SMM - Strategic Marketing Management
CC - Company's Competitiveness

Source: Own elaboration

In this phase, the mean (M) and standard deviation (SD) of the constructs were also analysed, see Table 1.4. Therefore, a low SD indicates that the data tends to be close to the mean (Barde & Barde, 2012). In this specific case, the results are acceptable.

In the confirmatory factor analysis, CR - Composite Reliability, AVE - Average Variance Extracted, MSV - Maximum Shared Variance, ASV - Average Shared Variance were used. Hair et al. (2010) suggest, as limits for these values, the following: CR > 0.7; AVE > 0.5; MSV < AVE; ASV < AVE. The obtained results indicate an acceptable level of one-dimensionality and convergent validity (Hair et al., 2010).

Finally, the square roots of the AVE measures are superior to all the correlations among all the constructs, and these data guarantee the discriminant validity (Fornell & Larcker, 1981; Roldán & Sánchez-Franco, 2012).

Therefore, the results above show that the model is valid. Overall, these results are consistent with the literature that emphasises the importance of Trade Fair Intelligence Activities to exhibitors (Hlee et al., 2017; Ratajczak, 2007; Søilen, 2010; Søilen, 2013).

5.4 Hypotheses Test

Structural equation modelling allows for simultaneous testing of all hypotheses (Marôco, 2014). The structural equation model involving the hypothesized relationships is shown in Figure 1.1. The path as well as t-statistics were estimated to analyse hypotheses (Marôco, 2014; Stevens, 2009). Standardized estimates of causal relationships (hypotheses) and their significance are shown in Figure 1.1. The results of estimates of regression weights and t-value show that Customer Intelligence contributes positively as Trade Fair Intelligence Activities of the exhibitors ($\beta = 0.80$, $t = 14.657$, $P < 0.001$), consequently H1 is supported. Furthermore, it is verified that Product Intelligence contributes positively as Trade Fairs Intelligence Activities of the exhibitors ($\beta = 0.76$, $t = 15.181$, $P < 0.001$), and Market Condition Intelligence also contributes positively as Trade Fairs Intelligence Activities of the exhibitors ($\beta = 0.75$, $t = 14.479$, $P < 0.001$), thus H2 and H3 are also supported.

Accordingly, the results indicate that Trade Fair intelligence activities have positive effects on the Information Management System ($\beta = 0.71$, $t = 12.042$, $P < 0.001$); therefore,

H4 is supported. Subsequently, it is also verified that Information Management System has positive effects on the Strategic Marketing Management ($\beta = 0.65$, $t = 12.532$, $P < 0.001$), so H5 is also supported. Lastly, the data indicate that Strategic Marketing Management has positive effects on the Company's Competitiveness ($\beta = 0.47$, $t = 9.748$, $P < 0.001$); consequently, H6 is supported.

Thus, all hypotheses (H1, H2, H3, H4, H5 and H6) are supported.

6. DISCUSSION AND FINDINGS

The purposes of this study were the identification of the main sources of information necessary for exhibitors and the proposal of a conceptual structure that describes their trade fair intelligence process.

The results of the study confirm H1, H2, and H3 in trade fair context. Therefore, in practice, the three factors (Customer Intelligence, Product Intelligence, Market Conditions Intelligence) function as a composite of common factors (Van Riel et al., 2017) that is, they are an integral part of Trade Fair Intelligence Activities. This means that the subcategories (customer, product, and market conditions intelligence) are sources of information to empower exhibitors. These results corroborate the ideas of several authors, such as Alberca et al. (2018), Situma (2012), Hlee et al. (2017), Søilen (2013), Gopalakrishna et al. (2019), Søilen (2010), Kellezi (2014), Maskell (2014), and Ummulkulthoum and Jianhua (2018). In fact, trade fairs are unique events that are highly rich in useful information, which can be obtained very quickly (Hlee et al., 2017) and trade fair intelligence activities are within reach of any exhibitor.

The study also ensured a positive impact between Trade Fair Intelligence Activities and the Information Management System (H4). Trade Fair Intelligence Activities imply interpreting and transforming information into something else, in other words, exhibitors need an Information Management System (Kahraman & Çevikcan, 2011).

Trade Fair Intelligence Activities will feed information management so that exhibitors can make strategic marketing decisions based on that "intelligence information" (Al-Adwan et al., 2015; Hakhu et al., 2013; Saura et al., 2019). Therefore, the results support H5, which suggests a positive impact of Information Management System on Strategic Marketing Management. The Information Management System influences the management, preparation, and implementation of the exhibitor/company's marketing strategy because, in today's world market context, companies need to be constantly updating data and information (Dibb et al., 2019; Kotler & Armstrong, 2017).

Finally, the results confirm H6, which suggests a positive impact of the Strategic Marketing Management on Company/Exhibitors' Competitiveness. This result indicates that the exhibitor can achieve a good competitive level through the formulation and

implementation of Strategic Marketing Management (Ahmad, 2015; Eidizadeh et al., 2017; Katsikea et al., 2019; Lin et al., 2015; Neil et al., 2012; Roger et al., 2016; Sánchez-Gutiérrez et al., 2019; Stavroula et al., 2018).

Considering all the above descriptions, Figure 1.2 illustrates the comprehensive model of the Trade Fair Intelligence Process of the exhibitors. According to the model (Figure 1.2), the main contribution of this study is the evidence that an exhibitor creates competitiveness based on an intelligence process from trade fairs. After performing Trade Fair Intelligence Activities (Customer Intelligence, Product Intelligence, Market Conditions Intelligence), an exhibitor can augment its Information Management System and consequently enrich its Strategic Marketing Management, as a result improving the Company's Competitiveness.

Hence, all hypotheses were supported; this demonstrates that the Trade Fair Intelligence Process is one of the most important guarantees for exhibitors, giving them the power and motivation to continue to participate in trade fairs, taking advantage of their presence at these events to foster competitive ability.

With the validity of this conceptual model and its supported hypotheses, this study adds new evidence to trade fair intelligence (Ratajczak, 2007; Søilen, 2010; Søilen, 2013). That is, participating in trade fairs can help exhibitors identify market trends, research competitors, evaluate the performance of their products, as well as identify and study customers, and also reveal new business opportunities.

The main contributions of this study were to identify the main sources of information of the exhibitors, and then to find a conceptual structure that describes their Trade Fair Intelligence Process. This study, in particular, suggests a composite of Trade Fair Intelligence Activities for exhibitors. In practice, this composite (Customer Intelligence, Product Intelligence, Market Conditions Intelligence) can be used by exhibitors to assess market opportunities and formulate market development plans and strategies for growth and/or competitiveness.

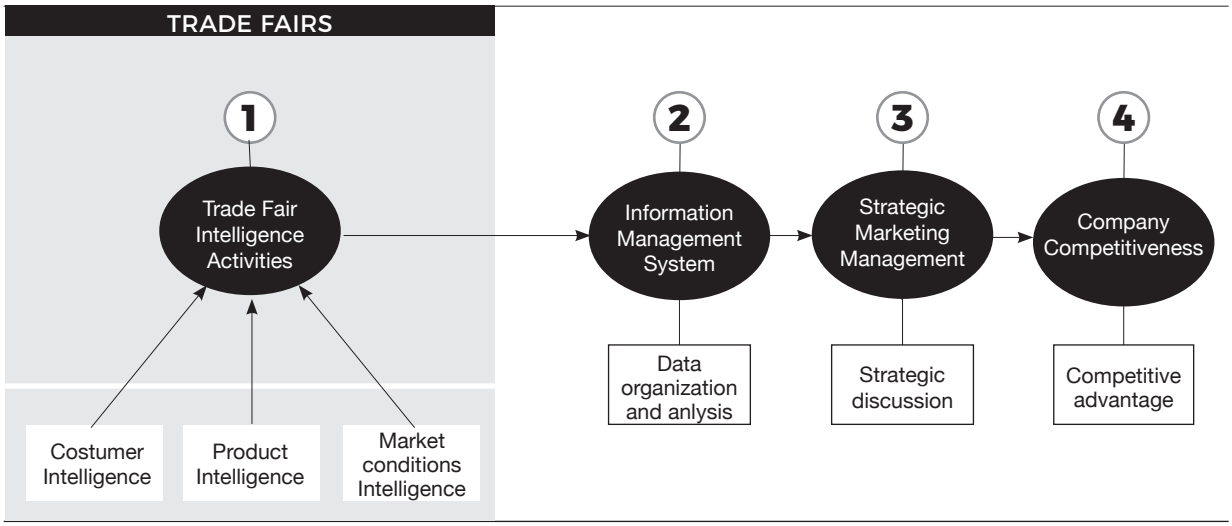
6.1 Theoretical implications

Theoretically, the study has implications for trade fairs and marketing literature. First, the intelligence process presented here is tested in the trade fair context. As there are limited previous studies concerning this topic (Søilen, 2010), this study

provides evidence on sources of information (in the trade fair context), suggesting three dimensions: Customer Intelligence, Product Intelligence, Market Conditions Intelligence. Thus, a second-order model was built, that allowed to confirm that the theorised construct - Trade Fair Intelligence Activities, loads into a certain number of underlying sub-constructs - Customer Intelligence, Product Intelligence, Market Conditions Intelligence (Van Riel et al., 2017). Second, the obtained results present a perspective that integrates trade and information (Li & Bathelt, 2017). Third, the study presents trade fairs as a process of information exchange, knowledge, and learning from the exhibitor's perspective (Sarmento & Simões, 2018; Tafesse & Skallerud, 2017).

Therefore, based on the findings of this study, a strategic process can be created to develop their competitive capabilities, starting from trade fairs. Figure 1.2 demonstrates this strategic process.

Figure 1.2 – Trade Fair Intelligence Process of the Exhibitors



Source: Own elaboration

As shown in Figure 1.2, this study presents a composite of three dimensions (Customer Intelligence, Product Intelligence, Market Conditions Intelligence) of exhibitors'Trade Fair Intelligence Activities. The operational dynamics of these three dimensions are essential to give way to the strategic action and decision making of the exhibitors. The study actually reveals a process or an intelligence system for exhibitors. This orientation is even more essential when approaching the dynamics of companies/exhibitors in trade fairs that perpetuate a solid strategy to generate competitive advantages.

6.2 Practical implications for exhibitors

The results of the study have practical implications for exhibitors, especially in an orientation for the collection and organisation, analysis, exploiting of information (about Customers, Product and Market Conditions). All of this information generated from trade fairs will allow the exhibitors to make informed marketing decisions and determine the best practices to work with their customers, develop and adapt products to changing market demands, as well as establish the best strategies to compete. The value of this information lies not only in itself but in the marketing actions that arise from the said information.

Therefore, exhibitors must consider their intelligence activities during the trade fair. They must use the trade fair environment for presenting, testing or experimentating their products or simulating their services, in order to collect information that allows for a deep understanding, insights and analyses about their products/services (Søilen, 2010).

In addition, exhibitors must train their staff, present at the stand, to interact with the visitor (Sarmento et al., 2015). It is important to have a well-prepared team, capable of effectively meeting the expectations of visitors, but also capable of collecting, analysing and interpreting customer information or behavior, through conversations, surveys, observation or other forms of relational interaction (Alias & Othman, 2018; Hlee et al., 2017; Søilen, 2013).

Given that trade fairs also allow contact with competitors, suppliers and complementary companies, exhibitors must also interact and observe these trade fair participants (Hlee et al., 2017), not only at one's stand, but also in the halls of the trade fair, visiting other exhibitors' stands, as well as in parallel activities, such as seminars and workshops (Sarmento et al., 2015).

It should also be noted that the trade fair organizer contains a lot of information about visitors, other exhibitors and the market in general (Hlee et al., 2017; Tafesse, 2014). Hence, the exhibitor should seek the trade fair organisation to collect information regarding visitors and other exhibitors, as well as the markets, trends or the industry.

Based on the most recent information collected at trade fairs, exhibitors must (1) institutionalize techniques and systems for registering, organizing and processing data, so that the extracted content is understandable to users. Afterwards, the exhibitor must (2) interpret

the data and create new marketing knowledge, in order to add reason and logic to the marketing decision making. Next, exhibitors must (3) design a marketing strategy to explore business opportunities and finally, they must (4) identify competitive advantages for future leadership.

This knowledge, focused on the customer, products and market, gives the exhibitors the right tools to develop effective marketing strategies, thus increasing their competitive capacity. Not surprisingly, trade fairs intelligence activities help to improve information systems, marketing strategy and, consequently, the exhibitor's competitiveness.

Finally, this three-dimensional proposal of Trade Fairs Intelligence Activities (Customer Intelligence, Product Intelligence, and Market Condition Intelligence) can help exhibitors to better manage their participation in trade fairs. The volume of information is usually considerable, therefore it is appropriate to implement this intelligence system. Additionally, Trade Fair Intelligence Activities can help overcome the environmental noise of trade fairs (Rinallo et al., 2010), due to the hasty, flowing and highly dynamic nature of these events (Reychav, 2009).

6.3 Practical implications for trade fair organizers

This study also has implications for trade fair organizers. Based on the findings, exhibitors should seek to provide an appropriate environment for information sharing activities among participants. For instance, promote events such as seminars, innovation contests, workshops, press conferences or other moments of socialisation/networking for participants (Sarmento et al., 2015). Moreover, trade fair organizers must develop databases or information systems to pass on to both exhibitors and visitors (Tafesse, 2014). Finally, organizers can promote training actions for exhibitors on how they can develop Trade Fair Intelligence Activities.

6.4 Practical implications for trade fair visitors

Last, but not least, this study has implications for trade fair visitors. The fair visitor is a key player in sharing information at the trade fair (Ling-yee, 2006; Sarmento et al., 2015). The visitors must also understand their role in the information exchange

process, thus they should actively participate in sharing information, more specifically, comment on product demonstrations, test products, participate in service simulations, answer questionnaires, among other information sharing actions. This approach would help the exhibitor to offer more and better solutions to their visitors.

In general, the insights from this research can contribute positively to the trade fair industry, namely in building or improving long-term sustainable relationships between visitors (customers, suppliers, partners, etc.), exhibitors and trade fair organizers.

CONCLUSION AND REMARKS

The versatility of trade fairs can and should be viewed as a great advantage. However, opportunities cannot be "burned" under the risk of jeopardizing the exhibitor's success. In fact, the purpose of this study was to analyse and recognize the advantage of trade fairs as sources of information, more specifically to study the role of Trade Fair Intelligence Activities within the perspective of exhibitors.

Thereby, in general, this study offers a significant contribution by demonstrating that trade fairs provide a unique, advantageous place for gathering information. In other words, a privileged stage for trade fair intelligence activities with different sources and perspectives (Customer, Product and Market Conditions). Thus, the study presents a new perspective on trade fairs as a source of information and an intelligence tool, as acclaimed by several authors referenced in the literature review.

The study demonstrates, in particular, a process or an intelligence system that can be used by any exhibitor based on three sources of information (Customer Intelligence, Product Intelligence, and Market Condition Intelligence). Trade fairs are a broad process of information review because, besides being an excellent source of information, they are also a privileged stage for marketing plans to arise and grow. As shown in Figure 1.2, based on the three sources of information, the results reveal a trajectory of tasks that exhibitors can perform to provide the best solutions/decisions towards competitiveness. This trajectory begins with the Trade Fair Intelligence Activities, and these activities nourish the company's Information Management System. This Information Management System plays an essential role in finding solutions and exploring opportunities, allowing the exhibitor to collect good quality and reliable information, in adequate quantity and at the right time to develop knowledge for a successful Strategic Marketing Management. This information/knowledge binomial is a determining factor for the competitiveness of the company/exhibitor.

In short, trade fairs can provide an intelligence process which can play a key role in accessing information, extracting and applying knowledge, vital for increasing the companies' competitiveness. Currently, with the increasing intensity of competition and the complexity of the business segment, it is urgent to acquire a competitive position.

Thus, this study is the first effort aiming to identify and analyse an operational way for exhibitors, through intelligence activities, to better impact their strategy and competitiveness.

However, the present study also has its limitations. The study did not include the role of information technology or other exhibitors' resources, so it would be interesting in future studies to include the impact of information technologies. Furthermore, this research does not explore the characteristics of the data (explicit or tacit), thereby, a future study could analyse the plurality of data/information that trade fairs provide. This study demonstrates the differences between explicit and tacit data in the trade fair context.

Moreover, the study is too focused on Portuguese companies, which restricts its generalisation. In future studies, it will be vital to include other nationality companies.

Finally, the results of this study can serve as a source of ideas for future studies.

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Chapter 2

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(see Appendix, p. II)

What is the value of Entrepreneurial Orientation on the network and performance? An examination in trade fairs context

1. INTRODUTION

Trade fairs are important marketing tools (Gerschewski et al., 2020), where many experts and business people (buyers/sellers) can meet up face to face in the same space and for a short time (Locatelli et al., 2019; Sarmento et al., 2015). The exhibitors are trade fair participants who physically exhibit their products and/or services to visitors, under the guidance of a specific organizing entity (Silva, 2014).

Trade fairs are expensive actions which require exhibitors' previous preparation (He et al., 2019; Nayak, 2019; Silva, 2014), so the performance of exhibitors has been a matter of growing concern (Çobanoğlu & Turaeva, 2014; Menon & Edward, 2017; Proszowska, 2018; Tafesse & Korneliussen, 2011; Tafesse & Skallerud, 2017). Although there are many studies on measuring the effectiveness of trade fairs for exhibitors (Çobanoğlu & Turaeva, 2014; Gopalakrihna & Lilien, 1995; Hansen, 2004; Menon & Edward, 2017; Proszowska, 2018; Tafesse & Korneliussen, 2011), measuring their performance is seen as a major difficulty (Cop & Kara, 2014; Kitchen, 2017). Tafesse & Skallerud (2017) found that in most recent articles, the researchers tend to use non-sales metrics to analyse the exhibitor's performance while in the past, researchers mainly used sales-related metrics. Therefore, it will be more appropriate to integrate the analysis of the exhibitors' performance in both sales and non-sales perspective (Çobanoğlu & Turaeva, 2014; Hansen, 2004).

The main question is knowing how exhibitors can make the most of trade fairs. In this sense, Entrepreneurial Orientation emerged from the literature as an important determinant for the development of business competence (Al Mamun & Muniady, 2019; Hooi et al., 2016; Mantok et al., 2019; Martins & Rialp, 2013; Rezvani et al., 2019). Particularly, Entrepreneurial Orientation can be a relevant resource for companies to operate in a competitive environment (Martins & Rialp, 2013) uncertain, dynamic and associated with social and business networks (Tajeddini et al., 2020), such as trade fairs. Where many rival firms are engaging (AUMA, 2017; Maskell, 2014) and buyers/sellers interact and develop networking (Locatelli et al., 2019).

This way, incorporating Entrepreneurial Orientation in the context of trade fairs allows to rekindle historically rooted theoretical perspectives, such as innovation.

"The stagnation in these perspectives is largely inexplicable from an industry (managerial practice) point of view, and as such, warrants closer examination in the future" (Tafesse & Skallerud, 2017, p. 26). Moreover, currently, it is suggested that the companies create an entrepreneur/innovate culture within the organisation, so that companies can achieve their goals (Nunes & Russo, 2019).

Considering that the aim of this research was to study the impact of Entrepreneurial Orientation on Exhibitor's Performance, this study is the first attempt to use the Entrepreneurial Orientation in the trade fair context and analyse its impact on the network and results of exhibitors, from a sales and non-sales perspective. So, this article aims to conduct an empirical study designing a comprehensive model, considering Entrepreneurial Orientation as a tool that can enhance the Exhibitor's Performance.

The paper consists of six sections. Following the introduction, the second section presents the theory and hypotheses development about Entrepreneurial Orientation construct and describes its relationship (Network Capability) to Exhibitors' Performance. The third section describes the methodology and empirical context where the survey was carried out. The fourth section reports the results; and the fifth section discusses the findings. Finally, the last section presents the main conclusions, limitations, and future research.

2. THEORY AND HYPOTHESES DEVELOPMENT

2.1 Entrepreneurial Orientation – Concept

Entrepreneurial Orientation is a general strategic posture towards entrepreneurship (Gupta & Gupta, 2015). Entrepreneurship is an act of innovation that involves empowering the existing resources of a new wealth-producing capacity (Drucker, 1985). However, entrepreneurship is presented in the literature in multiple perspectives, generating a multidimensional concept (Bula, 2012) and is used in many areas and contexts (Hoppe, 2016). But regardless of the various applications, concepts and dimensions, the central issues in entrepreneurship involve uncertainty and risk-taking, innovation, perception, and change (Essays, 2018).

In the business area, Miller (1983) states that an entrepreneurial company is one that is dedicated to product and market innovation, undertaking somewhat risky business and being proactive towards its competitors. Entrepreneurial Orientation refers to the extent to which a company is entrepreneurial in its plans and activities, encompassing the company's processes, structures, and behaviours (Stam & Elfring, 2008). Lumpkin and Dess (2001) defined Entrepreneurial Orientation as the companies' strategy-making process that engages in entrepreneurial activities (create new businesses, products, transformative decisions, etc.). However, Lumpkin and Dess (2001) pointed out that there is a difference between entrepreneurship and Entrepreneurial Orientation. The term Entrepreneurial Orientation refers to a series of dimensions towards organisational level (Lumpkin & Dess, 2001), that is, company's capabilities (Yoon et al., 2018).

In general, the literature suggests Entrepreneurial Orientation as a strategic stance at the company's level encompassing three dimensions: risk, innovation and proactivity (Martins & Rialp, 2013; Miller, 1983; Miller & Friesen, 1982; Mthanti & Ojah, 2017). The Innovation dimension can be interpreted as a tendency to engage creativity and experimentation by introducing new products/services and using technology through research and development (R&D) in new processes (Mason et al., 2015). Innovative practices can help increase the competitiveness of companies (Berne et al., 2019). The Proactivity dimension is an anticipatory behaviour seeking opportunities and characterized by the introduction of new products and services ahead of the competition

(Mason et al., 2015). Moreover, a proactive attitude can facilitate the establishment and maintenance of network relationships with key stakeholders (Gerschewski et al., 2020). Finally, the Risk dimension involves bold action and adventure into the unknown, investing or committing significant resources to ventures in uncertain environments (Mason et al., 2015).

Recently, Fadda (2018) added two more dimensions: Competitiveness and Autonomy. The Competitiveness dimension refers to the company's attitude when dealing with competitors, which means to continuously monitor and combat their rivals' strategies. This concept partly clashes with Mason et al. (2015) proposal for Proactivity. The Autonomy dimension can be considered as a predisposition for the development of appropriate conditions and the subsequent implementation of innovative ideas (Fadda, 2018).

In summary *"entrepreneurial orientation is a path that entrepreneurs take to create a "new entry", which can be defined as creation of a new business, new products or technology or a new market. It can also be defined as a set of strategies within a conceptual domain encompassing results at the organisational level, related to management preferences, beliefs and behaviors expressed through managers"* (Santos & Marinho, 2018, p. 121).

2.2 Entrepreneurial Orientation as a tool for exhibitors

As mentioned initially, entrepreneurial activity currently contains a multidimensionality of concepts (Bula, 2012) and is applied in various areas, circumstances and contexts (Hoppe, 2016). For instance, evidence from several recent studies shows that Entrepreneurial Orientation has a positive effect on business competence (Al Mamun & Muniady, 2019; Hooi et al., 2016; Knight, 2000; Mantok et al., 2019; Martins & Rialp, 2013). In fact, companies with high degree of Entrepreneurial Orientation are more plausible to prosper (Maleki & Hajipour, 2020). Thereby, in general, entrepreneurial companies could operate more easily in demanding external environments against conservative companies (Martins & Rialp, 2013; Tajeddini et al., 2020). Therefore, since trade fairs are a highly competitive environment to exhibitors (AUMA, 2017; Maskell, 2014), it is suitable to analyse and verify the Entrepreneurial Orientation of companies (exhibitors) participating in them.

Then, based on the literature, it is interesting to study if the five dimensions — Innovativeness, Proactiveness, Risk-taking (Fadda, 2018; Martins & Rialp, 2013; Miller, 1983; Miller & Hriesen, 1982; Mthanti & Ojah, 2017, Yoon et al., 2018), Competitiveness and Autonomy (Fadda, 2018) — fit in trade fair environment. So, the following hypotheses are defined:

H1. In the trade fair context, Innovativeness contributes positively for the exhibitors' Entrepreneurial Orientation.

H2. In the trade fair context, Proactiveness contributes positively for the exhibitors' Entrepreneurial Orientation.

H3. In the trade fair context, Risk-taking contributes positively for the exhibitors' Entrepreneurial Orientation.

H4. In the trade fair context, Competitiveness contributes positively for the exhibitors' Entrepreneurial Orientation.

H5. In the trade fair context, Autonomy contributes positively for the exhibitors' Entrepreneurial Orientation.

2.3 Entrepreneurial Orientation as a networking determinant

Trade fairs generally attract thousands of experts and business people (buyers/sellers), who can meet up face to face (networking) in the same space and at the same time (Locatelli et al., 2019; Sarmento et al., 2015). One of the great riches of the trade fairs is the possibility to create interactions, relationships, generate networking (Gopalakrishna, et al. 2019; Kitchen, 2017; Measson & Campbell-Hunt, 2015; Sarmento & Farhangmehr, 2016). However, exhibitors need to have tangible and intangible resources that allow them to facilitate interactions and promote close relations with the visitor (Rinallo et al. 2017). Innovation is a major resource of the trade fair's attractiveness (Sarmento et al., 2015), but Entrepreneurial Orientation is an important resource for networking development (Jiang et al., 2018; Strenge & Rank, 2018; Yoon et al., 2018) which has never been studied in the trade fair context. Therefore, Exhibitors' Entrepreneurial Orientation can have effects on their Network Capacity, defined as a *"complex organisational capability oriented towards managing business relationships along all their main development stages"* (Mitrega et al., 2012, p. 739). In other words, Network Capability *"is the ability to manage and*

gain benefits from external relationships" (Vinit et al., 2017, p. 94), for example customers, institutions, competitors, partners, etc.

Thus, it is hypothesized that in the context of the trade fair:

H6. Entrepreneurial Orientation of the exhibitor has positive effects on their Network Capability.

2.4 Network Capability on Exhibitor`s Performance

The interest of the trade fairs is to generate networking and convert contacts into results (Gopalakrishna, et al. 2019; Measson & Campbell-Hunt, 2015; Sarmento & Farhangmehr, 2016). Companies need a network of relationships to share their values and objectives, in order to drive the Entrepreneurial Orientation towards the desired results (Ruiz-Ortega et al., 2021). Particularly, Network Capacity can act as a determinant for company performance (Jiang et al., 2018; Strenge & Rank, 2018; Yoon et al., 2018).

Performance is a process that aims to match the company's strategies, corporate and functional objectives (Bititci et al.,1997; Al-Matari et al., 2014). Generally, companies' performance refers to the links between accounting returns, stock market and growth (Vasconcelos & Oliveria, 2018). However, Murugesan et al., (2016) report that a company's performance can be determined by several dimensions: profitability, growth, market value, customer satisfaction, employee satisfaction, environmental performance, corporate governance, and social performance. Abbas et al. (2019) include as company's performance factors: profit and sales goals, return on investment (ROI) goals, product quality, customer retention against competitors, reputation, employee turnover and new product development against competition. Therefore, companies often define and aim to achieve certain goals to create, elevate, improve, and sustain superior performance (Abbas et al., 2019; Eisenhardt & Martin, 2000).

In the trade fairs' case, exhibitors can set different objectives: transactional (sales), informational (information sharing), social (relational), symbolic and cultural (Tafesse & Skallerud, 2015). Gopalakrihna & Lilien (1995) indicate as measures of the exhibitor's performance: (i) attraction efficiency index (target visitor); (ii) contact efficiency index (with audience visitors); and (iii) conversion efficiency index (the ratio of actual sales conversations to the number of visitors who made contact). Menon and Edward

(2017) identified five dimensions of the exhibitor's performance: (i) sales performance, (ii) information gathering, (iii) networking, (iv) image building, and (v) motivations. Çobanoğlu and Turaeva (2014) point four measurement factors: (i) image-building performance, (ii) sales-related performance, (iii) relationship-building performance, (iv) information-gathering performance.

From these authors it can be extracted that Exhibitors' Performance can be divided into two types: Non-Sales Performance and Sales Performance (Menon & Edward, 2017). Curiously, trade fairs receive two types of customers/visitors: "Shopper" and "Total Visitors" (Rittichainuwat & Mair, 2012; Sarmento & Farhangmehr, 2016). The "Shopper" seeks product/service for future purchase intention. "Total Visitors" always want to be informed about new market trends and memorable experiences at trade fairs (Rittichainuwat & Mair, 2012; Sarmento & Farhangmehr, 2016).

Thus, in the present study it is convenient to divide the Exhibitor's Performance: Non-Sales Performance and Sales Performance (Menon & Edward, 2017), being that Non-Sales Performance are intangible results such as reputation, information gathering, relationships, etc., and Sales Performance are tangible results such as sales, profit, return on investment.

Generally, Sales Performance is a consequence of Non-Sales Performance (Kotler & Keller, 2015). For example, relational variable influences Sales Performance (Hasaballah et al., 2019) and knowledge management effects on the business success (Zebal et al., 2019).

When it comes to trade fairs, sales don't necessarily have to happen on the spot, because the "Shopper" seeks product/service for future purchase intention and Exhibitor's Performance is a process that doesn't end at the trade fair (Sarmento & Farhangmehr, 2016). In fact, generally 1/3 of the exhibitors follow up on contacts after the trade fair (Kitchen, 2017).

Based on the above arguments, the hypotheses that will be tested are as follows:

H7. Network Capability of the exhibitors has positive effects on their Non-Sales Performance.

H8. Exhibitors' Non-Sales Performance has positive effects on their Sales Performance.

2.5 Conceptual model

Fadda (2018), Martins and Rialp (2013), Santos and Marinho (2018) and Yoon, et al. (2018) explained the different dimensions of Entrepreneurial Orientation. Jiang, et al. (2018), Strenge and Rank (2018), Yoon et al. (2018) demonstrated that Entrepreneurial Orientation has positive effects on Network Capability. Particularly in the context of trade fairs, companies seek to develop networking to obtain results (Gopalakrishna, et al. 2019; Kitchen, 2017; Measson & Campbell-Hunt, 2015; Sarmento & Farhangmehr, 2016).

In fact, the Exhibitor's Performance justifies his participation in the trade fair (Çobanoğlu & Turaeva, 2014; Menon & Edward, 2017; Proszowska, 2018; Tafesse & Korneliussen, 2011; Tafesse & Skallerud, 2017). Jiang et al. (2018), Strenge and Rank (2018), and Yoon et al. (2018) revealed that Network Capability can have positive effects on Companies' Performance.

Rittichainuwat and Mair (2012), Sarmento and Farhangmehr (2016) demonstrated that trade fairs receive different visitors so the exhibitors' results can be divided into Sales Performance and Non-Sales Performance (Kitchen, 2017; Menon & Edward, 2017; Rittichainuwat & Mair, 2012; Sarmento & Farhangmehr, 2016). Sarmento and Farhangmehr (2016) reveal that Sales Performance can happen after the trade fair, as a result of Non-Sales Performance (Kotler & Keller, 2015). Such a sequence informed the theoretical model of this study.

Figure 2.1 shows the model and hypothesized relationships.

3. METHODOLOGY

This study focuses on the trade fairs' exhibitors. The questionnaire was prepared and addressed to the marketing and/or sales director of companies participating in trade fairs. A survey-based quantitative approach was adopted to analyse the relationship between the study's variables.

3.1 Survey

Survey research is *"the collection of information from a sample of individuals through their responses to questions"* (Check & Schutt, 2012, p. 160). This type of research allows a variety of methods to recruit participants, collect data and use various methods of analysis, such as questionnaires (Hair et al., 2014).

Based on the literature review, a questionnaire was developed (see table 2.1). The instrument had a clear and direct format and comprised two parts, beginning with a presentation of the scope and objectives of the study.

The first part served to measure the constructs. The constructs that make up the conceptual model are: (i) Entrepreneurial Orientation and its dimensions (subconstructs- Innovativeness; Proactiveness; Risk-Taking; Competitiveness; Autonomy) (ii) Network Capability, (iii) Exhibitor's Sales Performance, and (iv) Exhibitor's Non-Sales Performance.

The items that measure the different constructs (although adapted to the context) were used from research instruments validated by different authors (see Table 2.1).

However, to reinforce the validity of the content, a panel of experts composed of academics and industry practitioners was invited to review the initial items of the questionnaire. The cooperation of these experts was positive and helped to build an appropriate questionnaire for the study.

All variables were measured on five-point Likert scales, ranging from one (1) - totally disagree to five (5) - totally agree.

The second part contained questions related to the characteristics of the respondent companies, such as: type of company, size of the company (turnover), intensity of participation in trade fairs, volume of exports (%) and the company's country of origin.

Table 2.1 – Items survey

CODE	ITEMS	REFERENCE
Innovativeness		
IN1	Our company tends to present new ideas, products/services at trade fair.	Based on Fadda (2018); Martins and Rialp (2013); Yoon et al. (2018).
IN2	Our company encourages all employees to change something to a successful trade fair.	
IN3	Our company encourages all employees to share changes or innovations for a successful trade fair.	
IN4	Our company considers the presentation of new products/services as fundamental to our success at the trade fair.	
Proactiveness		
P1	Our company tends to introduce various methods to maintain a dominant position at trade fair.	Based on Fadda (2018); Martins and Rialp (2013); Yoon et al. (2018).
P2	Our company encourages employees to participate effectively to maintain a dominant position at trade fair.	
P3	Our company is more proactive than the trade fair's rivals.	
P4	Our company adopts a competitive posture at trade fair.	
Risk-Taking		
RT1	Our company has a strong tendency for high risk (high return) projects.	Based on Fadda (2018); Martins and Rialp (2013); Yoon *et al*. (2018).
RT2	Our company would like to undertake risky projects to improve our trade fair performance.	
RT3	Our company has a strong tendency to exploit opportunities in uncertain environments.	
RT4	Our company prefers success to stability.	
Competitiveness		
C1	Our company tends to have a competitive attitude to monitor competitors' actions at trade fair.	Based on Fadda (2018).
C2	Our company tries to counter competitor strategies at trade fair.	
C3	Our company uses conventional or unconventional methods to compete in trade fair.	
C4	During the trade fair, our company researches the actions of competitors.	
Autonomy		
A1	Our company encourages employees to act independently at trade fair.	Based on Fadda (2018).
A2	Our company encourages employees to make important strategic decisions during trade fair.	
A3	Our company encourages employees to implement key programs.	
A4	Our company encourages employees to be independent and responsible during the trade fair.	
Network Capability		
NW1	At trade fair, our company bets on strong and close relationships with potential partners.	Based on Jiang *et al*. (2018); Yoon *et al*. (2018).
NW2	At trade fair, our company often communicates with current and potential customers and partners.	
NW3	At trade fair, our company coordinates activities for strong and close relationships with potential customers and partners.	
NW4	At trade fair, our company bets on partnerships effectively and positively.	
NW5	Our partners and customers trust us.	
Exhibitor's Sales Performance		
EP1	Profit performance	Abbas, *et al*. (2019); Menon and Edward (2017); Gopalakrihna and Lilien (1995)
EP2	Sales performance	
EP3	Return on investment (ROI) goals	
Exhibitor's Non-Sales Performance		
ENP1	Information gathering	
ENP2	Networking	
ENP3	Reputation	
ENP4	Customers satisfaction	

Source: Own elaboration

3.2 Data collection

The population of this study was unknown, thus a database of the exhibitors' lists was created from various trade fairs' organizers, such as: Exponor (Portugal), FIL (Portugal), ExpoSalão-Batalha, as well as business associations, such as: ATP - Portuguese Textile and Clothing Association; APIMA - Portuguese Association of Furniture and Related Industries; APICCAPS – Portuguese Footwear, Components, Leather Goods Manufacturers' Association; or public business support institutions: IAPMEI - Institute of Support to Small and Medium Enterprises and Innovation; and AICEP - Agency for Investment and Foreign Trade of Portugal. So, data was collected through the database created with companies participating in international trade fairs. The questionnaire was sent by email between 3rd – 31st January 2020, addressed to the marketing and/or sales directors of the companies present in the databases, resulting in 362 complete responses.

3.3 Data analysis

SPSS 24.0 and Amos 20.0 statistical programs were utilized for data analysis. This three-step stage was used to validate the scales and examine the dynamic relationships among the constructs of the study.

In the first step, despite them having been validated by previous authors but because of adaptations, exploratory factor analysis (EFA) with varimax rotation was utilized to purify the items. EFA is used to extract the right number of constructs and identify the underlying measurement items (Devellis, 2012).

In the second step, confirmatory factor analysis (CFA) with maximum likelihood estimation was conducted to validate the measurement scales of the constructs (Hair et al., 2014). Then, reliability and validity measures were tested and structural equation modelling (SEM) was performed to test the proposed model and hypotheses. SEM is used to determine if a certain model is valid and allows to associate several measures to a single latent construction (Hair et al., 2014; Marôco, 2014). Finally, the maximum likelihood procedure was used to estimate the measurement model and structural model. In addition, model fit indexes were examined for model fit (Hair et al., 2014).

4. RESULTS

4.1 Sample profile

Descriptive analysis was done to obtain the profile of the respondent companies: 362 complete questionnaires were collected.

The sample size is in accordance with previous studies, for example Fadda (2018); Kitchen, (2017); Rittichainuwat & Mair (2012); Sarmento & Farhangmehr (2016). In addition, the sample size is also adequate given the proportion of items used (Devellis, 2012). Table 2.2. provides detailed information about the companies/exhibitors.

Table 2.2 - Characterisation of respondent companies/exhibitors

ELEMENTS OF COMPANIES CHARACTERISATION		*n*	%
Company type	Manufacturer/producer	244	67.4%
	Service	63	17.4%
	Wholesaler	14	3.9%
	Retailer	11	3.0%
	Importer/exporter agent	30	8.3%
	Total	362	100.0%
Company size (turnover)	<500.000€	82	22.7%
	500.000€ - 1.500.000€	66	18.2%
	1.500.001 - 2.500.000€	40	11.0%
	2.500.001€ - 5.000.000€	57	15.7%
	>5.000.000€	117	32.3%
	Total	362	100.0%
Participation intensity	Sporadically	29	8.0%
	1 trade fair every 4 years	6	1.7%
	1 trade fair every 2 years	14	3.9%
	1 trade fair per year	95	26.2%
	Several trade fairs a year	218	60.2%
	Total	362	100.0%
Export	<10%	101	27.9%
	11% – 25%	69	19.1%
	26% – 50%	59	16.3%
	51% – 75%	44	12.2%
	>75%	89	24.6%
	Total	362	100.0%
Country	Portugal	341	94.2%
	Other countries (+ 9)	21	5.8%
	Total	362	100.0%

Source: Own elaboration

4.2 Exploratory Factorial Analysis (EFA)

Throughout EFA the theoretically interpretable and substantial factors must be maintained (Kim & Mueller, 1978). So, Entrepreneurial Orientation (Innovativeness; Proactiveness; Risk-Taking; Competitiveness; Autonomy); Network Capability; Exhibitor's Non-Sales Performance; Exhibitor's Sales Performance were assessed. Table 2.3 shows the EFA findings.

Kasier-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity were evaluated to ensure the appropriateness of the data for EFA.

The results show that in general the KMO coefficient was greater than 0.80 and the Bartlett's test was significant at the 0.05 level, indicating the adequacy of the items (Hair et al., 2014). The KMO coefficient was also analysed for all constructs individually, showing adequate indicators.

Items with factor loadings lower than 0.50 or cross-loaded items were removed (P2 and C4) and the remaining items were factor analysed again (Hair et al., 2014). So, the total variance explained is greater than 0.710, which exceeds the threshold value of 60%. Therefore, the total validity of the scales is reasonable (Hair et al., 2014).

Finally, Cronbach's alpha was applied to test the reliability of the constructs, as shown in Table 2.3. The Cronbach alphas of all constructs are greater than 0.7, but that of the full scale is greater than 0.90. Therefore, AFE results indicate high internal consistency (Hair et al., 2014).

Table 2.3 - Exploratory Factorial Analyses

CONSTRUCTS	COD.	Factor loadings	Indicators	
Innovativeness	IN1	0.650	Cronbach's α 0.839 KMO test 0.693	Cronbach's α 0.839 KMO test 0.886
	IN2	0.723		
	IN3	0.751		
	IN4	0.682		
Proactiveness	P1	0.475	Cronbach's α 0.856 KMO test 0.772	
	P2	0.444		
	P3	0.567		
	P4	0.597		
Risk-taking	RT1	0.600	Cronbach's α 0.757 KMO test 0.699	
	RT2	0.723		
	RT3	0.751		
	RT4	0.653		
Competitiveness	C1	0.713	Cronbach's α 0.744 KMO test 0.726	
	C2	0.735		
	C3	0.621		
	C4	0.298		
Autonomy	A1	0.809	Cronbach's α 0.857 KMO test 0.781	
	A2	0.797		
	A3	0.750		
	A4	0.771		
Network Capability	NW1	0.816	Cronbach's α 0.877 KMO test 0.836	
	NW2	0.761		
	NW3	0.655		
	NW4	0.681		
	NW5	0.736		
Exhibitor's non-sales performance	ENP1	0.548	Cronbach's α 0.851 KMO test 0.781	
	ENP2	0.572		
	ENP3	0.640		
	ENP4	0.590		
Exhibitor's sales performance	EP1	0.836	Cronbach's α 0.910 KMO test 0.735	
	EP2	0.882		
	EP3	0.830		

Kaiser Normalisation Varimax rotation method
Kasier-Meyer-Olkin measure of sampling adequacy (KMO)= 0.913
Bartlett's test sig. 0.000.
Cronbach's α= 0.938

Source: Own elaboration

4.3 Confirmatory Factor Analysis (CFA)

CFA was applied based on the output of EFA using Amos 20. CFA allows to assess the overall model fit for the full measurement model (Hair et al., 2014; Marôco, 2014). Nevertheless, new analysis of the items was assessed to improve model fit indices. Therefore, based on Modification Index, we analysed error/crossload correlations (Whittaker, 2012), and the items (IN1; IN4; P4; RT2; RT4; C1; A4; NW1; NW5; and ENP4) were excluded, because of high error correlations (Whittaker, 2012).

Table 2.4 summarizes final items and constructs. Through Cronbach's Alfa it is verified that all items are scored in the same direction - appropriate reliability (Hair et al., 2014). However, there are two subconstructs (Risk-Taking = 0.592; Competitiveness = 0.617) with low Cronbach's Alpha. Still, in the general composition of the main construct (Entrepreneurial Orientation = 0.848) Cronbach's Alfa presents an adequate reliability (Hair et al., 2014).

Table 2.4 also shows the mean, which is a measure of central tendency and provides an indication of the average value of a distribution of responses to each item. In the same table we present the standard deviation (SD) that shows the variation of the mean of each item (Barde & Barde, 2012). A low SD indicates that the data tends to be close to the mean (Barde & Barde, 2012), in this specific case the results are acceptable.

Table 2.4 – Mean, SD, Variance, Cronbach's Alpha

CONSTRUCTS		ITEMS' CODE	MEAN	SD	LOADINGS EFA	LOADINGS CFA	TOTAL VARIANCE EXPLAINED	CRONBACH'S ALPHA	
Entrepreneurial Orientation	Innovativeness	IN2	3.54	1.134	0.723	0.774	0.918	0.911	0,848
		IN3	3.73	1.116	0.751	0.749			
	Proactiveness	P1	3.60	1.033	0.475	0.640	0.792	0.737	
		P3	3.29	0.992	0.567	0.517			
	Risk-taking	RT1	2.56	1.113	0.600	0.620	0.710	0.592	
		RT3	2.75	1.069	0.751	0.667			
	Competitiveness	C2	2.95	1.098	0.735	0.481	0.723	0.617	
		C3	2.83	1.056	0.621	0.720			
	Autonomy	A1	3.02	1.170	0.809	0.827	0.729	0.813	
		A2	3.18	1.163	0.797	0.842			
		A3	3.35	1.105	0.750	0.734			
Network Capability		NW2	4.27	0.882	0.761	0.726	0.763	0.842	
NW3		3.91	1.076	0.655	0.686				
NW4		3.96	1.031	0.681	0.739				
Exhibitor's non-sales performance		ENP1	3.89	0.853	0.548	0.707	0.744	0.825	
		3.80	0.943	0.572	0.706				
ENP2		4.19	0.778	0.640	0.711				
ENP3									
Exhibitor's sales performance		EP1	3.06	0.937	0.836	0.863	0.850	0.910	
		3.22	0.952	0.882	0.887				
EP2		3.23	1.037	0.830	0.830				
EP3									

Source: Own elaboration

The structural equation allowed to test the hypotheses of relationships as illustrated in Figure 2.1. Consequently, several indicators were used to assess the model fit: X2/DF; CFI - Comparative Fit Index; NFI - Normed-Fit Index; TLI - Tucker Lewis Index or NNFI - Non-Normed Fit Index; IFI - Incremental Fit Index; GFI - Goodness of Fit Index; AGFI - Adjusted Goodness of Fit Index; RFI – Relative fit index; RMSEA - Root Mean Square Error of Approximation; PNFI - Parsimonious Normed Fit Index; and PGFI - Parsimony Goodness-of-Fit Index.

CFA results indicate an appropriate fit for the data: X2= 275.768; DF= 162; X2/DF=1.702 (Bollen, 1989); CFI= 0.969 (Jöreskog & Sörbom, 1993); NFI= 0.929 (Garver & Mentzer, 1999); GFI= 0.930 (Jöreskog & Sörbom, 1984); AGFI= 0.910 (Hooper, et al., 2008); TLI= 0.964 (Tucker and Lewis, 1973); IFI= 0.970 (Bollen, 1989); RFI= 0.917 (Hair et al., 2014); RMSEA= 0.044 (Hair et al., 2014); PNFI= 0.792; and PGFI= 0.718 (Mulaik et al.,1989). Then, the average variance extracted is more than 0.533, being recommended >0.50 (Bagozzi & Yi, 1988; Hair et al., 2014).

Based on several authors, the obtained results indicate a model considered to be well adjusted. The indicators demonstrate a great level of unidimensionality and convergent validity. Figure 2.1 shows the standardized estimation of the conceptual model.

Finally, in the confirmatory factor analysis, CR - Composite Reliability, AVE - Average Variance Extracted, MSV - Maximum Shared Variance, ASV - Average Shared Variance were used. Hair et al., (2014) suggest the following limits for these values: CR> 0.7; AVE > 0.5; MSV < AVE; ASV < AVE.

These values are expressed in Table 2.5, indicating an appropriate level of unidimensionality and convergent validity (Hair et al., 2014).

Table 2.5 - AVE, MSV, ASV and Correlation Matrix of Constructs

CONSTRUCT	CR	AVE	MSV	ASV	1	2	3	4
1	0.834	0.558	0.543	0.434	**0.747**			
2	0.870	0.627	0.543	0.425	0.737	**0.792**		
3	0.871	0.533	0.476	0.356	0.616	0.690	**0.730**	
4	0.914	0.780	0.381	0.283	0.617	0.506	0.462	**0.883**

1 - Exhibitor's non-sales performance 2 - Network Capability 3 - Entrepreneurial Orientation 4 - Exhibitor's sales performance
*Diagonal elements (bold) show the square root of average variance extracted (AVE)

Source: Own elaboration

As we can see in Table 2.5, all AVE were greater than 0.50, providing additional support for convergent validity (Hair et al., 2014). The composite reliability of all scales was > 0.80, providing an appropriate level (Fornell & Larcker, 1981; Hair et al., 2014). In addition, Fornell and Larcker (1981) and Roldán and Sánchez-Franco (2012) say that, to guarantee the discriminant validity, the square root of the AVE measures must be superior to all the correlations among all the constructs.

Accordingly, all values support a convergent validity (Fornell & Larcker, 1981; Hair et al., 2014), validating the model in its fullness.

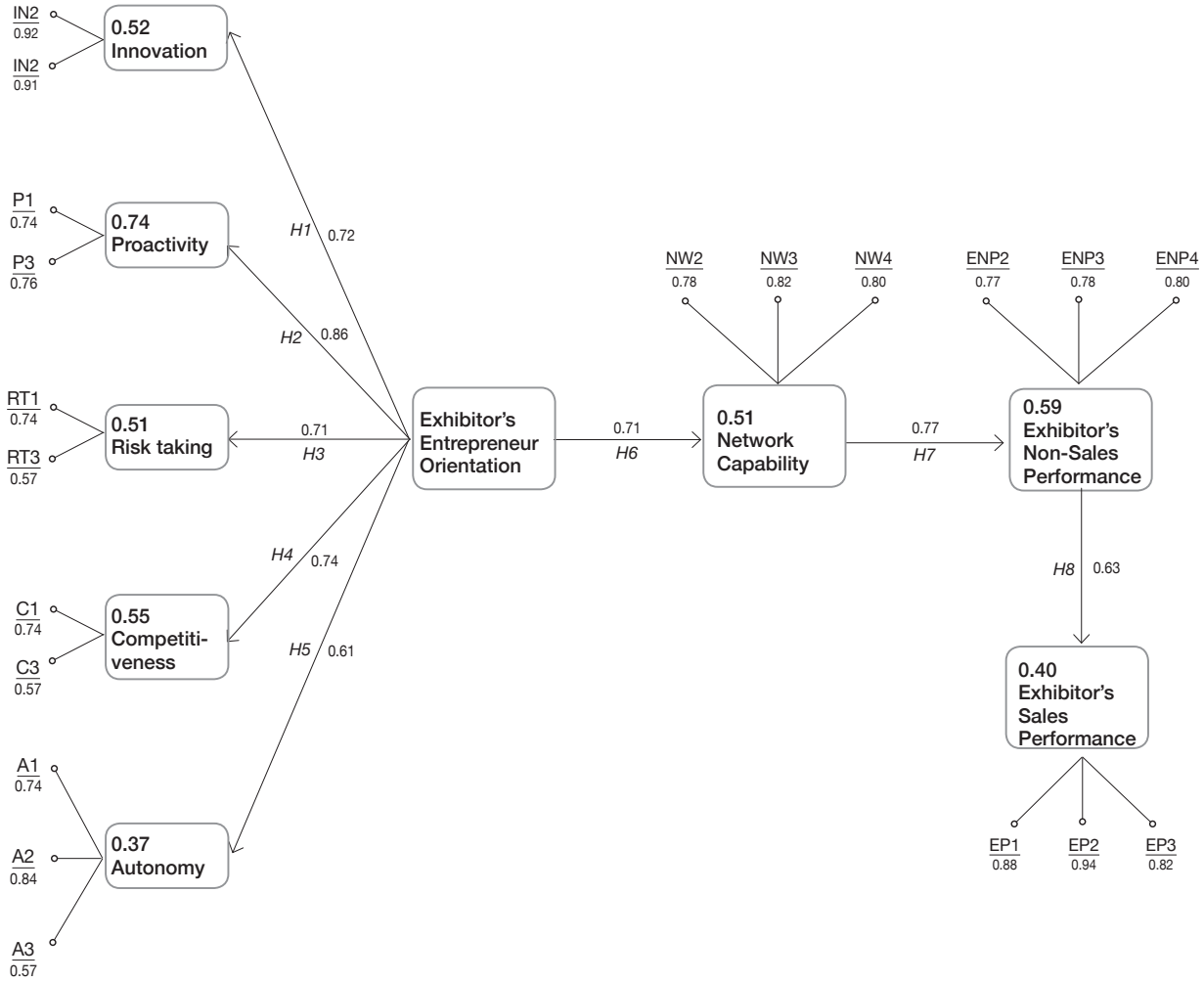
4.4 Structural model

The structural model with all constructs and hypothesized relationships was evaluated.

A graphic presentation of the original findings is shown in Figure 2.1, with standardized coefficient estimates. It should be noted that when testing H1, H2, H3, H4 and H5, it was applied a second-order Confirmatory Factor Analysis, because it allows to assess a composite of common factor configuration (Van Riel et al., 2017). Hence, this operation follows the indications of Fadda (2018) and Yoon et al. (2018) on the dimensions of Entrepreneurial Orientation - Innovativeness, Proactiveness, Risk-taking; Competitiveness; and Autonomy.

In the original estimated model, all hypotheses were supported, as shown in Figure 2.1 and on the next topic.

Figure 2.1 - Structural Equation Mode



Fit indices: X^2 = 275.768; DF = 162; X^2/DF = 1.702; CFI 0.969; GFI = 0.930; AGFI = 0.910; TLI = 0.964; IFI = 0.970; RFI = 0.917; RMSE = 0.044; PNFI = 0.792; OGFI = 0.718

Source: Adapted AMOS

4.5 Hypotheses Test

Kline (2016) affirms that hypothesized directional causal effects or direct effects represent the direct influence of one variable on another variable. So, the direct effect shows that "Innovativeness" (β= 0.723; $p<0.001$), "Proactiveness" (β= 0.863; $p<0.001$), "Risk-Taking" (β= 0.711; $p<0.001$), "Competitiveness" (β= 0.741; $p<0.001$) and "Autonomy" (β= 0.606; $p<0.001$) contribute positively to "Entrepreneurial Orientation", thus H1, H2, H3, H4 and H5 are supported.

Furthermore, the results of direct effects show that "Entrepreneurial Orientation" has positive and significant effects on "Network Capability" (β= 0.712; $p<0.001$), so H6 is supported; and "Network Capability" has significant positive effects on "Exhibitor's Non-Sales Performance" (β= 0.766; $p<0.001$), "Exhibitor's Non-Sales Performance" on "Exhibitor's Sales Performance" (β= 0.630; $p<0.001$), thus H7 and H8 are also supported.

In short, all the hypotheses (H1, H2, H3, H4, H5, H6, H7, and H8) were supported.

5. DISCUSSION AND FINDINGS

5.1 Summary of results

The purpose of this article is to examine the influence of Entrepreneurial Orientation on the Network and the Exhibitor's Performance.

The study aimed to analyse the relationship between Entrepreneurial Orientation, Network, and Exhibitor's Performance, by proposing and testing a conceptual model of the dynamic relationship among said variables.

Based on the CFA results, the study ensures that the factors Innovativeness, Proactiveness, Risk-Taking, Competitiveness, and Autonomy have positive contributions as elements of the Entrepreneurial Orientation mix, in the trade fair context. The results also demonstrate that Entrepreneurial Orientation has positive effects on Network Capability. The Exhibitor's Performance was divided into Non-Sale Performance and Sales Performance. Finally, the results verify that Network Capability has effects on the Exhibitor's Non-Sale Performance and Non-Sale Performance has positive effects on the Exhibitors' Sales Performance. Therefore, all hypotheses were supported.

5.2 Theoretical contributions

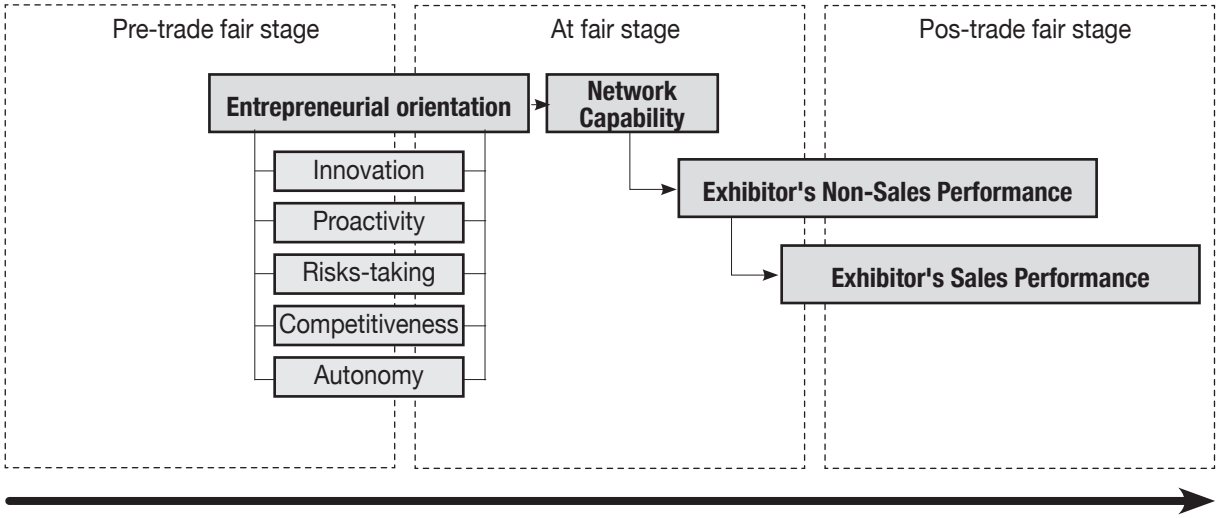
Firstly, this research possibly presents the first study to introduce the concept of Entrepreneurial Orientation in studies on trade fairs. Although the Entrepreneurial Orientation concept (Fadda, 2018; Martins & Rialp, 2013; Miller 1983; Miller & Hriesen, 1982; Mthanti & Ojah, 2017, Yoon et al., 2018) previously applied in different contexts, the results of the study prove that the Entrepreneurial Orientation mix of the exhibitors, based on its five dimensions (Innovativeness, Proactiveness, Risk-Taking, Competitiveness, and Autonomy). In addition, the present study shows that Entrepreneurial Orientation is a useful resource for exhibitors to develop networking (Jiang et al. 2018; Ruiz-Ortega et al., 2021; Strenge & Rank, 2018; Yoon et al., 2018) with a view to obtaining results (Kitchen, 2017; Rittichainuwat & Mair, 2012; Ruiz-Ortega et al., 2021; Sarmento & Farhangmehr, 2016). In fact, the results indicate that the Exhibitor's Performance depends on the Network Capability and the Network Capacity depends on the Exhibitor's Entrepreneurial Orientation.

Secondly, based on the recognized difficulty in measuring Exhibitors' Performance (Cop and Kara, 2014; Kitchen, 2017), the present study divided the Exhibitor's Performance in two perspectives - Sales Performance and Non-Sales Performance (Çobanoğlu & Turaeva, 2014; Menon & Edward, 2017; Sarmento & Farhangmehr, 2016) - and assessed an empirical effect between the two perspectives. Thus, it was possible to confirm that Sales Performance depends on Non-Sales Performance (Kotler & Keller, 2015) and can happen in the post-trade fair phase (Kitchen, 2017, Sarmento & Farhangmehr, 2016).

5.3 Managerial implications

The practical implications of this study can be summarized in a process, as shown in Figure 2.2.

Figure 2.2 – Trade fair participation process



Source: Own elaboration

The exhibitor can adopt an Entrepreneurial Orientation by investing in innovation, adopting a proactive and risk-taking attitude, betting on competitiveness and promoting his employees' autonomy. It must start before the trade fair as the exhibitor should prepare his participation in advance (He et al., 2019; Nayak, 2019; Silva, 2014). Then, based on Entrepreneurial Orientation, the exhibitor can develop networking, generate

bonds and commitment (Jiang et al., 2018; Ruiz-Ortega et al., 2021; Strenge & Rank, 2018; Yoon et al., 2018) during the fair. Also, the exhibitor can network with other industry members and costumers to increase his reputation, gather information, etc. – Non-Sales Performance (Çobanoğlu & Turaeva, 2014; Menon & Edward, 2017; Sarmento & Farhangmehr, 2016). More so, lead generation is one of the most imperative benefits of trade fairs (Kitchen, 2017). All an exhibitor needs to do is get in touch with these leads right after the trade fair (Kitchen, 2017, Sarmento & Farhangmehr, 2016) and grow the customer base – Sales Performance.

Trade fairs offer an unparalleled opportunity for face-to-face interactions with a wide array of potential customers (Locatelli et al., 2019; Sarmento et al., 2015).

So, based on this study Entrepreneurial Orientation emerges as a resource or an important catalyst for exhibitors to operate successfully in competitive, uncertain and dynamic environments (Martins & Rialp, 2013; Tajeddini et al., 2020) like trade fairs (AUMA, 2017; Maskell, 2014).

CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

The main objective of this study was to evaluate the impact of Entrepreneurial Orientation on the Exhibitor's Performance. Eight hypotheses were formulated to achieve this objective: H1, H2, H3, H4, H5, H6, H7, and H8.

This research project started from a theoretical foundation developed in previous studies. The research itself found that Entrepreneurial Orientation can operate as a recipe for companies to operate effectively in a competitive environment such as trade fairs. The study also reveals that Entrepreneurial Orientation can help a company to develop its Network Capacity, allowing it to generate results. Developing a great contact network at the trade fair is essential for the exhibitor's success. Even a good part of the negotiations is the result of a networking developed at trade fairs.

Thus far, the present study allowed the development of a validated model and allowed the assessment of hypotheses. Confirmatory factor analysis showed results that confirm all hypotheses.

The results which confirm H1, H2, H3, H4, H5, and H6 were important contributions to the study, as no previous research had analysed these relationships in the context of trade fair. These results highlight innovation, proactivity, risk-taking, competitiveness and autonomy as a mix of important ingredients for the exhibitor's networking.

Additionally, the confirmation of H8 also reveals a new way to evaluate the Exhibitor's Performance. More than establishing contacts, the company needs to keep them on its radar and interact productively to gain prestige, reputation and strengthen relationships. For that reason, trade fairs become territory that remains well beyond the event itself, transforming the networking established at the trade fair into intangible assets (Non-Sales Performance) that add competitive advantages capable of generating sales (Sales Performance).

Regarding the general objective of this study, which was to analyse the impact of Entrepreneurial Orientation on the Exhibitor's Performance, the findings are useful and with practical implications, so the objective was achieved.

This research has some limitations that must be considered. First, a study was carried out mainly on Portuguese companies, restricting its generalisation. Second, exhibitors'

performance was measured based on the exhibitors' level of satisfaction and not on real sales results.

In relation to future research directions, this survey could also be replicated incorporating other countries. Another recommendation is to conduct a study that separately analyses each dimension of Entrepreneurial Orientation in trade fair context. Finally, future studies may relate additional constructs, for example, it would be interesting to study the Entrepreneurial Orientation of exhibitors towards organisational learning.

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Chapter 3

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(See Appendix, page III)

What are the effects of product innovation and network on export performance? Evidence for industrial SME from trade fairs, considering home-country context.

1. INTRODUCTION

The current world of business is uncertain and complex (Clegg et al., 2019) and the challenges on companies arise in several ways. In the case of a small economy like Portugal, the OECD (2019) highlights two challenges for companies: the capacity to innovate and the capacity to export.

Exportation is a constant challenge and a complex process, especially for SME - Small and Medium Enterprises (Kalafsky & Gress, 2020). Due to their limited size, SME needs external relationships to make a profit (Zacca et al., 2015). In this regard, trade fairs offer a unique advantage for smaller companies in accessing exports through the generated contacts or business networks (Measson & Campbell-Hunt, 2015; Geldres-Weiss & Monreal-Pérez, 2018; Monreal-Pérez & Geldres-Weiss, 2019; Gerschewski et al., 2020; Kalafsky & Gress, 2020). For instance, by acquiring space in a trade fair (at a reasonable cost), they get a chance to exhibit their products and/or services and establish contacts, same as larger competitors (Silva, 2014).

Companies are also continuously pressured to innovate. Recent studies demonstrate the importance of innovation for companies (Popkova et al., 2018; Migdadim, 2020), economies and societies (Tlesova et al., 2018; Demir Uslu & Kedikli, 2019). Innovation is seen as a sustaining factor for the success of companies, communities, and nations (Green et al., 2015). Particularly, product innovation is often the primary source of competitive advantage for companies (Yan & Chen, 2018).

In this demanding environment, trade fairs play an important role in promoting innovation and consequently, generating business networks (Chu & Chiu, 2013; Dawson et al., 2014; Kim & Mazumdar, 2016; Bathelt, 2017; Golfetto & Rinallo, 2017). Especially as there is a time delay between product awareness and the adoption process (Anand et al., 2016). So, here, companies can use trade fairs to test, communicate and raise awareness of product innovations on the market (Bathelt, 2017).

Therefore, it can be said that trade fairs help to improve both challenges: product innovation and export. Interestingly, Pla-Barber and Alegre (2007) show a positive and significant link between innovation and exports. Cassiman et al. (2010) also point out that product innovation induces SMEs to enter the export's market. However,

Pla-Barber and Alegre (2007) suggest including in future studies other variables or factors in the analysis of the relationship between innovation and exports. From another perspective, Gerschewski et al. (2020) suggest that investigating any antecedents (for example product innovations) of network development at trade fairs for international SMEs could be a promising research. Consequently, Lewandowska et al. (2016, p. 3680) demonstrate that the *"networking capability becomes another factor responsible for the successful innovation and internationalisation of firms". However, they also warn that it is not possible to generalize the significance and strength of the influence exerted by innovation, networking capability, in the export of new products; because different contexts can affect the influence of these relationships* (Lewandowska et al., 2016).

In this sense, it would be interesting to assess whether in a trade fair context, there is evidence of a positive and significant link between innovation, networking capability, and exports. Curiously, no study has ever analysed the connection between these three concepts in trade fair context. So, the present paper aims to create and evaluate a conceptual model that represents a relationship of sequential influence of product innovation, networking capacity and export performance, in trade fair context. The business world is very volatile and changes are a reality, so new research on potential ways to make trade fairs successful is always important (Bauer & Borodako, 2019; Shi et al., 2020). Moreover, this analysis of the conceptual model will be extended from three different perspectives: Model A encompasses all surveyed SMEs, Model B includes only industrial/producer SMEs, Model C comprises service/other SMEs. This comparative study is opportune, because more studies are needed on the role of industrial trade fairs (Gerschewski et al., 2020).

Hence, the present research is pertinent, firstly because trade fairs are tools for business networks (Golfetto & Rinallo, 2017), and this heterogeneity of network partners at trade fairs, offers challenges and opportunities for innovation (Dawson et al., 2014), such as export opportunity. Strangely, these themes (innovation, internationalisation) are stagnant in recent trade fair's literature, therefore it is necessary to renew these for research (Tafesse & Skallerud, 2017). For instance, future research on internationalisation should investigate companies considering their home-country context (Lindner et al., 2018). Secondly, Lewandowska et al. (2016) suggest future research about product innovation, networks, and exports in different contexts. In addition, studying the presentation of product innovations at trade fairs, such as antecedents of network

development and export to SMEs, could be a promising research (Gerschewski et al., 2020). Geldres-Weiss et al. (2016) also reinforce the need for more studies that highlight the importance of products on the company's export performance. Thirdly, because the current competitive and ever-changing global environment offers opportunities and challenges that require flexible and effective strategic responses or actions (Clegg et al., 2019; Oliveira et al., 2019), mainly for SME (Oliveira et al., 2019). Therefore, the present study can generate important insights for SME.

Finally, it is argued that the home-country context remains little studied for internationalisation (Lindner et al., 2018). Thus, this study focuses on SME from a small country/economy - Portugal. Portugal is the second country in the European Union, where the weight of small "companies" is considerable in its economy (EUROSTAT, 2020). "The category of micro, small and medium-sized enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million" (European Commission, 2020).

The business sector in Portugal is composed almost entirely of SME - 99.9% (Pordata, 2020). These values show the importance of SMEs in the Portuguese economy, in exports and in employment. According to Pordata (2020), the export of goods from Portugal in 2019, mostly by SMEs, was 59,906.1 Euros - Millions (provisional data) and services of 35,269.3 Euros - Millions (provisional data). The value of Portuguese exports in 2018 exceeded 40% of the Portuguese GDP (OECD, 2019). However, according to data from Instituto Nacional de Estatística (2020), Portuguese exporting companies account for only 11% of the business sector. Despite being developed and belonging to the Eurozone, Portugal still presents structural problems in the economy (high indebtedness, unbalanced global value chain, low economies of scale, among others) and considerable deviations in efficiency. Therefore, the Portuguese economy is vulnerable, small and with a low degree of internationality (OECD, 2019).

Export is a crucial factor for Portuguese SMEs because the Portuguese economy needs to continue to grow internationally (OECD, 2019). For this reason, this study can be an important contribution to SMEs from countries like Portugal (small country/ economies), which presents insights on how to continue to diversify international markets through international trade fairs.

The article consists of six sections. After the introduction, the second section presents the literature review, formulation of constructs and hypothesis. The third section briefly describes the empirical context and applied methodology. The fourth section reports the results. Then, the fifth section discusses findings and analyses the results. Finally, in the sixth and last section, the main conclusions, limitations, and suggestions for future research are presented.

2. THEORETICAL BACKGROUND AND HYPOTHESES FORMULATION

2.1 Product innovation - concept

The concept of innovation is currently fragmented and inconsistent (Costello, 2015), presenting more than thirty concepts of the innovation. However, authors recognize innovation as a complex process and not a simple occurrence (Griffin & Moorhead, 2011), and it can happen in many ways, contexts, and realities (Maillard, 2015). Edwards-Schachter (2018, p. 75) says that innovation in general terms "*is an approach organisation use to introduce changes to survive and thrive during uncertain and turbulent conditions*". Varadarajan (2018, p. 143) defines an overview of innovation as *"the creation of value by using relevant knowledge and resources for conversion of an idea into a new product, process, or practice, or improvements in an existing product, process, or practice".*

Milutinović et al. (2015) argue that innovation can be classified as incremental, semi-radical and radical, depending on its scope in each case. Varadarajan (2018) argues that innovation can happen on four types: product innovation, process innovation, business model innovation and marketing innovation. Nevertheless, in the OECD/Eurostat (2018), five different types of innovation are presented: product innovation, process innovation, business model innovation, marketing innovation and organisational innovation. So, OECD/Eurostat (2018, pp. 70) refers that "a product innovation is a new or improved good or service that differs significantly from the firm's previous goods or services and that has been introduced on the market". Consequently, product innovation is very common in companies, as they usually choose to focus on one product as their strategy for innovation development (Stošić, 2013).

2.2 Trade fairs are a stage for product innovation

Trade fairs are a market system (Tafesse & Skallerud, 2017), where many experts and business people (sellers, buyers, suppliers, distributors and intermediaries) come

together in one place, for a specific period. At trade fairs, visitors and exhibitors meet face to face to create productive and dynamic interactions (Sarmento et al., 2015; Locatelli et al., 2019). Thus, trade fairs have three different actors: exhibitors (including SME), Visitor and Organizers (Lin et al., 2015). International trade fairs are large events, which attract a significant amount of international exhibitors/SME and visitors (Silva, 2014). Exhibitors are organisations that physically display their products and/or services, at the trade fair, to visitors, under the guidance of a specific trade fair organizer (Silva, 2014). Consequently, many companies (SME) use trade fairs to present the main product line (Kirchgeorg et al., 2010b) and product concepts in different stages of development (Kim & Mazumdar, 2016), namely product innovations.

Trade fairs allow to "*reinforce the international market presence of the firm, the possibility of finding new ideas and test new products*" (Santos & Mendonça, 2014, p. 1957). They also allow companies to interact directly with customers, sharing information about their products and receiving direct feedback for improvements in new product development (Bettis-Outland et al., 2010). Accordingly, among the strategies during the trade fair, the exhibition of the products is an essential factor of success for the SME (Chu & Chiu, 2013). Particularly, innovation is a key factor to help a company compete in your industry (Yan & Chen, 2018), like trade fairs that are highly competitive environments (Maskell, 2014).

2.3 SME's product innovation stimulates networking capacity

Trade fairs are events which represent a temporary coming-together of multiple organisations (Bettis-Outland et al., 2020), they are a type of network business that provides benefits to participants (Lai, 2015). Generally, SME marketing activities can be assisted by networking (O'Donnell, 2014). So, trade fairs offer great possibilities for building networks for SME (small and medium-sized enterprises), as well as the benefits of selling, promoting, and collecting information (Measson & Campbell-Hunt, 2015). So, expectedly, the size of the business network significantly influences the SME's satisfaction, trust, and loyalty (Lai, 2015). Consequently, one of the main objectives of the exhibitor is to "*establish relationships with present and future customers and enhance the brand image and reputation of the firm*" (Santos & Mendonça, 2014, p. 1957). In this

context, SME need to have network capacity. Vinit et al., (2017, p. 94) defined "*network capability as the ability to manage and gain benefits from external relationships*" (customers, institutions, competitors, partners, among others). Network capability is the strength of network ties (Yoon et al., 2018) or a dynamic resource that creates interdependencies (Battistella et al., 2017; Cenamor et al., 2019). This helps companies achieve their goals (Yoon et al., 2018).

Lewandowska et al. (2016) emphasize that product innovation attracts contacts/networking, because of the benefits related to access to knowledge, assets, new technologies and markets, and new products, risk sharing, among others. Potential partners are varied, such as suppliers, customers, competitors, consultants, government support institutions, among others (Lewandowska et al., 2016). Precisely in the trade fair context, the motivations of "innovation and promotion" of the exhibitors coincide with the motivations of "learning and trying/testing" of the visitors (Caber et al., 2016). So, innovation positively influences a company's network capability (Yoon et al., 2018), since "n*etwork partners collaborate to innovate and innovate to collaborate and thereby achieve value*" (Dawson et al., 2014, p. 496). Particularly, innovation is a tool to achieve customer loyalty and confirm the company's reputation (Foroudi et al., 2016). Therefore, product innovation is an antecedent to this quality of the company's relationship with the customer (Jalal & Haim, 2015). Based on the above discussion, the following hypothesis is presented:

H1. In trade fair context, SME's product innovation has positive effects on its networking capacity.

2.4 SME's networking capacity contribute to their export performance

Previous studies show that participation in international trade fairs creates an excellent opportunity to enter new markets for companies, especially for SME, which leads to increased exports facilitating the internationalisation of their businesses (Evers & Knight, 2008; Measson & Campbell-Hunt, 2015; Kalafsky & Gress, 2020).

Exporting is a mode of foreign market entry (Cateora et al., 2019; Escandon-Barbosa et al., 2019; Feng-Jyh & Ching-Wei, 2019), which in general terms consists of selling or sending a product/service to a foreign customer (Cateora et al., 2019). Export performance is the company's level of satisfaction (exhibitor) with its export operations (export

intensity, growth of international sales, export profit level, volume of international sales, and market share, among others) as an indicator of the success of international activity (Zou et al., 1998; Escandon-Barbosa et al., 2019). This definition emphasizes joint action of the exported product and the market, moreover, helps to overcome several difficulties in measuring export performance (Escandon-Barbosa et al., 2019).

In particular, trade fairs are a vital vehicle where SME develop networking, through which valuable resources for export can be acquired (Measson & Campbell-Hunt, 2015; Geldres-Weiss & Monreal-Pérez, 2018; Gerschewski et al., 2019). Interestingly, Monreal-Pérez & Geldres-Weiss (2019) show that small, young, and inexperienced companies are the ones that get the most out of trade fairs to generate leads.

Relationships with foreign partners are important, because they provide preliminary information and generate the necessary contacts to improve export performance (Yu et al., 2011). Thus, trade fairs can substantially minimize entry barriers in international markets (Kellezi, 2014). More, trade fairs can promote contacts and exports from one country to various destinations in the world (Li & Shrestha, 2013). The main reason is the ability of trade fairs to provide networking, through relationships, information exchange and social interaction among participants (Measson & Campbell-Hunt, 2015; Sarmento & Farhangmehr, 2016). Consequently, the socialisation plays an important role in building and developing relationships, especially in a business-to-business (B2B) context (Gopalakrishna et al., 2019; Sarmento et al., 2015). Business networks play an essential role in providing information benefits, market selection, decision making and entry modes (Jeong, 2016), and facilitate the global value chain (Measson & Campbell-Hunt, 2015). Gerschewski et al. (2020) present empirical evidence that the proactive development of networks at trade fairs can have positive implications for the company's performance, especially for entering international markets. Thus, these arguments lead to the following hypothesis:

H2. In trade fair context, SME's network capacity has positive effects on its export performance.

2.5 SME - Innovate to Networking and Networking to Export

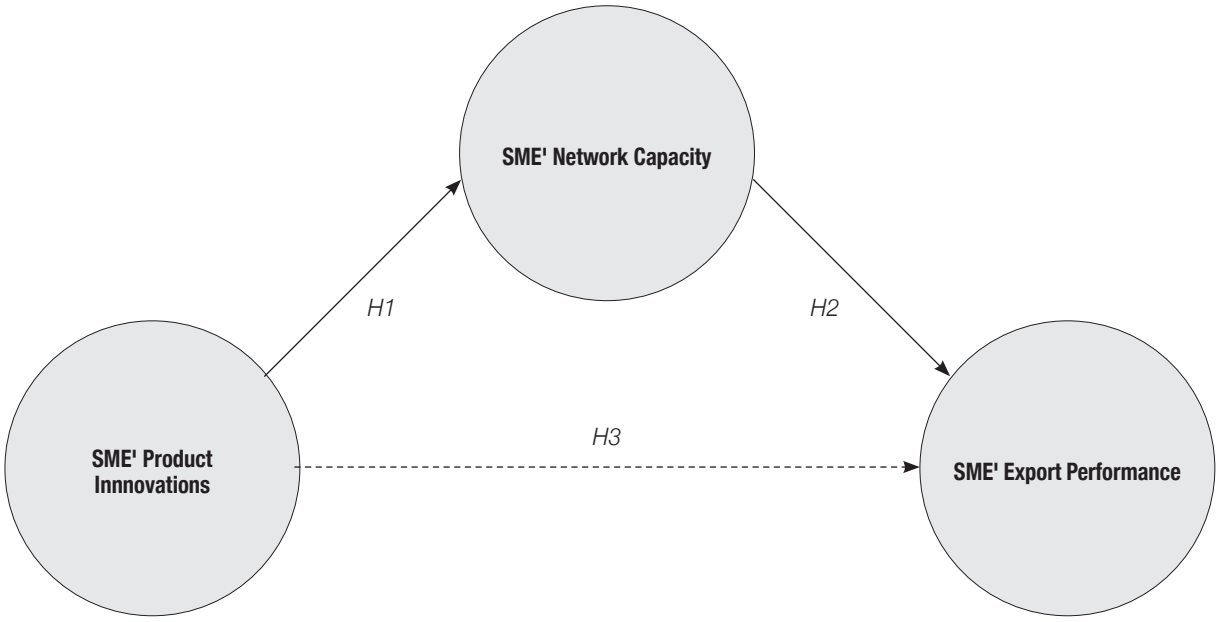
Trade fairs are important events for promoting product innovations (Dawson et al., 2014; Santos & Mendonça, 2014; Kim & Mazumdar, 2016) and exports (Geldres-

Weiss & Monreal-Pérez, 2018; Gerschewski et al., 2019; Monreal-Pérez & Geldres-Weiss, 2019). However, studies do not make the connection between product innovation and exports in the context of trade fairs, even though they highlight the role of networking in product innovation (Dawson et al., 2014; Jalal & Haim, 2015; Foroudi et al., 2016) and exports (Measson & Campbell-Hunt, 2015; Geldres-Weiss & Monreal-Pérez, 2018; Gopalakrishna et al., 2019; Vissak et al., 2020). Interestingly, networking capability plays an important role for the successful innovation and internationalisation of companies (Lewandowska et al., 2016). Precisely, in trade fair context, networking is an important resource for the exhibitor's performance and internationalisation (Gerschewski et al., 2020), because participation in trade fairs allows adaptive and productive learning (Bettis-Outland et al., 2020). From this perspective, it is pertinent to study whether trade fairs allow - Innovate to Networking and Networking to Export. Thus, these arguments lead to the following hypothesis:

H3. In trade fair context, network capability moderates the relationship between SME's product innovation and SME's export performance.

Therefore, based on the literature discussed earlier, this study proposes the research model shown in Figure 3.1.

Figure 3.1 - Research model



Source: Own elaboration

2.6 Trade fairs and Industrial SMEs

An industrial trade fair is essentially composed of industrial exhibitors and receives professional visitors – B2B (Silva, 2014). Studies on the role of industrial trade fairs for SME performance are scarce in recent literature (Gerschewski et al., 2020). Therefore, in order to extend the impact of this study, it is argued that trade fairs may play a relevant role for SME's industries/producers, in particular, when presenting product innovations, network development and export performance.

The importance of trade fairs for industries/producers has been observed in some literature. In general, the research shows that trade fairs can help industrial companies manage the process of developing new products (Bello & Barczak, 1990; Bathelt, 2017; Golfetto & Rinallo, 2017) and they allow to present and discuss the advances and innovations in the industry (Kirchgeorg et al., 2010a). Because trade fairs facilitate the testing of innovations and experimenting of new products (Kirchgeorg et al., 2010a). This tangibility of industrial trade fairs is a very relevant factor, which makes the trade fair's environment "*rich in sensorial stimuli – sounds, noises, odours, colours, signs, physical objects*" (Rinallo et al., 2010, p. 252). Generally, when customers can physically touch the products for examination increase their interest in these products (Pramudya & Seo, 2019), because real/physical contact allows the customer to judge products, including material properties, physical dimensions, sensory or psychophysical judgments (Chen et al., 2009). While the intangibility of services creates more complexity for service companies because generally customers have more difficulty in identifying differences in the offer of services due to their intangibility (Campbell & Verbeke, 1994). For instance, the intangible nature of the service implies more emphasis on personal interactions (Erramilli, 1992).

Trade fairs represent a unique opportunity for visitors to voluntarily examine exposed products (Sarmento et al., 2015; Silva, 2014), as a result industrial trade fair requires "*exhibition personnel with proper interpersonal skills, product knowledge and communication capabilities*" (Li et al., 2011, p. 438), in order to generate leads, networking (Gopalakrishna & Williams, 1992) and quick access to market information, which facilitates entry to industrial markets abroad (O'Hara et al., 1993).

Therefore, the present investigation deserves a comparative analysis between industrial/producer SMEs and service/other SMEs. Thus, the study addresses the research model from three different perspectives: Model A encompasses all surveyed SMEs, Model B includes only industrial/producer SMEs, Model C comprises service/other SMEs.

3. METHODOLOGY

A questionnaire was developed in this study as a data collection method for survey and analysis. Survey research *is "the collection of information from a sample of individuals through their responses to questions*" (Check & Schutt, 2012, p. 160).

3.1 Survey

The questionnaire was constructed based on bibliographic research, who already had the items valid. The items were derived from several studies: Battistella et al. (2017); OECD Oslo Manual (2018); Yoon et al. (2018); Cenamor et al. (2019); Escandon-Barbosa et al. (2019) (see Table 3.1.). Nonetheless, to reinforce the quality of the instrument, the questionnaire was also analysed by experts (two academics, two SME and two trade fair organizers). The purpose of the pre-analysis was to refine the research tool (questionnaire) and ensure its appropriate, clear, and relevant content. Based on their comments and suggestions, the questionnaire was revised for clarity. In general, the experts considered the questionnaire to be adequate, suggesting minor changes in the items/questions to improve its clarity. They also suggested introducing a brief presentation and objectives of the study and indicating the estimated response time at the beginning of the questionnaire. So, the cooperation of these experts was critical and helped to build a suitable questionnaire for the study.

The questionnaire had a clear and direct format and comprised two parts, starting with a presentation of the scope and objectives of the study, as well as the indication of the estimated response time, as suggested by the experts.

The first part addressed the issues related to the empirical study. Table 3.1 describes the scales used to measure the various constructs: Exhibitor Product Innovation, SME's network capacity; Exhibitor Export Performance. The items (Exhibitor Product Innovation, SME's network capacity) were measured using a five-point Likert scale (1 = strongly disagree; 5 = strongly agree). The items (Exhibitor Export Performance) were measured using the five-point Likert scale (1 = totally dissatisfied; 5 = totally satisfied). The SME's Network Capacity is the variable that can moderate the relationship between SME's Product Innovation and SME's Export Performance.

Network Capacity can be defined as a force of network ties that help companies achieve their goals (Yoon et al., 2018), in this case, that of presenting Product Innovation at trade fairs and thus improving their performance in exports.

The second part of the questionnaire concerned the characterisation of the respondent SME, such as type of company, company size (turnover), frequency of participation in trade fairs, and level (volume) of exports (%).

Table 3.1 – Items survey

ITEMS	FACTOR LOADINGS		
	Model A	**Model B**	**Model C**
SME Product Innovation - Based on OECD Oslo Manual (2018) and Yoon et al. (2018).			
Our company tends to present new ideas, products/services at trade fair.	0.703	0.751	0.603
Our company encourages all employees to change something to a successful trade fair.	0.847	0.862	0.819
Our company encourages all employees to share changes or innovations for a successful trade fair.	0.848	0.868	0.804
Our company considers the presentation of new products/services as fundamental to our success at the trade fair.	0.736	0.717	0.778
SME Network Capacity - Based on Yoon et al. (2018), Battistella et al. (2017) and Cenamor et al. (2019).			
At trade fair, our firm bets on strong and close relationships with potential partners.	0.863	0.869	0.845
At trade fair, our firm often communicates with current and potential customers and partners.	0.828	0.832	0.785
At trade fair, our firm coordinates activities for strong and close relationships with potential customers and partners.	0.729	0.708	0.756
At trade fair, our firm bets on partnerships effectively and positively.	0.715	0.739	0.591
Our partners and customers trust us.	0.755	0.761	0.736
SME Export Performance (satisfaction level) **-** Based on Zou et al., (1998) and Escandon-Barbosa et al., (2019).			
Foreign market share.	0.893	0.849	0.921
Foreign sales growth.	0.917	0.880	0.942
Foreign profitability.	0.921	0.896	0.932
Return on investment in international markets.	0.908	0.867	0.936
Number of international markets.	0.876	0.836	0.894
Number of international customers and partners.	0.889	0.851	0.913
Kaiser Normalisation Varimax rotation method Kasier-Meyer-Olkin measure of sampling adequacy (KMO)= 0.865 *(Model A)*; 0.85 *(Model B)*; 0.830 *(Model C)*. Bartlett's test sig. 0.000. Cronbach's α= 0.891 *(Model A)*; 0.906 *(Model B)*; 0.869 *(Model C)*. All factor loadings are significant at P < 0.001			

Source: Own elaboration

3.2 Data collection

The population of this study is Portuguese companies participating in trade fairs. The database was created of the SME's lists, available from various trade fairs organizers, such as Exponor (Portugal), FIL (Portugal), ExpoSalão-Batalha, as well as business associations, such as IAPMEI - Institute of Support to Small and Medium Enterprises and Innovation, AICEP - Agency for Investment and Foreign Trade of Portugal, AEP - Portuguese Business Association and AIP - Portuguese Industrial Association.

So, 3122 SME participating in international trade fairs were contacted and each contact/ SME had an equal opportunity to respond. The questionnaire was sent electronically between the 3rd – 31st January 2020, addressed to the marketing and/or sales directors of the SME. The 3122 SME contacted were responding randomly.

In the end, 341 complete responses were collected, registering a response rate of approximately 10,9%. Since respondents are companies (SME), it is normal for the response rate to be relatively low in these situations. However, the sample size is in line with previous studies, for instance, Sarmento and Farhangmehr (2016), Yoon et al. (2018), and Gopalakrishna et al. (2019), and also adequate given the proportion of items used (Devellis, 2012).

3.3 Data analysis

Data analysis happened in two steps.

First step: SEM - Structural Equation Modelling was used, allowing path analysis and consequent CFA - Confirmatory Factor Analysis (Marôco, 2014; Byrne, 2016). SEM consists of a set of multivariate techniques, which are confirmatory rather than exploratory in testing whether models fit data (Byrne, 2016). SEM is a mature and successful methodology in marketing and business research (Kim et al., 2015). This is methodology is a particularly suitable technique for evaluating the multiple relationships between observed and latent variables (Hair et al., 2014). In the present study, the SEM involved hypothesized relationships as shown in Figure 3.1.

AMOS-SEM were the selected software because this study is about theoretical tests and does not intend to develop or construct theories so, as Roldán and Sánchez-Franco

(2012) suggest, AMOS-SEM is the indicated software for these studies. So, SEM is used to determine if a particular model is valid and allows the association of several measures to a single latent construction (Hair et al., 2014; Marôco, 2014). Also, using Maximum Likelihood Estimation allows to estimate the measurement model and structural model. Then, model fit indexes were examined for model fit, and the hypotheses were also tested (Hair et al., 2014). Lastly, moderating effects of Network Capability were estimated through the non-parametric bootstrap method by Preacher and Hayes (2008). The bootstrap resampling method has a high precision (Hayes et al., 2011; Marôco, 2014; Preacher & Hayes, 2008), which is recommended for small samples since it does not violate the assumptions of normality (Preacher & Hayes, 2008).

The first step was carried out in three different perspectives: Model A (all surveyed SMEs), Model B (industrial/producer SMEs), and Model C (service/other SMEs).

In the second step, three control variables ("Company Size"; "Frequency of Participation in Trade Fairs"; "SME's Export Level") were included in the model to analyse its effects on the criteria variable ("SME's Export Performance"). The inclusion of control variables adds knowledge to the conclusions (Lu & White, 2014). Since all these factors are measured as ordinal variables, an estimation by Ordered Logistic Models was used. This is appropriate for ordinal dependent variables because this model considers the ceiling and floor effects and avoids the use of subjectively chosen scores, attributed to the categories (Lu, 1999; Hanushek & Jackson, 2013; Grilli & Rampichini, 2014). Therefore, when the response variable of interest is ordinal, Ordered Logistic Models is a specific advisable model and more robust than traditionally used models, such as linear regression model (Grilli & Rampichini, 2014). Thus, in examining the effects of control variables on the criteria variable, it was decided to use the Ordered Logistic Models.

4. RESULTS

4.1 Sample profile

Descriptive analysis was done to obtain the profile of the respondent companies: 341 complete questionnaires collected. So, the second part of the questionnaire allowed to characterize the SME/exhibitor respondents. Therefore, approximately 66% of respondents are manufacturer/producer SMEs and 34% are service/other SMEs. Regarding the size of the company, almost 23% have a turnover < 500000 €, 18.5% of the respondents have between 500001 € - 1500000 €, 11.5% between 1500001 € - 2.500.000 €, around 16% between € 2500001 - € 5000000, and finally 31% between € 5,000,000 - € 50,000,000.

About the frequency of participation in trade fairs, 8.5% of SMEs respondents participate sporadically, approximately 2% participate in 1 trade fair every 4 years, 3% of SMEs participate in 1 trade fair every 2 years, around 26% participate in 1 trade fair per year, and lastly 60.5% of SMEs respondents affirm to participate in several trade fairs a year.

As regard the export level, 26.5% of SMEs respondents export <10% of their turnover, around 20% export between 11% - 25%, 16.5% export between 26% - 50%, 12% respondent SMEs export between 51% - 75%, and finally 25% export more than 75% of their turnover.

These variables (Company size - turnover, Frequency of participation in trade fairs, and Export level) will also be the object of analysis to add new knowledge to the study. So, they will function as control variables, generally constant and unchanged throughout the investigation: "*Control variables refer to variables whose effects on an outcome variable are statistically adjusted in order to estimate independent effects of an explanatory variable*" (Mehta, 2001, p. 2727).

4.2 First Step - Structural equation models (SEM)

Structural equation models (SEM) techniques were used in testing the model (Figure 3.1). SEM has some advantages, mainly because it allows explicitly assessment of measurement error. In general, other multivariate techniques inadvertently ignore the

measurement error, while SEM models estimate these error variance parameters for independent and dependent variables (Byrne, 2016).

4.2.1 Confirmatory Factor Analysis (CFA)

Within SEM, CFA is generally used to assess the quality of adjustment of a theoretical measurement model to the correlational structure observed among the manifest variables (items) (Marôco, 2014). So, the CFA (using IBM AMOS 21.0) was used to evaluate the measurement models, composed of three constructs: SME's Product Innovation measured by four items; SME's Network Capacity with five items; and SME's Export Performance with 6 items.

Considering the argument of topic 2.6., the study followed Hair et al. (2014) and Marôco (2014) to examine three separate CFA models. The models differ only in approach. Model A contains all the observations, Model B contains only industrial/producers SMEs and Model C evaluates only the responses of services/other SMEs.

First, an analysis of the items was performed for each model, in order to improve the model's adjustment rates (Hair et al., 2014). As shown in the Table 3.1, all factor loadings were positive and significant at the 0.01 level.

The structural equation model involving the hypothesized relationships is illustrated in Figure 3.1 (for each model). Several indicators were used to assess the model fit: X2/DF (Bollen, 1989); CFI (Jöreskog & Sorbom, 1993); NFI (Garver & Mentzer, 1999); GFI (Jöreskog & Sörbom; 1984); TLI (Tucker & Lewis, 1973); IFI (Bollen, 1989); RMSEA = 0,042 (Hair et al., 2014); PNFI and PGFI (Mulaik et al., 1989).

The results indicate an excellent fit for the data for all three models: Model A, with nine items in total and 341 observations, got X2/DF = 1.602; CFI = 0.992; NFI = 0.979; GFI = 0.975; TLI = 0.988; IFI = 0.992; RMSEA = 0.040; PNFI = 0.653; and PGFI = 0.520. Model B, with nine items in total and 226 observations, achieved X2/DF = 1.582; CFI = 0.985; NFI = 0.961; GFI = 0.946; TLI =1740.981; IFI = 0.985; RMSEA = 0.052; PNFI = 0.734; and PGFI = 0.602. Lastly, Model C, also with nine items in total and 115 observations, found X2/DF = 1.263; CFI = 0.985; NFI = 0.934; GFI = 0.927; TLI = 0.981; IFI = 0.985; RMSEA = 0.047; PNFI = 0.713; and PGFI = 0.590.

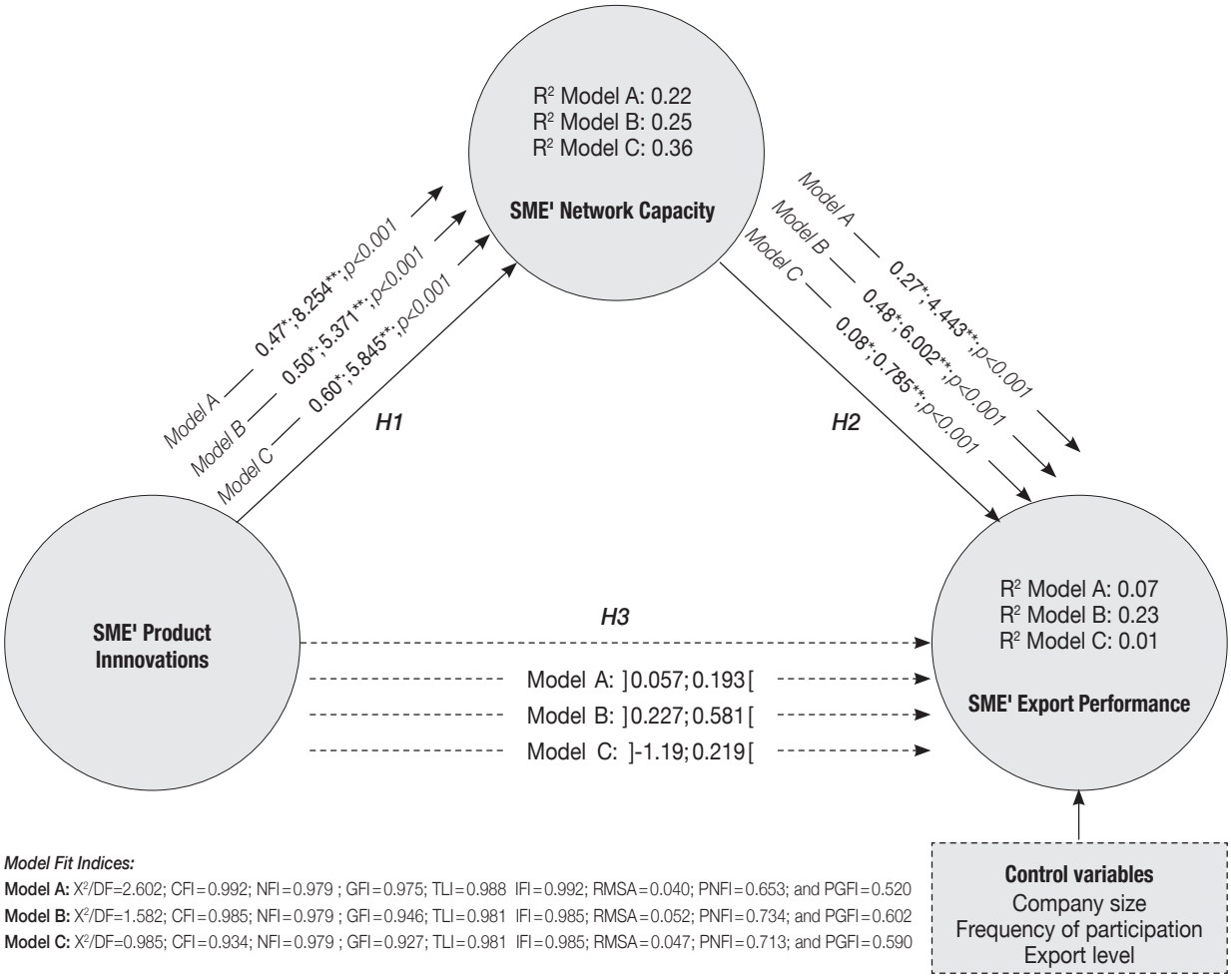
Overall, the results of the three measurement models were adequate (according to the authors' recommendations), which indicates the three models considered to be well adjusted.

Furthermore, the Cronbach's alpha was greater than 0.844 in Model A, 0.791 in Model B, and 0.716 in Model C. These results support the reliability of the tested constructs (Hair et al., 2014). Table 3.2 summarizes the means, standard deviations, Cronbach's alpha values, for each model.

In Model A, the composite reliability (CR) for relationship quality is greater than 0.857 and the average variance extracted (AVE) is more than 0.602, both above the recommended values of 0.60 and 0.50, respectively (Bagozzi & Yi, 1988; Hair et al., 2014). For Model B, the CR is greater than 0.799 and the AVE is more than 0.570, so Model B also shows results within the recommended. Model C shows that CR is greater than 0.793 and the AVE is more than 0.538, so Model C also shows indicators within the recommended.

The obtained results indicate three models considered to be well adjusted. The indicators demonstrate an excellent level of unidimensionality and convergent validity (Hair et al., 2014). Figure 3.2 shows the standardized estimation of the conceptual model, in all three perspectives.

Figure 3.2 - Structural Equation Model



Source: Own elaboration

Table 3.2 summarizes the mean, standard deviation (SD), variance explained, reliability and validity of the constructs, for the three models. Based on the obtained values, the three model/perspectives are correct and measure the theoretical relationship of ideas in a practical way.

Reliability examines the extent to which a set of items measures the underlying construct, for each model. Through Cronbach's Alpha, it can be assumed that all items are scored in the same direction, because all constructs of the three models have values above 0.70 (Hair et al., 2014), as shown in Table 3.2.

Also, the mean and standard deviation (SD) were both analysed. The average is a measure of central tendency and indicates the average value of a distribution of responses for each item. The standard deviation shows the variation of the average for each item. Therefore, a low SD indicates that the data tend to be close to the average (Barde & Barde, 2012); in this specific case, the results are very good.

Table 3.2 – Mean, SD, Variance, Reliability and Validity of the Constructs

CONSTRUCTS	MEAN	SD	α	TVE	CR	AVE	MSV	ASV	1	2	3
1. SME's networking capacity	3.62[a] 3.76[b] 3.82[c]	1.12[a] 1.11[b] 1.01[c]	0.844[a] 0.831[b] 0.716[c]	0.917[a] 0.749[b] 0.646[c]	0.857[a] 0.799[b] 0.849[c]	0.602[a] 0.570[b] 0.538[c]	0.220[a] 0.243[b] 0.359[c]	0.146[a] 0.238[b] 0.182[c]	**0,776**[a] **0.755**[b] **0.734**[c]		
2. SME's product innovation	4.23[a] 4.18[b] 4.19[c]	0.87[a] 0.89[b] 0.90[c]	0.909[a] 0.791[b] 0.841[c]	0.693[a] 0.714[b] 0.624[c]	0.912[a] 0.853[b] 0.793[c]	0.838[a] 0.672[b] 0.548[c]	0.220[a] 0.243[b] 0.359[c]	0.119[a] 0.155[b] 0.181[c]	0,469[a] 0.493[b] 0.599[c]	**0,915**[a] **0.820**[b] **0.740**[c]	
3. SME's export performance	3.15[a] 3.39[b] 2.82[c]	1.14[a] 0.98[b] 1.27[c]	0.909[a] 0.935[b] 0.965[c]	0.846[a] 0.796[b] 0.892[c]	0.909[a] 0.936[b] 0.940[c]	0.759[a] 0.747[b] 0.840[c]	0.072[a] 0.239[b] 0.006[c]	0.045[a] 0.149[b] 0.005[c]	0,268[a] 0.482[b] 0.075[c]	0,132[a] 0.257[b] 0.064[c]	**0,877**[a] **0.865**[b] **0.916**[c]

SD - Standard deviations
α - Cronbach's alpha
TVE - Total variance explained
CR - Composite Reliability
AVE - Average Variance Extracted
MSV - Maximum Shared Variance
ASV - Average Shared Variance
a - Model A
b - Model B
c - Model C
Diagonal elements (bold) show the square root of average variance extracted (AVE)

Source: Own elaboration

Finally, the following indicators were analysed: CR - Composite Reliability, AVE - Average Variance Extracted, MSV - Maximum Shared Variance, ASV - Average Shared Variance. Hair et al. (2014) suggest as limits for these values the following: CR > 0.7; AVE > 0.5; MSV < AVE; ASV < AVE.

The obtained values (CR; AVE; MSV; ASV) shown in Table 3.2, indicate an excellent level of unidimensionality and convergent validity (Hair et al., 2014), for each model. In addition, Fornell and Larcker (1981), Roldán and Sánchez-Franco (2012), say that in order to guarantee the discriminant validity, the square root of the AVE measures must be superior to all the correlations among all the constructs, which is verified in the three models.

The CR of all scales in each model was > 0,793 (see Table 3.2), providing an excellent level of reliability (Fornell & Larcker, 1981; Hair et al., 2014). Therefore, all values support a convergent validity (Fornell & Larcker, 1981; Hair et al., 2014), validating the model in all three perspectives.

However, Model B (Industrial SMEs) is the one that, in general, presents more consistent values, as shown in Figure 3.2 and Table 3.2. The determination coefficients (R2) are reasonable ["Network Capacity" (R2 = 0.25) and "Export Performance" (R2 = 0.23)] (Kline, 2016) and higher than on the other two models.

4.2.2 Hypotheses Test

In practical terms, the hypothesized directional causal effects or direct effects represent the influence of one variable on another variable (Kline, 2016), moreover as a rule when the t-value is >1.96 or t-value <-1.96 "regression weight", the coefficient value is significant at the 95% level, that is, the "path" estimate is significant (Gao et al., 2008). Hypotheses were evaluated in the three perspectives/models.

In Model A, the results show that "SME's Product Innovation" has positive and significant effects on "SME's Networking Capacity" ($\beta = 0.47$; $t = 8.254$; $p<0.001$), so H1 is supported; and "SME's Networking Capacity" has significant positive effects on "SME's Export Performance" ($\beta = 0.27$; $t = 4.443$; $p < 0.001$), thus H2 is also supported.

In Model B, H1 is supported ($\beta = 0.50$; $t = 5.371$; $p < 0.001$), and H2 ($\beta = 0.48$; $t = 6.002$; $p < 0.001$) is also supported. In Model C, H1 is supported ($\beta = 0.60$; $t = 5.845$; $p < 0.001$), but H2 ($\beta = 0.08$; $t = 0.785$; $p < 0.435$) is not supported from the perspective of Model C.

4.2.3 Hypotheses Test - mediator construct

This topic is intended to test the mediation effect of the SME's Networking Capacity relative to the effect of the SME's Product Innovation on the SME's Export Performance. However, AMOS software does not test the significance of indirect methods (Marôco, 2014); therefore, the non-parametric bootstrap method was used. This method was presented by Preacher and Hayes (2008) and has become increasingly popular, which is recommended for small samples, as it does not violate the assumptions of normality (Marôco, 2014). This analysis was also applied to the three perspectives/models.

In Model A, the estimate of the indirect effects of SME's Product Innovation on the SME's Export Performance is within a 95% confidence interval with limits:]0,057 and 0,193[("Lower Bounds" and "Upper Bounds"). This indirect effect is significantly different from zero with p = 0.001 (Marôco, 2014). Thus, confirming the mediation effect of the SME's Networking Capacity, H3 is supported.

In Model B, within a 95% confidence interval, got limits:]0.227;0.581[, so H3 is also supported in this perspective. Finally, in Model C within a 95% confidence interval was found with limits:] -1.19;0.219 [, so H3 is only partially supported in this model/ perspective, because indirect effect is not entirely significantly different from zero with p = 0.001 (Marôco, 2014).

Therefore, in Model A and B the mediation effect of the SME's Networking Capacity support H3. But in Model C it is only partially supported.

4.3 Second Step: Ordered Logit Models (OLM)

In the second step, this study included some control variables (independent of the variables initially observed) which may help to reduce biased estimates of the effects (Mehta, 2001). So, the research added new analysis variables (control variables), more specifically we evaluated the effects of the SME's characteristics ("Company Size" and "Frequency of Participation in Trade Fairs", "SME's Export Level") on the construct – "SME's Export Performance".

Concerning the criteria variable - "SME's Export Performance", it was selected the four measuring variables (items) with the most quantitative and objective characteristics: EXP1- Foreign market share; EXP2 – Foreign sales growth; EXP3 – Foreign profitability; and EXP4 - Return on investment in international markets (see Table 3.1). This analysis was performed from the perspective of Model A, including all observations.

All variables used in OLM are categorical and ordinal, that is, there is an ordination between the response categories (with five categories). Therefore, for ordinal dependent variables, OLM is appropriate to analyse the effects of certain variables on the latent variable (Lu, 1999).

Hereupon, suppose that the probability of the "Company Size" and "Frequency of Participation in Trade Fairs", "SME's Export Level" influence in a particular "SME's Export Performance" is:

$$P_i = P\left(Y = \frac{i}{x}\right)$$

A standard model for these studies is the POM - Proportional Odds Model (Lu, 1999):

$$\frac{P\left(y \leq \frac{j}{X}\right)}{P\left(y > \frac{j}{X}\right)} = exp(\alpha - \beta^T X), \dots J = 1, \dots, 5$$

Notes:

- indicates the conditional probability of having at most j level of satisfaction given a vector of covariates x;
- is the probability of being satisfied above level j;
- is a column vector of the coefficients and the unknown parameter α satisfy .

Lu (1999, p. 272) warns that "*the common slope assumption in the POM is not always reasonable. If this assumption does not hold based on the score test, alternative models that allow the odds ratio to change with respect to response categories should be applied*". Lu (1999) also suggests the application of GLM - Generalized Logit Model (GLM). In this case, with five levels of response per variable, the GLM is given by:

$$\log\left(\frac{P_5}{P_1}\right) = \alpha_1 + \beta_1 X$$

$$\log\left(\frac{P_4}{P_1}\right) = \alpha_1 + \beta_3 X$$

$$\log\left(\frac{P_3}{P_1}\right) = \alpha_1 + \beta_2 X$$

$$\log\left(\frac{P_2}{P_1}\right) = \alpha_1 + \beta_4 X$$

Note: P_1, P_2, P_3, P_4 and P_5 are the response probabilities according to the five response options per variable (see table 3.6).

Table 3.3 - Results of the Ordered Logit Model

					Version b: Model with Odds Ratio Estimation			
Control Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4.**	**Model 1**	**Model 2**	**Model 3**	**Model 4.**
Company size	0.2168***	0.13136**	0.097887	0.17037**	1.2422***	1.1403**	1.10283	1.18575**
Frequency of Participation	0.2795***	0.2590***	0.2344***	0.19520**	1.3225***	1.2957***	1.2642***	1.21555**
Export level	0.5116***	0.4622***	0.4394***	0.4671***	1.7178***	1.5876***	1.5517***	1.5955***
Pseudo R2	0.1147	0.0826	0.0744	0.0912				
Brant Test	29.76***	32.17***	33.26***	27.07***				
LR chi (4)	114,13***	82.59***	73.96***	90.24***				

Source: Own elaboration

The results of Table 3.3, show the effects of two predictors, Frequency of Participation in Trade Fairs (2) and Exportation levels (3) statistical significance at 1% levels for all four dependent variables or predictors proposed for measuring the performance of SME's metrics, more specific, (i) in Foreign market share, which estimative of the coefficient was $\beta 3 = 0.2795$ and $\beta 4 = 0.5116$ respectively, (ii) in Foreign sales growth, $\beta 3 = 0.2590$ and $\beta 4 = 0.4622$, (iii) in Foreign profitability, $\beta 3 = 0.2344$ and $\beta 4 = 0.4394$. However, in Model 4 (iv) the Return on investment in foreign markets, the effect of Frequency of Participation in Trade Fairs shows a statistically significant effect at 5% level, $\beta 3 = 0.1952$; while the predictor Exports level show a significance at 1 % level, which estimative of coefficient $\beta 4 = 0.4671$. Others statistical evidence for the predictor (1) Company size, the results show only a statistical significance at 5% on Foreign sales growth and the Return on investment in foreign markets, respectively.

All coefficients of all three predictors are in log-odds units and cannot be read as regular OLM coefficients. To interpret them, it is necessary to estimate the predicted probabilities of the dependent variable. So, all predictors, using an ordered logit model estimation, were positively associated with the odds ratio of being beyond each "SME's Export Performance" measures considered in the analysis. In terms of the odds ratio, for both model 1 and model 2, odds of being beyond a Company Size, Frequency of Participation, and Export Level, were 1.242, 1.332 and 1.717 times greater with one unit increase in the Market share and were 1.140, 1.295 and 1.587 scores greater with one unit increase in the Sales growth.

The model goodness-of-fit expressed through the McKelvey and Zavoina pseudo R^2 (McKelvey & Zavoina, 1975), which approximates the ordinary least square R^2, is reasonably lowest considering that the value range between that 7.44%, and 11.47% of the variance in the dependent variable is accounted for all four models considered to measure the "SME's Export Performance". The ordered logit model estimation was conducted by the Brant test (Brant, 1990), in order to verify the need for the generalized ordered logit instead of the ordered logit model.

According to Table 3.4, the Brant test results reveal that not all variables meet the proportional odds assumption, and hence their estimated coefficients vary across severity thresholds. Consequently, the generalized ordered logit model is preferable since the ordered logit is misspecified (Fu, 1998). This study is following the estimation of OLM (Williams, 2006).

Table 3.4 - Brant Tests of the Ordered Logit assumption for Each Predictor

Control Variables	Brand Test			
	Model 1	Model 2	Model 3	Model 4
Company size	3.98	6.76	8.00**	5.26
Fair Intensity	11.46***	3.28***	2.65	1.36
Export level	4.07	7.32*	7.00	9.59***

Notes: Probability values are in subscript, *** and ** refer to the rejection of the null hypothesis at the significance levels of 1%, and 5% respectively.

Source: Own elaboration

Table 3.5 shows the results of the Generalized Ordered Logit effects and corresponding odds ratios of all three variables were different across all four models comparing probabilities of being beyond category *j* versus at or below that category *j*.

Table 3.5 — Results of the Generalized Ordered Logit Model (Y > cat. *j* vs. Y ≤ cat. *j*)

Dependent Variable	**Model 1 -** Foreign market share				**Model 1: Odds Ratio estimation**			
Control Variables	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**
Company size	0.3536***	0.2533***	0.2124***	0.030360	1.4243***	1.2888***	1.23664***	1.03082
Frequency of Participation	0.20573	0.4148***	0.27561**	-0.73245	1.22842	1.5141***	1.31734**	0.92937
Export level	0.8477***	0.5937***	0.5087***	0.62216***	2.3343***	1.8107***	1.66164***	1.86296***
Constant	-0.67606	-2.64288	-3.689***	-4.0372***	0.50861	0.0711***	0.02497***	0.01764***
Pseudo R2	0.1391							
LR Chi(16)	138.38***							
Dependent Variable	**Model 2 -** Foreign sales growth				**Model 2: Odds Ratio estimation**			
Control Variables	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**
Company size	0.3597***	0.2191**	0.08126	0.002646	1.4329***	1.2450**	1.08465	1.00264
Frequency of Participation	0.35125**	-0.258**	0.3368***	0.093519	1.4208**	1.2944**	1.40059***	1.09803
Export level	0.9352***	0.4949***	0.4360***	0.47617***	2.5478***	1.6404***	1.54662***	1.6099***
Constant	-1.199856	-1.3579**	-3.102***	-4.2757***	0.301237	0.25719**	0.04491***	0.01390***
Pseudo R2	0.1115							
LR Chi (16)	111.53***							
Dependent Variable	**Model 3 -** Foreign profitability				**Model 3: Odds Ratio estimation**			
Control Variables	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**
Company size	0.3698***	0.168637*	0.039053	0.005058	1.4475***	1.18369*	1.03982	1.00507
Frequency of Participation	0.200842	0.22546**	0.3177***	0.134976	1.222433	1.25290**	1.3740***	1.14451
Export level	0.9108***	0.5337***	0.4099***	0.43902***	2.4863***	1.7053***	1.5068***	1.5511***
Constant	--0.50716	-1.01167	-2.872***	-4.4090***	0.602201	0.36360	0.05653***	0.01216***
Pseudo R2	0.1067							
LR Chi(16)	106.02***							
Dependent Variable	**Model 4 -** Return on investment in foreign markets				**Model 4: Odds Ratio estimation**			
Control Variables	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**
Company size	0.29756**	0.19078**	0.182424	-0.036828	1.3465**	1.2101**	1.20012**	0.963841
Frequency of Participation	0.246321	0.18887	0.25782**	0.038543	1.27931	1.20789**	1.40059**	1.03929
Export level	1.0152***	0.5602***	0.4029***	0.42712***	2.759***	1.7150***	1.4962***	1.53284***
Constant	-1.06834	-1.1601**	-2.881***	-3.8410***	0.343576	0.31343**	0.05604***	0.02147***
Pseudo R2	0.1166							
LR Chi(16)	115.46***							

Notes: Probability values are in subscript, *** and ** refer to the rejection of the null hypothesis at the significance levels of 1%, and 5% respectively.

Source: Own elaboration

Table 3.6. also evidences that accordingly to the results of the series ($j-1$) of associated binary logistic regression models, each split compares the dependent variable $Y >$ category J to $Y \leq$ category j.

Table 3.6 — A Series ($j-1$) of associated binary logistic regression Models, each split compares the dependent variable $Y >$ category j to $Y \leq$ category j

Dependent Variable	**Model 1 -** Foreign market share				**Model 2 -** Foreign sales growth			
Control Variables	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**
Company size	0.419	0.274	0.202	0.018	0.440	0.260	0.086	-0.003
Frequency of Participation	0.112	0.469	0.290	-0.078	0.275	0.265	0.344	0.065
Export level	0.993	0.606	0.488	0.590	1.267	0.553	0.414	0.460
Constant	-0.512	-2.872	-3.694	-3.885	-1.534	-1.582	-3.047	-4.096
Dependent Variable	**Model 3 -** Foreign profitability				**Model 4 -** Return on investment in foreign markets			
Control Variables	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**
Company size	0.491	0.194	0.030	0.006	0.361	0.249	0.180	-0.060
Fair Intensity	0.163	0.238	0.336	0.111	0.161	0.230	0.253	0.058
Export level	1.220	0.552	0.392	0.418	1.218	0.579	0.386	0.428
Constant	-0.952	-1.149	-2.840	-4.232	-1.172	-1.512	-2.722	-3.835

Source: Own elaboration

However, according to Brant test (see Table 3.4), the statistical significance suggests the choice of the analysis of results shown in Generalized Ordered Logit estimation.

In this alignment, a positive logit coefficient generally indicates that an individual is more likely to be in a higher category as opposed to a lower category of the outcome variable. To estimate the odds of being at or below a specific category, however, the signs before both the intercepts and logit coefficients in both models considered must be reversed. Regarding the coefficients associated with explanatory variables and corresponding odds values, for example, for Export Level variable, there is statistical significance at 1% on all dependent variables included in analysis. On the other hand, a comparison of the odds ratios estimation implies by the category Y>1 vs Y≤1 (Export level range between 11% and 25% face to Export level < 10%), the category $Y > 2$ vs $Y \leq 2$ (Export level range between 26% and 50% face to Export level range between 11% and 25%) and category $Y > 3$ vs $Y \leq 3$ (Export levels range between 50% and 75% face to Export level range between 26% and 50%), suggest that even three categories selected the effect of Export Levels and return to increase this effect on all four models considered in $Y > 4$ vs $Y \leq 4$ category (Export levels >75% face to Export Levels range between 50% and 75%). The effects became much stronger when Export Levels moved from lower to a higher category; furthermore, the highest effect was identified among the initial category comparison.

The model fit statistic, the log-likelihood ratio Chi-Square test, LR $\chi 2$ (16) range between the values 106.02 and 138.38 with p-value < 0.01 for all three dependent variables, indicated that the full model with three predictors provided a better fit than the null model with no independent variables. Moreover, this Generalized Ordered Logit model estimation also evidences that accordingly to the values of the pseudo square R2, is reasonably lowest considering the value range between that 10.67%, and 13.91% of the variance in the dependent variable is accounted for all four models considered to measure the "SME's Export Performance", however, these values of pseudo R2 are higher than the first OLM.

5 FINDINGS AND RESULTS DISCUSSIONS

5.1 Summary of results

The objective of the study was to examine a conceptual model in the trade fair context, which represents the link between innovation, networking capability, and exports. The conceptual model was also analysed from three different perspectives. Model A contained all surveyed SMEs, Model B included only industrial/producer SMEs, Model C comprised service/other SMEs.

In addition, this study also involved an OLM, examining other factors of the SME ("Company Size", "Frequency of Participation in Trade Fairs", "SME's Export Level") on the "SME's Export Performance".

The results of CFA (Model A) indicate a positive and significant influence between SME's Product Innovation, SME's Network Capacity and SME's Export Performance, in trade fair context. Model B shows a positive and significant influence between Industrial SME's Product Innovation, Industrial SME's Network Capacity, and Industrial SME's Export Performance. Both models also confirm the mediation effect of the SME's Networking Capacity relative to the effect of the SME's Product Innovation on the SME's Export Performance. So, in perspective of Model A and B, all hypotheses were supported. Especially noteworthy are the results of Model B - see the determination coefficients (R2) in Figure 3.2.

While Model C reveals a positive and significant influence between Service SME's Product Innovation and Service SME's Network Capacity, the effects of Service SME's Network Capacity on Export performance are not significantly positive. Moreover, the mediation effect of the Service SME's Networking Capacity relative to the effect of the Service SME's Product Innovation on the Service SME's Export Performance is only partially supported. Therefore, in Model C only H1 is fully supported and H3 is partially supported.

Regarding OLM, the results show very interesting data. The control variables effects with a level of significance of 1% (very demanding) stand out: "Export Level" has effects on four variables: "Foreign market share"; "Foreign sales growth"; "Foreign profitability"; "Return on investment in international markets". "Frequency of Participation" has effects on three variables: "Foreign market share"; "Foreign sales growth"; "Foreign profitability".

"Company size" has no effect on any variable at the most demanding level (significance of 1%). So, the results highlight "Frequency of Participation in Trade Fairs" and "SME's Export Level" as positively influencing factors on the Export Performance of SME.

5.2 Theoretical contributions

The results confirm the findings of the literature, demonstrating that trade fairs are an excellent opportunity for companies, particularly for SME, to open up to international markets, which increases their exports (Gerschewski et al., 2019; Monreal-Pérez & Geldres-Weiss, 2019; Gerschewski et al., 2020), as well as to promote product innovations (Kim & Mazumdar, 2016; Bathelt, 2017; Golfetto & Rinallo, 2017).

This study is also a significant contribution to the literature on SME's internationalisation and industrial marketing. The results demonstrate the importance of the Network Capacity in linking Product Innovation with the Export Performance of the SME, corroborating the study by Lewandowska et al. (2016). Furthermore, it adds more knowledge, when this conceptual model (Product Innovation, Network Capacity and Export Performance) was examined/confirmed in trade fair context. Lewandowska et al. (2016) suggested studying these relationships (Product Innovation, Network Capacity and Export Performance) in new contexts. It should also be noted that the analysis was developed simultaneously from three perspectives (Model A, B, and C), which provided important insights.

The results show that Product Innovations, in general, are a strong argument for SME to capture the interest of potential customers (visitors). Because it allows visitors to access knowledge, assets, new technologies and markets, and new products, among others (Lewandowska et al., 2016). Product Innovations can also promote customer loyalty and confirm the company's reputation in the market (Foroudi et al., 2016). Therefore, it is confirmed that Product Innovations are an antecedent of Network Capacity (Dawson et al., 2014; Jalal & Haim, 2015). Thus, it is suggested a new antecedent (Product Innovations) of network development and export to SMEs, in trade fair context, as recommended by Gerschewski et al. (2020).

The Network Capability of SMEs naturally influences their Export Performance, since it allows the exhibitor to build good relationships and make partnerships (Geldres-Weiss & Monreal-Pérez, 2018; Gerschewski et al., 2019). Contacts and relationships with international partners help to overcome export barriers (Kellezi, 2014) and provide preliminary information, which improves Export Performance (Yu et al., 2011). In fact,

the study highlights that SME marketing activities, like trade fairs, can be assisted by networking (O'Donnell, 2014).

Particularly, in Model C (Service/others SME) it is not confirmed that Network Capability of SME influences their Export Performance. Also, the mediator effect of the Networking Capacity is only partially confirmed. So, to Service SME find it more difficult to promote their services internationally probably due to their intangible nature (Campbell & Verbeke, 1994). Supposedly, service SMEs need more personal interactions activities (Erramilli, 1992). So, regarding Service SME, it will be necessary to study more factors associated with Network Capability that may influence the Export Performance.

While in the context of Industrial SMEs, the results suggest that presenting Product Innovations is a strong enough reason to promote networking and access international markets (Bello & Barczak, 1990; Bathelt, 2017; Golfetto & Rinallo, 2017). Apparently, the tangibility of Product Innovations is a key feature in the context of the industrial trade fair, which allows to generate leads, networking (Gopalakrishna & Williams, 1992), and facilitates entry to industrial markets abroad (O'Hara et al., 1993). Therefore, at industrial fairs product innovations can be physically inspected by visitors, this real examination of the products increases their interest (Pramudya & Seo, 2019), mainly for foreign customers.

The study also reinforces knowledge in the existing literature on Industrial SMEs from small economies. It is reminded that this research was applied to Portuguese SMEs (small country/economy). So, this research investigated SME considering their home-country context (Lindner et al., 2018). The results suggest trade fairs as an essential tool to help Industrial SMEs face the challenges of today's competitive and demanding business world (Clegg et al., 2019; Oliveira et al., 2019), especially for SMEs residing in small economies such as Portugal.

The OLM also has implications for trade fair literature. The results demonstrate that the Frequency of Participation and the Export Level of SMEs are factors that contribute to their Export Performance. This means that the SME's experience (Export Level) proved to be very relevant, as well as the continuous participation in trade fairs (Frequency of Participation).

It can be concluded that the more experience and continuous participation in trade fairs there is, the higher the SME's capacity to increase its export performance. In a way, this result partially contradicts the results of Monreal-Pérez and Geldres-Weiss (2019) that new companies are the ones that get the most out of trade fairs. The present study indicates the experience as relevant. Frequency of participation also proved to be important, showing that trade fairs imply a continuous medium to long term process.

Finally, it appears that "Company Size" does not have significant influence on the Export Performance of SME. Hence, regardless of their size, trade fairs are useful to any company, partially corroborated by several authors (Evers & Knight, 2008; Measson & Campbell-Hunt, 2015; Kalafsky & Gress, 2020) about the importance of trade fairs for SME, especially industrial micro/small companies (Silva, 2014; Monreal-Pérez and Geldres-Weiss, 2019; Gerschewski et al., 2020).

5.3 Managerial implications

The results show that trade fairs are excellent vehicles for the export of SMEs, through the dynamic trajectory: Innovate to Networking and Networking to Export, especially for industries and producers. Therefore, the present study has practical implications mainly for managers of Industrial SMEs. The pragmatic advices for managers are clear: (i) use trade fairs, continuously and consistently, to develop, test and promote product innovations; (ii) be proactive, flexible and communicative at trade fairs to develop networks/leads; (iii) take full advantage of the networks and leads to access international markets.

Trade fairs are unique events that allow a highly dynamic and face-to-face interaction between participants (Sarmento et al., 2015; Locatelli et al., 2019) which facilitates direct contact of visitors with products at the exhibition stand (Rinallo et al., 2010). Therefore, Industrial SMEs are advised to use trade fairs to test, develop and promote new product innovations (Kirchgeorg et al., 2010b; Kim & Mazumdar, 2016) taking advantage of the sensorial stimuli from the physical/direct contact of the product innovations with visitors (Rinallo et al., 2010).

The study also highlights the important mediation role of the SME's network capability (Lewandowska et al., 2016). Establishing professional relationships for different purposes is important for any company. This attitude contributes to the exchange of information and knowledge, as well as the mutual exchange of benefits, helping to overcome barriers to access international markets (Measson & Campbell-Hunt, 2015; Jeong, 2016; Geldres-Weiss & Monreal-Pérez, 2018; Gerschewski et al., 2019). Thus, SMEs, especially industrial SMEs, are advised to promote socialisation actions/moments during the trade fair (Measson & Campbell-Hunt, 2015; Sarmento et al., 2015; Sarmento & Farhangmehr, 2016; Gopalakrishna et al., 2019), such as workshops to present product innovations, seminars for knowledge sharing, creation of a lunch/confraternisation area inside the stand, innovation contests, games or prizes, among other actions. These examples are a great way to create relationships, engagement, share information and knowledge,

for example about product innovations. It should be noted that the present research reveals that the test/presentation of product innovation, at trade fairs and especially for Industrial SMEs, is a strong argument for developing networks and for export performance (Lewandowska et al., 2016).

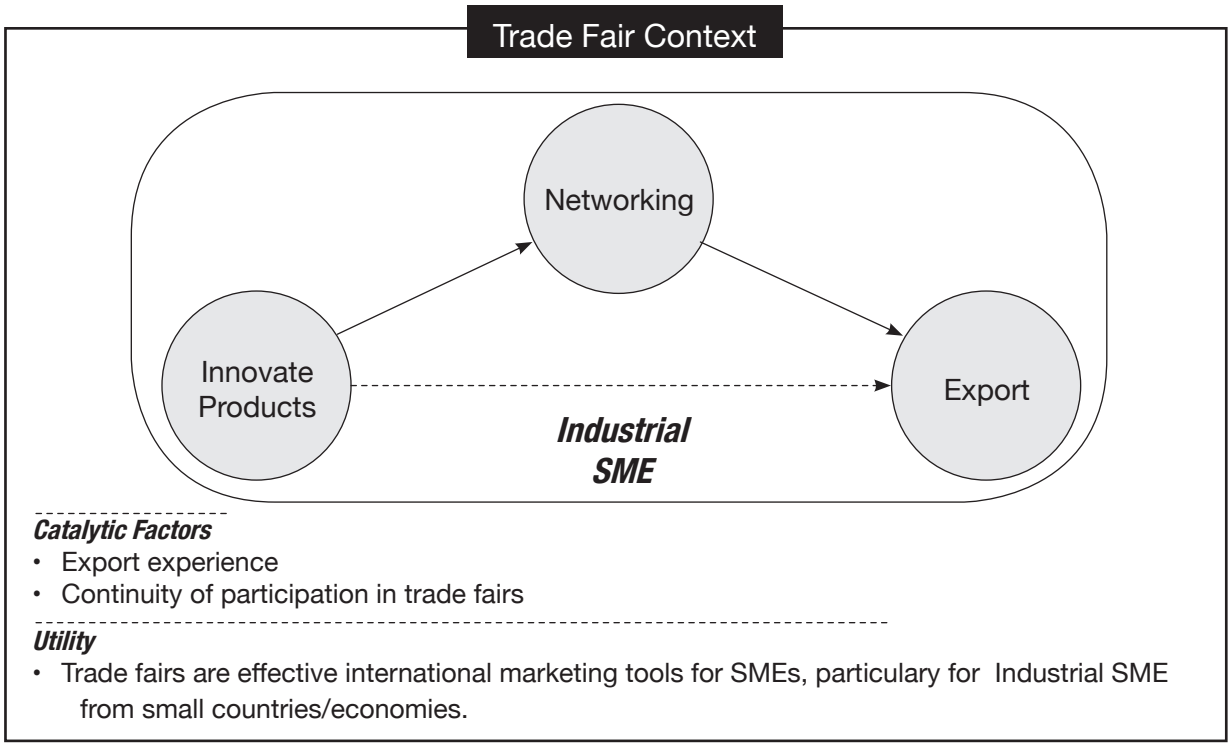
Another advice for Industrial SMEs is that they should competently explore and manage the contacts/leads developed during the trade fair. In order to do this, Industrial SMEs must invest in staff, at the stand, with proper interpersonal skills, product knowledge and communication capabilities (Gopalakrishna & Williams, 1992). Thus, the exhibitor improves his networking capacity, and consequently international customer loyalty and the SME's reputation (Foroudi et al., 2016). The quality of the relationships between contacts/leads helps overcome barriers and branches access to international markets (Measson & Campbell-Hunt, 2015; Jeong, 2016; Geldres-Weiss & Monreal-Pérez, 2018; Gerschewski et al., 2019). For instance, networks can help SME gain knowledge about markets - market intelligence and/or provide links for conducting business, which can help access to international markets. So, the networks appear as an important factor to explain the export performance of SMEs participating in trade fairs.

Finally, to add new knowledge to the results, the OLM also showed two important catalysts for export performance: (i) export experience and (ii) the commitment to continuous participation in trade fairs. Thus, the more involved SMEs are in export dynamics, the greater their ability to export. Moreover, SMEs must invest in continuous participation in trade fairs. Sporadic participation in international trade fairs will hardly contribute to export performance. Nonetheless, OLM also allows to verify that the size of the company is not an impediment to export performance. Therefore, even micro companies can and should consider trade fairs as a strategic tool for promoting product innovations, networking, and internationalisation. Micro companies can take advantage of trade fairs to learn from the most successful companies, examine competition or market niche to discover. In addition, with participation in trade fairs, micro companies can gain international visibility, authority, credibility, and influence when they share the same physical space as the dominant companies.

Figure 3.3 reflects the main contributions of the study, which can be seen that trade fairs are benign vehicles that contribute to marketing activities (Innovation, Networking, Export) developed by a small company. Figure 3.3 suggests a conceptual structure of INE (Innovation, Networking, Export) and the present study found that it works well in the trade fair context, especially for industrial SME. The exhibitors can use the INE structure

as a tool for entering international markets. More specifically, the results indicated that the promotion of product innovations, especially at industrial trade fairs, generates interests, interaction and promotes networking between exhibitors and visitors, which is essential for accessing international markets, particularly through exports.

Figure 3.3 – Innovation–Networking–Export framework on trade fair evaluation



Source: Own elaboration

Moreover, the present study considered the home-country context of the respondents SMEs (Lindner et al., 2018), thus the results also have implications for associations of Industrial SMEs and/or public or semi-public SME promotion agencies that coordinate and/or implement SME support, especially residents in small and vulnerable economies. Currently, business is not confined to physical proximity, and competition is global, particularly SMEs of vulnerable economies like Portugal that have more difficulties in accessing international markets (OECD, 2019). Consequently, the results of the study suggest encouraging participation in international trade fairs. Thus, industrial associations and/or public or semi-public SME promotion agencies can promote actions to stimulate and support international trade fairs, for example through logistical support, collective participation, training, among others. Focusing the presentation on product innovation, network development and foreign markets prospection for its associated Industrial SMEs.

CONCLUSIONS, LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

The conclusions of the study confirm a conceptual model from the perspective of exhibitors/SMEs, mainly for Industrial SMEs. The results demonstrate a dynamic trajectory that SME (especially Industrial SMEs) can take advantage from trade fair: (i) show innovations products, (ii) to generate networking, (iii) and to improve export performance. The study also reveals two catalysts for the success of the export performance of SME: (a) export experience and (b) continued participation in trade fairs. Ultimately, the results also indicate that trade fairs are accessible to any company, regardless of size, in this case particularly for Industrial SMEs.

Theoretically, the study recovers important themes (innovation, networks, and exports) stagnated in the literature on trade fairs (Tafesse & Skallerud, 2017) as well as the study considers the home-country context of the investigated SMEs, which is rarely reflected in the similar research (Lindner et al., 2018). The results confirm a link between innovation, cooperation (networking) and export intensity (Lewandowska et al., 2016) in trade fairs context. In addition, this study when considering SMEs` home-country also allowed to derive pertinent insights for SME from countries characteristically like Portugal.

This study is opportune and relevant especially for managers of Industrial SMEs and for associations of Industrial SMEs in small and vulnerable economies. In practice, the results suggest that Industrial SMEs can use trade fairs as flexible and effective strategic actions to operate in the current competitive and constantly changing global environment (Clegg et al., 2019; Oliveira et al., 2019).

In short, this research accomplishes the main objective, because the results demonstrate how trade fairs can help SME show/announce product innovations, create networks and to export. Therefore, trade fair are important promotional instruments for SMEs, mainly for Industrial SMEs, operating in international markets. As detailed in the article, the results have significant implications for internationalisation of Industrial SMEs through trade fairs.

This research has some limitations that must be considered. For instance, the study does not reflect the individual's personality in his network capacity, instead, the study focused on explaining how network capacity interact with between product innovation and export performance. So, it would be interesting in a future study to include

personality traits. Moreover, the export performance was measured based on the SME's level of satisfaction and not on real sales results.

In future research, this study can be replicated to companies of other nationalities, and it would also be interesting to use a longitudinal study design or other statistical methods.

It is also suggested that future studies explore more in detail the two outstanding catalysts found in this study: Export Experience and Frequency of Participation in Trade Fairs.

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Chapter 4

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(See Appendix IV)

Examining the relationship between sales force proactiveness, network capability and sales performance: Evidence from international trade fairs.

1. INTRODUCTION

Trade fairs are specific events that periodically bring stakeholders from a specific market or industry together under one roof, for instance: producers/sellers and customers/buyers (Sarmento & Simões, 2018; Silva et al., 2020). In trade fairs, the exhibitors physically display their products and/or services to visitors, under the guidance of an organizing entity (Silva et al., 2020). Generally, exhibitors place diverse staff at the stand, such as technicians, executives/top management, salespeople, and the marketing department (Tafesse & Korneliussen, 2012; Haon et al., 2020). The stand staff are the main service providers of the exhibitor during the trade fair, so their selection is a particularly critical aspect (Li, 2020). The general function of the exhibitor's staff is to meet and interview customers to explore and determine what they need (Haon et al., 2020). Therefore, from the exhibitor's perspective, trade fairs are events that allow one to promote products/services, generate leads and negotiate sales (Haon et al., 2020). In fact, the exhibitor's staff, regardless of their position in the company, can assume the role of the exhibitor's sales force during the trade fair (Lee et al., 2018). The sales force is the group of people whose main role is to interact with customers and aim to build relationships and close sales (Kotler & Armstrong, 2017).

As mentioned before, exhibitors often employ a team from different departments and management levels (Tafesse & Korneliussen, 2012; Haon et al., 2020), but generally exhibitors' staff recruitment for trade fairs is not ideal (Haon et al., 2020)). For instance, the diversified use of employees at the stand has its advantages, especially technical staff, who play an important role in innovation (Kalafsky & Gress, 2014; Haon et al., 2020). However, few companies employ diversified staff at the stand, especially small companies (Kalafsky & Gress, 2014). In this case, many exhibitors possibly employ people with inadequate customer service skills at trade fairs. Consequently, inconsistencies persist between the preferences of trade fair visitors and the exhibitors' staff, which affects sales exhibitors' results (Haon et al., 2020). Haon et al. (2020) suggest an increase in staff diversity, more specifically in technical staff at the stand. Nevertheless, the study did not consider that in general, small companies / exhibitors optimize costs due to limited resources (Fang & Ding, 2020). In addition, trade fairs are in fact expensive (Brown et al., 2017; Nayak, 2019), require considerable resources

(Li, 2020) and increasing technical staff further increases costs, such as accommodation, travel, among others. On the other hand, Fang and Ding (2020) argue that more important than the number of staff in the booth is their ability to interact quickly with clients (visitors) and respond effectively to their questions, thus Fang and Ding (2020) suggest adequate training. Li (2020) presents a model with antecedent and consequent factors to the concept "exhibitor's booth personnel commitment" which consists of the exhibitor's pre-fair decision regarding the commitment of human resources for a specific trade fair. Despite the importance of the practical suggestions of Fang and Ding (2020), Haon et al., (2020) and Li (2020) for the operationalisation of the exhibitor staff, the existing research about predictors and results is still limited (Li, 2020). For example, Li (2020) focuses essentially on the organisation of the stand team while Haon et al., (2020) basically discuss the diversity of the staff team, and Fang and Ding (2020) on the other hand, emphasize the importance of staff training. Therefore, a factor related to the exhibitor`s sales forces, which at trade fairs can contribute to improving the marketing performance or exhibitor effectiveness, remains to be identified and examined (Tafesse & Korneliussen, 2012; Fang & Ding, 2020) in a manner that triggers the best outcomes, namely to generate leads and negotiate sales (Haon et al., 2020). This is bearing in mind small and medium-sized companies with limited resources and from less competitive countries.

Accordingly, the present study focuses on this gap, since the existing literature has neglected sales force attitudes, conduct and abilities during the trade fair (Chun, 2016; Li, 2020) and particularly for SME with limited resources and from a little competitive country - Portugal. In this context, it is argued that sales force proactiveness at trade fairs is a relevant factor which can lead to the desired outcomes of the exhibitor. In fact, the interaction of the staff with the visitor at the stand is a pertinent task for the exhibitor to achieve results (Li, 2020). Proactive personality is an important factor for any job, especially for the sales job (Edelman & Singer, 2015). When salespeople put additional effort into their work, they improve overall sales performance (Harindranath & Sivakumaran, 2021). The sales force proactiveness allows one to take advantage of market opportunities (Fadda, 2018), anticipating situations and taking initiatives (Varela et al., 2019), as well as seeking the maximum benefits in every circumstance (Mason et al., 2015). Finally, proactiveness is an excellent resource for competitive situations with significant levels of uncertainty (Tajeddini et al., 2020; Varela et al., 2019) such as trade

fairs, which are highly competitive environments (Association of the German Trade Fair Industry [AUMA], 2019; Maskell, 2014).

From this research, the present study also reveals a more profitable view of the trade fair. Apparently, the focal orientation of trade fairs as sales tools seems to have changed over the years, as revealed by the literature reviews (Sarmento & Simões, 2018; Tafesse & Skallerud, 2017). Nonetheless, it should be noted that exhibitors consider spot sales to be a significant factor in the participating decision-making process (Nayak, 2019). Therefore, it is necessary to recover the most profitable view of trade fairs, mainly because, a trade fair "*requires a lot of money and effort and thus it becomes important that such events be successful*" (Nayak, 2019, p. 125).

Accordingly, this research aims (i) to test a conceptual model, in trade fair context, that examines the effects of Sales Force Proactiveness on the main sales force functions during trade fairs, more precisely, generating contacts/leads (Network Capacity) and prospect sales (Sales Performance). In addition, (ii) the research will be referring to a particular context: SME with limited resources and from a little competitive country.

Literature also highlights that when exhibitors participate frequently and consistently at trade fairs, they tend to be more competent in creating and executing a strategic marketing plan (Silva, 2021) because they begin to understand how to achieve their specific goals more efficiently (Kang & Schrier, 2011). In addition, experienced exhibitors are more attentive to unfavourable situations for the company (Li, 2020). Hence, the other objective of this research is to assess (iii) whether the frequency of participation in trade fairs has effects on sales performance indicators (amount, profit and return on investment).

For this purpose, analysis of the structural equation modelling (SEM) was used to test the validity of the theoretical model that defines causal and hypothetical relationships (Marôco, 2014; Kline, 2016), as a result, the SEM is the appropriate methodology to explain the relationships between multiple variables (Kline, 2016), in this case between Sales Force Proactiveness, Network Capacity and Sales Performance.

Consequently, methodology Ordered Logit Model (OLM) was also used to assess the impact of the control variable (Frequency of Participation in Trade Fairs) on each sales performance indicator: Profit performance, Sales Amount, Return On Investment (Sales Performance items). The Ordered Logit Model is an ideal methodology for ordinal

scales, moreover, it allows one to see the extent to which a response can be predicted based on the answers to other questions (Grilli & Rampichini, 2014).

The remainder of this article is designed as follows: the study presents a literature review; subsequently, the methods, the data used, the variables and their measures are described, and the main results are reported; and finally, the results are discussed and the study ends with some conclusions and implications.

2. LITERATURE REVIEW AND HYPOTHESES FORMULATION

2.1 Sales force proactiveness in trade fair context

The sales force is the set of salespeople whose job is to promote and sell products and services (Kotler & Armstrong, 2017). *"Salespeople's role consists in identifying and analysing customers' needs while providing a solution for customers' problems"* (Varela et al., 2019, p. 189) as well as develop customer relationships (Jieun et al., 2010).

Trade fairs provide a privileged space for developing interactions between sellers and buyers (Silva et al., 2020) and a relevant source of qualified leads for salespeople (Haon et al., 2020). A lead is an individual or organisation with an interest in what the company is selling (Sabnis et al., 2013). This interest, which can be originated at the trade fair, facilitates future contacts. So, *"the team present at the stand is also advised to adopt a dynamic posture that encourages dialogue and fosters relational interactions"* (Sarmento & Farhangmehr 2016, p. 747).

In this sense, proactiveness stands out as an important resource for the success of job tasks (Mallin, 2016; Kraus et al., 2018; Varela et al., 2019), especially in the sales area because it helps to improve customer trust in, satisfaction with, and commitment to the salespeople (Amyx et al., 2016).

Proactiveness is an anticipatory behavior that seeks market opportunities (Fadda 2018; Mason et al., 2015; Ruiz-Ortega et al., 2021) ahead of competition (Rezaei & Ortt, 2018). In other words, proactiveness refers to the ability to anticipate market changes, in particular, customer trends (Fadda, 2018). In practice, proactiveness is a character trait (Gerschewski et al., 2016). Thus, highly proactive individuals are more conscientious and more extraverted than others and they increase the company's collaboration levels with customers (Murphy & Coughlan, 2018). Proactive behaviour is particularly relevant in jobs that involve a certain degree of uncertainty as is the case with the salespeople's function (Tajeddini et al., 2020; Varela et al., 2019), because *"salespeople are obliged to interact with customers whose needs are constantly changing"* (Varela et al., 2019, p. 189). Proactiveness (one of the Entrepreneurial Orientation dimensions) is an important resource not only for tasks in high uncertainty environments, but also for

situations associated with social and business networks (Tajeddini et al., 2020). Therefore, in trade fair context, proactiveness can influence the network capability (Yoon et al., 2018), namely through interactions or relationships (Sarmento & Farhangmehr, 2016; Kitchen, 2017). "*Network capability is the ability to manage and gain benefits from external relationships*" (Parida et al., 2017, p. 94), in this case between exhibitor salespeople and visitors (who can be customers, institutions, competitors, partners, among others) (Silva et al., 2020). In practice, network capability is the strength of network ties (Yoon et al., 2018).

Hence, based on this discussion, the following hypothesis is proposed:

H1. In trade fair context and from the exhibitor's perspective, the Sales Force Proactiveness has positive effects on its Network Capability.

2.2 Sales force network capability influences sales

Trade fairs are sources of contacts (Silva et al., 2020) where there are multiple opportunities for formal and informal networking (Kitchen, 2017; Measson & Campbell-Hunt, 2015) and significant relationships between business partners (Geldres-Weiss & Monreal-Pérez, 2018). Accordingly, trade fairs are a relational space in which participants interact and learn spontaneously (Belso-Martínez et al., 2015). The experience provided through interaction between visitor and staff at the booth is relevant to the success of the exhibitor/visitor networking (Sarmento & Farhangmehr 2016). Generally, the salespeople's actions are crucial to create long-term relationships with profitable customers, allowing for the achievement of sustainable sales growth and profitability over time (Valenzuela-Fernández et al., 2019). Network Capability is one of the factors that serves as a professional resource to increase sales performance (Liu, 2019), because the relational variable influences sales performance (Hasaballah et al., 2019; Macintosh & Krush, 2014; Thornton et al., 2015). Salespeople's network affects their performance significantly (Bolander et al., 2015), by providing resources and capabilities (Koch & Windsperger, 2017). Al Mamun et al. (2019) are bolder and claim that networking has a positive effect on all performance of the company, particularly in the context of trade fairs, and the involvement of visitors/customers is relevant to the exhibitors' performance (Gopalakrishna et al., 2019).

Performance is a process that meets the company's strategies as well as corporate and functional objectives (Al-Matari et al., 2014). The company's performance can be determined by different dimensions: profitability, sales growth, market value, customer satisfaction, employee satisfaction, environmental performance, and so forth (Murugesan et al., 2016). Abbas et al. (2019) include as company's performance factors: profit and sales goals, return on investment (ROI) goals, product quality, reputation, and so on. In trade fair context, generally, the intended achievement of the number of contacts/leads and the revenue define the exhibitor efficiency (Fang & Ding, 2020).

The present study will focus on the sales performance of the exhibitor/companies based on the sales amount, profit and ROI (Return on Investment), because in the trade fair context it is urgent to emphasize the exhibitor's sales (Nayak, 2019). So, the following hypothesis is proposed:

H2. In trade fair context and from the exhibitor's perspective, the Network Capability has positive effects on the Sales Performance.

Finally, literature analysis suggests that Network Capability is influenced by the Sales Force Proactiveness (Measson & Campbell-Hunt 2015; Yoon et al, 2018) and Network Capability influences the Sales Performance (Gopalakrishna et al., 2019; Hasaballah et al., 2019). Therefore, based on previous discussions, Network Capability is a factor that acts as an intervener between the Sales Force Proactiveness and the company's Sales Performance. Thus, these arguments lead to the following hypothesis:

H3. In trade fair context and from the exhibitor's perspective, Network Capability has a mediating role between Sales Force Proactiveness and the Sales Performance.

2.3 Experienced exhibitors at trade fair

Frequent and consistent participation in trade fairs positively influence the exhibitor's competence in creating a strategic marketing plan, mainly in its programming and execution (Silva, 2021). The constant participation will give them an opportunity to enhance relationships and as a result they will begin to understand how to achieve their specific goals more efficiently (Kang & Schrier, 2011). Moreover, experienced exhibitors

may be more alert to unfavourable situations that could potentially jeopardize their companies (Li, 2020). Normally, new exhibitors highlight the networking opportunities with potential buyers as the objective, while repeat exhibitors seek the opportunity to meet key decision makers (Qi et al., 2018), thus, more experienced exhibitors are more focused on who decides to buy/sell.

In this sense, it is relevant to evaluate if the control variable - frequency of participation in trade fairs - influences the indicators of the sales performance of exhibitors.

3. METHODOLOGY

Considering the main research aims: (i) to test a conceptual model that examines the effects of Sales Force Proactiveness on the Network Capacity and Sales Performance in trade fair context, (ii) to examine data from SME with limited resources, and (iii) to assess the effects of frequency of participation in trade fairs on the sales performance indicators (amount, profit and return on investment), a quantitative study was applied to Portuguese SMEs.

3.1 Data collection

A database of the exhibitors' list was created from trade fair organizers in Portugal, such as: Exponor (Porto), FIL (Lisboa), ExpoSalão (Batalha), as well business associations: ATP - Portuguese Textile and Clothing Association and APIMA - Portuguese Association of Furniture and Related Industries. The final version of the database contained 3655 companies participating in international trade fairs. All companies in the database had a valid email address. Based on this mother database, each company was contacted through the Internet, between the 3rd – 31st January 2020. The survey was addressed to the company's sales force department and each company had an equal opportunity to respond. In the end, 362 complete responses were collected randomly from an organized and updated database (3655 companies), resulting in a response rate of 9,9%.

To assess the non-response bias, two groups were created. The first group contained the early respondents (responses received in the first 15 days) and the second group included the late respondents (responses received in the last 15 days). The results of both groups were compared, revealing no significant differences. Hence, this suggests that there are no problems of non-response bias in this study (Armstrong & Overton, 1977).

The sample size is adequate, given the proportion of items used (Devellis, 2012), moreover, it is in accordance with previous studies, for instance Fadda (2018) and Gopalakrishna et al. (2019).

3.2 Survey instrument

A questionnaire which allows to collect and analyse data, was applied (Hair et al., 2014). The questionnaire was developed based on the literature review (see Table 4.1). However, the scales have been modified to suit the trade fair context, as appropriate. The instrument had a clear and direct format and comprised two parts, beginning with a presentation of the scope and objectives of the study.

The first part of the questionnaire aimed to measure the constructs: Proactiveness, Network Capability and Exhibitor's Sales Performance. The questionnaire contained items based on Fadda (2018), Rezaei and Ortt (2018), Yoon et al. (2018), Abbas et al. (2019) and Murugesan et al. (2016), however, the items were adapted to the context. All variables were measured on five-point Likert scales, ranging from: one (1) - totally disagree to five (5) - totally agree, except for the Sales Performance measures which were assessed according to the level of satisfaction where: one (1) - dissatisfied and five (5) - totally satisfied. Generally, five-point scales report higher reliabilities (McKelvie, 1978). To reinforce the validity of the content, a panel of six experts (three academics and three industry practitioners) were invited to review the questionnaire's initial items. The cooperation of these experts was positive and helped to build an appropriate questionnaire for the study.

The second part of the questionnaire concerned the characterisation of the respondent companies concerning company type, company size (turnover), frequency of participation in trade fairs and export level.

Table 4.1 – Items survey

ITEMS	FACTOR LOADINGS	SKEW		KURTOSIS		KMO
		Statistic	Std. Error	Statistic	Std. Error	
PROACTIVENESS - *Based on Fadda 2018; Rezaei & Ortt (2018), Yoon et al. (2018).*						
Our company tends to introduce various methods to maintain a dominant position at trade fair.	0.841	-0.511	0.128	-0.094	0.256	0.772
Our company encourages employees to participate effectively to maintain a dominant position at trade fair.	0.821	-0.598	0.128	0.080	0.256	
Our company is more proactive than the trade fair's rivals.	0.761	-0.271	0.128	-0.019	0.256	
Our company adopts a competitive posture at trade fair.	0.720	-0.543	0.128	-0.199	0.256	
NETWORK CAPABILITY - *Based on Yoon et al. (2018).*						
At trade fair, our company bets on strong and close relationships with potential partners.	0.891	-1.363	0.128	1.828	0.256	0.836
At trade fair, our company often communicates with current and potential customers and partners.	0.828	-1.252	0.128	1.436	0.256	
At trade fair, our company coordinates activities for strong and close relationships with potential customers and partners.	0.732	-0.864	0.128	0.141	0.256	
At trade fair, our company bets on partnerships effectively and positively.	0.709	-0.991	0.128	0.650	0.256	
Our partners and customers trust us.	0.719	-1.340	0.128	1.821	0.256	
EXHIBITOR SALES PERFORMANCE - *Based on Abbas et al. (2019); Murugesan et al. (2016).*						
Profit performance	0.879	-0.427	0.128	-0.237	0.256	0.735
Sales amount	0.906	-0.520	0.128	-0.286	0.256	
Return on investment (ROI) goals	0.859	-0.291	0.128	-0.435	0.256	

Kaiser Normalisation Varimax rotation method
Kasier-Meyer-Olkin measure of sampling adequacy (KMO)= 0.865
Bartlett's test sig. 0.000.
All factor loadings are significant at $P < 0.001$

Source: Own elaboration from SPSS

3.3 Data analysis

Data analysis was quantitative and executed in two parts. First part involved SEM - Structural Equation Modelling to test the general model and hypotheses (Hair et al., 2014; Marôco, 2014). The SEM is a multivariate statistical technique that allows to evaluate relationships between multiple constructs simultaneously (Kline, 2016), in this case between Sales Force Proactiveness, Network Capacity and Sales Performance.

SPSS 24.0 and AMOS 20.0 statistical programs were used for data analysis. AMOS-SEM is the indicated software for studies on theoretical tests (Roldán & Sánchez-Franco,

2012). Initially, an analysis was made regarding correlations of observable variables (items) organized into factors (constructs) (Hair et al., 2014; Marôco, 2014). The Kaiser-Meyer-Olkin (KMO) Test was also used. KMO is a measure of how suited your data is for Factor Analysis. The test measures sampling adequacy for each variable in the model and for the complete model (Klein, 2013). Table 4.1 shows the results obtained, which were considered adequate, according to the authors' recommendations (Hair et al., 2014; Klein, 2013)).

Subsequently, Structural Equation Modelling (SEM) using AMOS was employed. SEM allows to statistically test a theoretical model hypothesized by the researcher (Hair et al., 2014; Marôco, 2014). This operation implies testing the measurement psychometric properties involving Confirmatory Factor Analysis (CFA), using Maximum Likelihood Estimation (Hair et al., 2014; Marôco, 2014). Then, the bootstrap resampling method was used to estimate the indirect effect of the "Sales Force Proactiveness" on the "Exhibitor's Sales Performance" (Marôco, 2014).

Finally, in the second part, the Ordered Logit Model was used to assess the effects of the control variable "frequency of participation in trade fairs" on each indicator of the sales performance of exhibitors (amount, profit and return on investment). In fact, "*when the response variable of interest is ordinal, it is advisable to use a specific model such as the ordered logit model*" (Grilli & Rampichini, 2014, p. 4510). The STATA was the software used in the analysis according to the Ordered Logit Model (Liu, 2015; Williams, 2016).

4. RESULTS

4.1 Sample characterisation

The study sample consists of 362 sales force responses from companies participating in trade fairs. Table 4.2 presents the characterisation of respondent companies.

Table 4.2 - Characterisation of respondent companies

ELEMENTS OF COMPANIES'Characterisation		*n*	%
Company type	Manufacturer/producer	244	67.4
	Services or others	118	32.6
	Total	**362**	**100.0**
Company size (turnover)	<500.000€	82	22.7
	500.000€ - 1.500.000€	66	18.2
	1.500.001€ - 2.500.000€	40	11.0
	2.500.001€ - 5.000.000€	57	15.7
	>5.000.001€ - 50 000 000€	117	32.3
	Total	**362**	**100.0**
Frequency of Participation in Trade Fairs	Low frequency (1 trade fair for every 4 years or less)	35	9.7
	Medium frequency (1 trade fair per year or less)	109	30.1
	High frequency (more than 1 trade fair per year)	218	60.2
	Total	**362**	**100.0**
Export level	Low/Medium export level (≤50%)	229	63.3
	High export level (>50%)	133	36.7
	Total	**362**	**100.0**

Source: Own elaboration

According to Table 4.2, it should also be noted that the sample only consists of micro, small and medium-sized enterprises (SMEs). The SME category includes enterprises which have an annual turnover not exceeding EUR 50 million. Nevertheless, within the SME category: a small enterprise is considered when the annual turnover does not exceed EUR 10 million. A microenterprise is considered when the annual turnover does not exceed EUR 2 million (European Commission, 2020).

In addition, the sample is made up of SMEs from a small economy: Portugal. In general, Portuguese SMEs face some problems, such as high indebtedness, limited financial resources and competitive capacity (Organisation for Economic Co-operation and Development [OECD], 2019). Portugal faces certain weaknesses that hinder its competitive growth. For instance, low qualification of workers and managers; low propensity of companies for innovation; weak specialisation in technological products; among others (OECD, 2019).

Therefore, with this sample profile, the study can gain important insights, especially for SMEs with limited resources (Fang & Ding, 2020).

4.2 SEM - Structural Equation Modeling

Table 4.1 shows detailed information about the respondents. A full listing of the 12 items of the measurement model is presented in Table 4.1. However, before the Confirmatory Factor Analysis (CFA), the items were analysed. All items register more than 0.7 of factor loading (see Table 4.1), that is, each item extracts sufficient variance from the corresponding construct (Hair, et al., 2014). Thereafter, the skewness and kurtosis of the data were evaluated, as shown in Table 4.1. The values are generally acceptable, therefore <2 indicates insignificant nonnormality (Kim, 2013). The study then went on to the CFA stage. This stage tested an overall measurement model including all the first order constructs: Proactiveness, Network Capability, and Exhibitor's Sales Performance. Hereby, Table 4.3 summarizes the confirmatory factor analysis.

Table 4.3 – Mean, SD, Variance, Reliability and Validity of the Constructs

CONSTRUCTS	MEAN	SD	α	TVE	CR	AVE	MSV	ASV	1	2	3
1. Network Capability	4.11	0.937	0.768	68.9	0.783	0.552	0.296	0.292	**0.743**		
2. Proactiveness	3.45	1.010	0.737	79.2	0.848	0.737	0.287	0.292	0.536	**0.859**	
3. Exhibitor's Sales Performance	3.17	0.975	0.910	85.01	0.914	0.780	0.296	0.248	0.544	0.447	**0.883**

SD - Standard deviations
α - Cronbach›s alpha
TVE - Total variance explained
CR - Composite Reliability
AVE - Average Variance Extracted
MSV - Maximum Shared Variance
ASV - Average Shared Variance

Diagonal elements (bold) show the square root of average variance extracted (AVE)

Source: Own elaboration based on SPSS and AMOS

According to Table 4.3, Cronbach's Alfa varies between 0.737 - 0.91 for each construct, so the results respect the recommended value: Cronbach's Alfa must be > 0.70 (Hair et al., 2014). This data allows one to check that all items are scored in the same direction. The total variance explained is greater than 0.689, which exceeds the threshold value of 0.60, as a result, the total validity of the scales is reasonable (Hair et al., 2014).

Convergent validity is also evidenced by the significant coefficients of each item in the respective construct (ranging from 0.57 to 0.94). The CR coefficients range from 0.78 to 0.91 all exceeding the recommended guideline of 0.70 (Hair et al., 2014). The AVE for each construct differs between 0.55 - 0.78, with > 0.50 being recommended (Bagozzi & Yi, 1988; Hair et al., 2014). Hair et al., (2014) suggest MSV < AVE and ASV < AVE, as shown in Table 4.2.

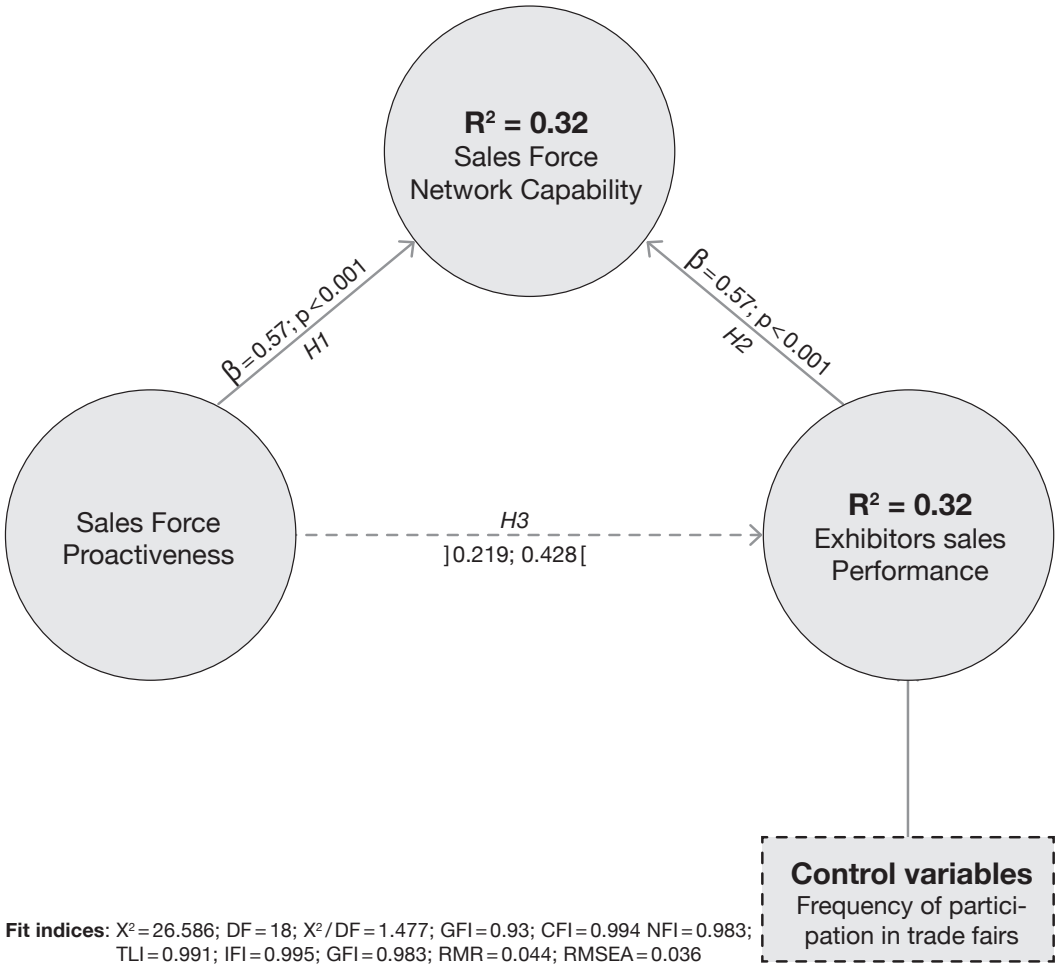
Table 4.3 also provides the means, standard deviations, and a correlation matrix for the constructs. Fornell and Larcker (1981) and Roldán and Sánchez-Franco (2012) say that in order to guarantee the discriminant validity, the square root of the AVE measures must be superior to all the correlations among all the constructs. Therefore, the discriminant validity is evidenced by the data mentioned.

4.2.1 Structural model

The structural equation modelling involving the hypothesized relationships is shown in Figure 4.1. Several indicators were used to assess the model fit: X2/DF; CFI - Comparative Fit Index; NFI - Normed-Fit Index; TLI - Tucker Lewis Index or NNFI - Non-Normed Fit Index; IFI - Incremental Fit Index; GFI - Goodness of Fit Index; RMR - Root Mean Square Residual; RMSEA - Root Mean Square Error of Approximation. Kline (2016) suggests that these indicators are the most relevant to be reported.

Results yielded an adequate fit for the data: X2 = 26.586, DF = 18, X2/DF = 1.477; GFI = 0.93; CFI = 0.994; NFI = 0.983; TLI = 0.991; IFI = 0.995; RMR = 0.044; RMSEA = 0.036. The indicator values are in accordance with the recommendations of the authors (Hair et al., 2014; Kline, 2016). Consequently, CFA results indicate an excellent fit for the data. Figure 4.1 shows the standardized estimation of the conceptual model.

Figure 4.1 - Structural model



Source: Own elaboration based on AMOS

4.2.2 Hypothesis test

The structural equation modelling involving the hypothesized relationships is shown in Figure 4.1. Kline (2016) affirms that direct effects represent the direct influence of one variable on another variable.

Thus, the direct effect shows that "Sales Force Proactiveness" has positive and significant effects on "Sales Force Network Capability" ($\beta = 0.566$; $p < 0.001$), hereby, H1 is supported. These results are consistent with the literature that emphasizes the importance of Sales Force Proactiveness to elevate Sales Force Network Capability (Yoon et al, 2018).

Additionally, the results indicate that "Sales Force Network Capability" contributes positively to "Exhibitor's Sales Performance" ($\beta = 0.566$; $p < 0.001$). Therefore, H2 is also supported. Curiously, the effects (H1 and H2) are similar. This data corroborates with

previous studies on the importance of the network for sales success (Al Mamun et al., 2019; Bolander et al., 2015; Hasaballah et al., 2019; Macintosh & Krush, 2014; Thornton et al., 2015) and in this specific case, on the exhibitor's results (Gopalakrishna et al., 2019).

4.2.3 Mediator construct - Hypothesis test

The bootstrap resampling method was used because it has a high precision (Hayes et al., 2011; Marôco 2014; Preacher & Hayes, 2008), which is recommended for small samples since it does not violate the assumptions of normality (Preacher & Hayes, 2008). The estimate of the indirect effect of the "Sales Force Proactiveness" on the "Exhibitor's Sales Performance" is within a 95% confidence interval with limits:]0.219;0.428[("Lower Bounds" and "Upper Bounds"). This indirect effect is significantly different from zero with p = 0.001 - two-tailed significance. Therefore, zero (0) is outside of the said interval, and as a result, the null hypothesis is rejected (Marôco, 2014). In practice, the result indicates that there is 95% confidence that the indirect effects fall within the interval] 0.219;0.428 [. Accordingly, by rejecting the null hypothesis, the results reveal that the indirect effects of the "Sales Force Proactiveness" on the "Exhibitor's Sales Performance" were statistically significant, hence, H3 is also supported.

4.2.4 The effects of the control variable - Ordered Logit model

The Methodology Ordered Logit Model (OLM) was also used to assess the impact of the control variable (Frequency of Participation in Trade Fairs) on each sales performance indicator: Profit performance, Sales Amount, Return On Investment (Sales Performance items). The Ordered Logistic regression model followed, Long and Freese (2006) and can be written as:

$$ln\left(\frac{\pi_j(x)}{1-\pi_j(x)}\right) = \alpha_j + (- \beta_1 x_1 - \beta_2 x_2 - \beta_3 x_3, \ldots, - \beta_k x_k)$$

where, $\pi\_j\,(x) = \alpha\_j + (\,Y \leq j \mid x_1, x_2\ x_3\ ","...x_k)$ is the probability of being at or below category j, given a set of predictors j = 1,2,3,…J-1 , α_j are the cut point and $\beta_1, \beta_2, \beta_3, ..., \beta_k$ are logit coefficients.

The Generalized Ordered Logit model was based on Williams (2016) and can be written as:

$$P(Y_i > j) = \frac{\exp(\alpha_j + X_i\beta_j)}{1 + [\exp(\alpha_j + X_i\beta_j)]}, \mathrm{j} = 1, 2, \ldots, \mathrm{M} - 1$$

where, the unconstrained model gives results that are similar to running a series of logistic regressions, where first it is category 1 versus all others, then categories 1 & 2 versus all others, then 1, 2 & 3 versus all others, and so on.

Table 4.4 shows four (j–1) associated binary logistic regression models for both Ordered Logistic regression and the Generalized Ordered Logit Model, where each split compares Y> cat. j to Y≤ cat. j because data was dichotomized according to probability comparisons.

Table 4.4 - Results of the Ordered Logistic regression and of the Generalized Ordered Logit Model (Y > cat. j vs. Y ≤ cat. j)

MODEL #1	**Ordered logistic regression**				**Generalized Ordered Logit Estimates**			
Equation 1	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**
Partº Trade Fairs / Constant	0.431362***				-0.3271108	-1.9711***	-4.0006***	-7.0870***
Pseudo R2	0.0788				0.067			
LR chi(9) /chi (2)	75.20***				63.88***			
Equation 2	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**
Partº Trade Fairs / Constant	0.419864***				-2.1579***	-3.5463***	-4.9746***	-5.3195***
Pseudo R2	0.1076				0.0909			
LR chi (13) / chi (3)	102.66***				86.76***			
MODEL #2	**Ordered logistic regression**				**Generalized Ordered Logit Estimates**			
Equation 1	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**
Partº Trade Fairs / Constant	0.620183***				-0.233806	-2.0744***	-3.7635***	-6.9491***
Pseudo R2	0.0936				0.0743			
LR chi (9) / chi (2)	89.32***				70.93***			
Equation 2	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**
Partº Trade Fairs / Constant	0.57682***				-3.3370***	-3.5173***	-4.1981***	-6.1567***
Pseudo R2	0.1139				0.0946			
LR chi (13) -/ chi (6)	108.75***				90.32***			
MODEL #3	**Ordered logistic regression**				**Generalized Ordered Logit Estimates**			
Equation 1	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**
Partº Trade Fairs / Constant	0.450809***				-1.39375**	-2.2246***	-2.8502***	-4.4796***
Pseudo R2	0.0657				0.0646			
LR chi (2)	67.86***				66.80***			
Equation 2	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**	**Y>1 vs Y≤1**	**Y>2 vs Y≤2**	**Y>3 vs Y≤3**	**Y>4 vs Y≤4**
Partº Trade Fairs / Constant	0.337542**				-1.38826**	-3.1609***	-4.8989***	-7.0699***
Pseudo R2	0.0938				0.0763			
LR chi (13)	96.98				78.87***			

Notes: Probability values are in subscript, *** and ** refer to the rejection of the null hypothesis at the significance levels of 1%, and 5% respectively.

Source: Own elaboration from Stata

In this analysis two equations were applied. Equation 1 included the variables of the "Proactiveness" construct and Equation 2 included the variables of the "Network Capability" construct. Thus, it was possible to evaluate two perspectives, based on the two paths ("Proactiveness" to "Exhibitor Sales Performance" and "Network Capability" to "Exhibitor Sales Performance") of the conceptual model (see Figure 4.1).

According to the results of the Ordered Logit Model, one can notice the effect of the control variable "Frequency of Participation in Trade Fairs" impacting on three metrics variables of Sales Performance (Profit Performance - Model #1; Sales Amount - Model #2; Return on Investment - Model #3), whose coefficients are statistically significant at 1% level. This evidence was verified in both perspectives (Equation 1 and 2).

5. DISCUSSION AND CONCLUSION

The main objective of this study was to test a conceptual model that examines the effects of Sales Force Proactiveness, as attitude and ability (Chun, 2016; Li, 2020), on its main functions during trade fairs: contacts/leads (Network Capacity) and prospect sales (Sales Performance) (Haon et al., 2020). Thus, this study examined the effects of Sales Force Proactiveness on the Network Capability and Exhibitor's Sales Performance, in trade fair context.

The results support the three hypotheses (H1, H2 and H3). Therefore, it is confirmed that in trade fair context, the Sales Force Proactiveness has positive effects on its Network Capability (H1). This finding is consistent with the literature (Kitchen, 2017; Murphy & Coughlan, 2018, Sarmento & Farhangmehr, 2016; Yoon et al, 2018). The research also confirmed that Network Capability has positive effects on Exhibitor's Sales Performance (H2), corroborating with the literature (Al Mamun et al., 2019; Gopalakrishna et al., 2019; Hasaballah et al., 2019; Liu, 2019; Macintosh & Krush, 2014; Thornton et al., 2015). Finally, the results validate that Network Capability has a mediating role between Sales Force Proactiveness and the Exhibitor's Sales Performance (H3). This finding adds knowledge, as it allows one to verify the influence that Network Capability has on the relationship between Sales Force Proactiveness and the Exhibitor's Sales Performance. This result highlights the importance of role of networking in the trade fair context, corroborating with the literature (Kitchen, 2017; Measson & Campbell-Hunt, 2015).

Moreover, a control variable "frequency of participation in trade fairs" was introduced in the analysis. The results show that there are significant effects of the participation's frequency in trade fairs on Profit Performance, Sales Amount, and ROI. This finding highlights the importance of continuous participation, which allows exhibitors to develop relationships and achieve their goals more efficiently (Kang & Schrier, 2011), especially marketing goals (Silva, 2021).

Therefore, in the trade fair context, the proactivity of the sales force or stand team is an attitude that allows them to anticipate situations and take advantage of opportunities (Fadda, 2018; Mason et al., 2015; Varela et al., 2019) ahead of their trade fair rivals (Rezaei & Ortt, 2018). This kind of attitude is fundamental to encourage dialogue and foster relational interactions, improving the exhibitor's network capability and sales (Murphy

& Coughlan, 2018, Sarmento & Farhangmehr, 2016; Varela et al., 2019; Yoon et al, 2018). Notably, the network capacity is a resource to increase sales performance (Hasaballah et al., 2019; Kotler & Armstrong, 2017; Liu, 2019; Macintosh & Krush, 2014; Thornton et al., 2015) and specifically the exhibitor's profit, sales amount, and ROI.

Moreover, the results demonstrate that the continued and consistent participation of exhibitors/companies at trade fairs is an important factor for the success of the exhibitor's sales performance, in terms of amount, profit, and ROI. Thus, the results reveal that constant participation at trade fairs increases efficiency in achieving objectives, particularly in marketing goals (Kang & Schrier, 2011; Silva, 2021). Perhaps due to the fact that experienced exhibitors more easily counter threats (Li, 2020) or they are more focused on meeting key decision makers (Qi et al., 2018), who decide to buy/sell. Thereby, the constant participation at trade fairs can help to create a long-term relationship with customers, allowing them to achieve sustainable sales growth and profitability over time (Valenzuela-Fernández et al., 2019).

Therefore, the consolidation of the literature review and the results of the study reveal that the proactiveness of the exhibitor staff present at the stand is a key factor for success for any SME, regardless of the resources available. Successful exhibitors use proactive teams to actively interact with visitors, generating contacts/leads/networking, thereafter converting those contacts/leads into sales (amount, profit, and ROI). Successful exhibitors in sales are not necessarily those who invest the most in resources. Thus, in trade fair context, the resource-limited exhibitors can focus on their sales force proactiveness to improve their sales performance, however, they must also bet on a continuous and consistent participation in trade fairs.

5.1 Theoretical contributions

The contribution of this study reflects on the literature concerning trade fairs and the literature of sales marketing. In addition, this study and its findings can potentially be applied to investigate the same theoretical association in other contexts, such as events marketing, human resources (special sales area), and service at the point of sale.

The first objective of the study (to test a conceptual model and examines the effects of Sales Force Proactiveness on the Network Capacity and Sales Performance in trade

fair context) allows one to recover (from the exhibitor`s perspective) the most profitable view of trade fairs, which has been neglected by the recent literature (Sarmento & Simões, 2018; Tafesse & Skallerud, 2017). This research also increases knowledge to the literature when studying the sales force proactiveness in the trade fair context, since the existing literature has neglected sales force attitudes, conduct and abilities (Chun, 2016; Li, 2020).

Regarding the second objective (to apply the study in SME with limited resources and from a little competitive country), this research reveals that sales force proactiveness is a factor which is accessible to any SME, regardless of the resources available and the competitive level. Consequently, the research focused on Portuguese SME (OECD, 2019). The present research does not ignore a basic economic principle - the scarcity of resources. Thus, the results help to prioritize factors that truly bring results in a trade fair context. In this specific case, the sales force proactiveness is a factor that generates interaction/contacts/networking that subsequently become customers/sales. In fact, to succeed requires staying focused. This research reveals that a focus on proactiveness and networking can help small companies in trade fair context and with limited resources to achieve positive sales performance. However, it is worth highlighting the role of Network Capability. Exhibitors hope to compensate their expenses and efforts with new customers/sales generated by networking at trade fairs. SMEs can use trade fairs to build important relationships (Kitchen, 2017; Measson & Campbell-Hunt, 2015; Sarmento & Farhangmehr, 2016).

The third objective (examination of the effects of the frequency of participation in trade fairs on sales performance indicators) revealed that the impact of continuous and consistent participation in trade fairs is not merely a factor that contributes to general marketing competences (Silva, 2021). It also contributes to specific functions such as generating sales, ROI, and profits. In fact, the exhibitor's experience emerges as a success factor (Kang & Schrier, 2011; Li, 2020), helping to improve the exhibitor's focus on interaction with decision makers (Qi et al., 2018) in this case of buying/selling.

Finally, this research is about trade fairs, with an emphasis on sales which was dormant in the recent literature (Sarmento & Simões, 2018; Tafesse & Skallerud, 2017).

5.2 Practical contributions for exhibitor

This paper investigates the influence of the sales force proactiveness on the network and on sales performance in the trade fair context, based on the exhibitor's perspective, especially exhibitors characterized with limited resources.

For exhibitors, this study suggests guidelines for improving the results of the exhibitor's trade fair, regardless of the resources available. Thus, sales force proactiveness is an attitude that can be developed without significant investment. In practice, it is an anticipatory behaviour (Fadda 2018; Mason et al., 2015) or character trait (Gerschewski et al., 2016) which consists in seeking new business opportunities ahead of competition (Rezaei & Ortt, 2018). Therefore, sales force proactivity can be a particularly useful factor for small companies/exhibitors, as they are often forced to optimize costs due to limited resources (Fang & Ding, 2020).

That being said, this study suggests that exhibitors should identify and select the most proactive employees in their company for the stand staff, namely, employees who are motivated, confident in sales tasks and willing to take calculated risks, because proactiveness in the business world means bringing solutions (Mallin, 2016). Moreover, it is important to emphasize that proactiveness is a skill that can be developed by any employees. Thus, exhibitors can promote the development of proactiveness in their trade fair team, for instance, through appropriate training programs, coaching, among others (Fang & Ding, 2020; Mallin, 2016), with relatively controlled investments.

Other contributions of this study to the exhibitors are related to the frequency of participation in trade fairs. Exhibitors must invest in continuous and consistent participation in trade fairs, which allows them to gain marketing skills (Silva, 2021) and practical experience (Fang & Ding, 2020) with positive effects on their sales performance (volume, profit, and ROI). In fact, the results suggest that the consistency of participation in trade fairs is a relevant factor, as it probably signals a direction and offers greater credibility, which helps to strengthen relationships and retain customers. Therefore, sales are a consequence of relationships or developed networking (Kotler & Armstrong, 2017). On the other hand, the low frequency of participation in trade fairs can generate customer disinterest and even forgetfulness.

In short, consistent and proactive exhibitors inspire success by generating leads and sales.

5.3 Practical contributions for exhibitor's sales forces

The present study also offers contributions to members of the exhibitor's salesforces. Each member of the booth team has a fundamental role to play and must contribute toward the team's effectiveness in developing leads and sales. In this sense, the results show that proactiveness is a skill that can help any salesperson to maximize results from networking at trade fairs.

Generally, at trade fairs there is a crowd of unknown faces and a highly competitive environment (AUMA, 2019; Maskell, 2014) causing an inhibiting scenario. Proactiveness can enable the sales force to anticipate and take the initiative to interact with participants (Tajeddini et al., 2020; Varela et al., 2019), especially in business network situations, such as trade fairs (Tajeddini et al., 2020). A proactive person assumes an anticipated behaviour in relation to a situation, looking for advantages and opportunities (Fadda, 2018; Mason et al., 2015), in this specific case, to generate leads and negotiate sales (Haon et al., 2020).

Therefore, in the trade fair context, the salesperson must be brave and able to start conversations with strangers or people outside their normal networking circle, hereby, enhancing the network and promoting long-term relationships with visitors/clients. Currently, customers (visitors) are in constant change (Varela et al., 2019), thereby requiring dynamic and creative salespeople.

The trade fair provides several networking opportunities (Kitchen, 2017; Measson & Campbell-Hunt, 2015; Sarmento & Farhangmehr, 2016) and these opportunities must be seized. For instance, the salesperson should be able to (1) interact with whoever enters the stand (Haon et al., 2020) and (2) positively surprise the visitor (tasting, demonstrations, socializing moments, among others). The salesperson must also (3) be able to identify potential customers and (4) share contacts (business card, QR Codes vCard). They must also take advantage of the (5) parallel trade fair activities (seminars, workshops), as well as social networks and/or other digital tools to meet and increase potential contacts/people during the trade fair. Consequently, it is essential that (6) the salesperson creates an effective relationship and engagement with leads in trade fair context (Gopalakrishna et al., 2019), in order to make headway on the purchases

journey. In addition, (7) the salesperson should not forget about the competition at trade fairs, therefore, it is necessary to be attentive to the business sector, to be aware of the latest trends and to react in advance (Silva, 2021).

Finally, proactiveness is a behaviour that can be developed/trained with no investment required. The fundamental question is whether that salesperson wants to change. Thus, they should be open to receiving advice as well as feedback and start training behaviours and attitudes in their daily life when faced with problems.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

In terms of research limitations, it is noted that this research was based on Portuguese SMEs, which limits its generalisation. Future research may consider SMEs of another home-country. Another limitation is the measurement of sales performance, which is based on the level of the exhibitors' satisfaction, although it would be more appropriate to evaluate real sales results. Thus, future studies could use real value/sales from exhibitors to improve and consolidate this analysis.

Lastly, the study does not consider the factors that motivate proactiveness, as such, future studies could perhaps conduct a study of these factors in the trade fair context.

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Conclusion

This chapter summarizes how the four essays make a coherent contribution to meeting the research objectives, identifies implications for research and management, and indicates directions for future research. The coherent contribution of this dissertation lies in the development of an integrated approach to understand the impact of intelligence activities and entrepreneurial orientation in the competitiveness of exhibitors.

Thus, this dissertation is formed through the alignment between four individual contributions in terms of theoretical analysis, conceptual model and research methodology and conclusions.

In general, the study accomplished the objectives by demonstrating that trade fairs have a multifunctional character and therefore allow multiple elements of exchange between participants (Tafesse & Skallerud, 2015). This way, trade fairs foster the competitiveness of companies, which reflects in their financial and non-financial performance (Maune, 2014). The study particularly examined intelligence activities and entrepreneurial orientation as two competitive forces for exhibitors, which are two practices that can complement each other (Boso et al., 2013) in trade fair context.

1. SUMMARY

This thesis covers four correlated researches. Chapter 1 examined the role of Trade Fair Intelligence Activities within the perspective of exhibitors. Chapter 2 investigated the influence of Entrepreneurial Orientation on the Network, and the Exhibitors' Performance. Chapter 3 studied in particular a dimension of Entrepreneurial Orientation: product innovation. The purpose of this research was to examine the relationship between product innovation and network, and their export performance in the trade fair context and within the exhibitor's perspective, more concretely SMEs (Small and Medium Enterprises). Additionally, chapter 3 presents a comparative study, thus, the model was examined from three different perspectives: Model A encompasses all surveyed SMEs, Model B includes only industrial/producer SMEs, Model C comprises service/other SMEs. Chapter 4 examined the impact of the exhibitors' sales force proactiveness (another dimension of Entrepreneurial Orientation) on their network capability and sales performance.

This dissertation applies research in the trade fair context, integrating the perspectives of companies/exhibitors. The study in general provides a detailed, holistic, coherent and realistic image of trade fairs as intelligence sources and as a stage for exhibitors' entrepreneurial practices. In particular, this dissertation shows that Trade Fair Intelligence Activities and Entrepreneurial Orientation are parallel drivers of competitiveness for exhibitors, through the multiplicity of exchanges.

Trade Fair Intelligence Activities are described by three dimensions: Customer Intelligence; Product Intelligence; Market Conditions Intelligence. The study shows that Trade Fair Intelligence Activities, when processed by information systems and applied in the marketing strategy, generate a competitive advantage for the company/exhibitor.

Likewise, the study shows that companies, when applying in trade fair context the practices that characterize the entrepreneurial orientation (Innovation, Risk taking, Autonomy, Competitiveness, Proactivity), also present greater capabilities to develop business networks. The study also indicates that Entrepreneurial Orientation and Network Capability contribute to the company's performance (competitive skills).

Finally, the survey also highlights the role of Product Innovation and Sales Force Proactiveness present at the trade fair. Product Innovation contributed to the Network Capability and influenced Export Performance (competitive skills), particularly for industrial/producer SMEs. Sales Force Productiveness is a driver for developing business Networks and influencing the SMEs' Sales Performance (competitive skills).

2. THEORETICAL CONTRIBUTION

Overall, the individual contributions of each chapter are part of a common foundation, that combine to provide an integrated and coherent approach to trade fair analysis as a competitive tool for companies/exhibitors.

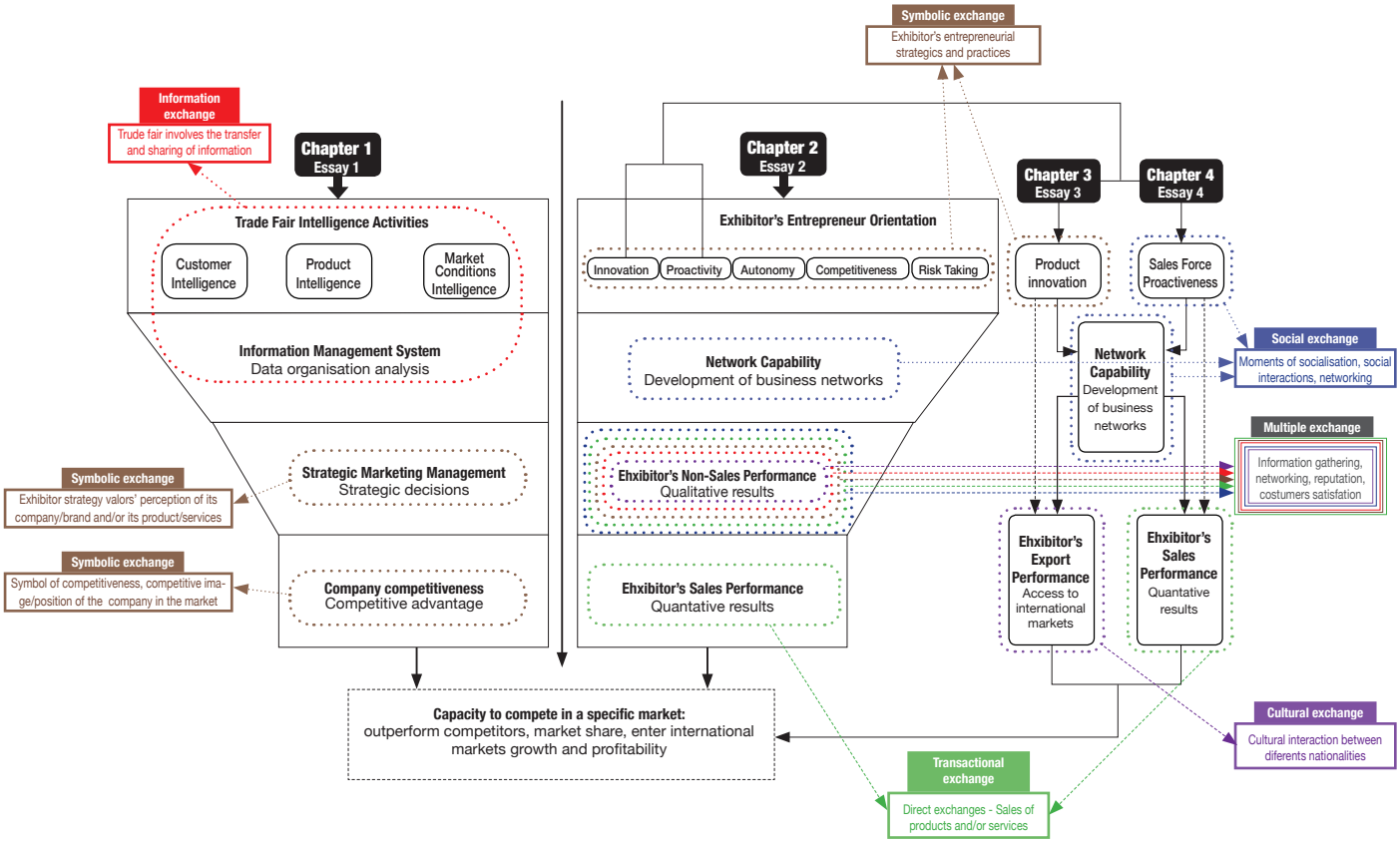
Regarding the research's general objective, chapters 1, 2, 3 and 4 demonstrate that trade fairs are a multifunctional strategic means by which companies establish a variety of exchange relationships (transactional, informational, social, symbolic and cultural) to meet their respective organisational goals and objectives (Tafesse & Skallerud, 2015).

Trade fair transactional exchanges involve direct exchanges, such as selling products and services. The exchange involves transference and sharing information between trade fair participants through interactions and for this reason they are great sources for the exhibitors' intelligence activities (Hlee et al., 2017; Li, 2020). Trade fairs are also events that offer socializing opportunities, in which entrepreneurial orientation allows strengthening current relationships and developing more comprehensive and important ones for business growth (Tajeddini et al., 2020).

The symbolic exchange is based on the exhibitor's ability to positively influence the perception of his company or product towards current and potential customers, for example through product innovation (Bathelt, 2017; Golfetto & Rinallo, 2017; Kim & Mazumdar, 2016), or the proactivity of the exhibitor's sales force (Mallin, 2016; Kraus et al., 2018; Varela et al., 2019). Trade fairs also provide opportunities for cultural interaction through access to international markets (Measson & Campbell-Hunt, 2015).

Therefore, this dissertation corroborates the perspective of Tafesse and Skallerud (2015) about trade fairs as important platforms for strategic exchanges. Figure 1A reveals a view of the multiplicity of exchanges in the exhibitor's perspective from the studies developed in the present dissertation.

Figure 1A – Trade fairs as a strategic means of exchange



Source: Own elaboration

Each chapter of this dissertation highlights the role of trade fairs as a strategic means of exchange. Through these types of practices, exhibitors can increase their competitiveness in the market.

In general, this thesis contributes to the literature in several ways, providing empirical evidence that trade fairs continue to be an important marketing tool for companies (Gerschewski et al., 2019). Despite constant changes in the business world, trade fairs are not inert to the current challenge of adapting to the great technological, social, political, and economic changes (Shi et al., 2020).

2.1 Intelligence activities in trade fair context as a competitive factor

Regarding the first research question, chapter 1 reveals that a strategic process can be created to develop competitive capabilities, starting with trade fairs. It also shows trade fairs as a process of information exchange, knowledge, and learning from the

exhibitor's perspective (Sarmento & Simões, 2018; Tafesse & Skallerud, 2017), suggesting three intelligence dimensions: Customer Intelligence, Product Intelligence, Market Conditions Intelligence.

The operational dynamics of these three dimensions are essential to give way to the exhibitors' strategic action and decision making, reflecting on their competitiveness (Nyanga et al., 2019). Therefore, exhibitors' intelligence activities help to transform raw data into meaningful and useful information, with the purpose of detecting opportunities and minimizing market threats (Cheng et al., 2020). For example, with intelligence activities, an exhibitor can: analyse the behaviour of trade fairs customers/visitors in relation to their exhibited products/services; identify the main competitors; analyse the main strategies of competing exhibitors; test products/services; study the culture of an international market, among other information.

With this type of data, the exhibitor can make intelligent and more accurate marketing decisions, in order to increase business competitiveness.

2.2 Entrepreneurial Orientation in trade fair context as a competitive factor

As for the second research question, chapter 2 introduces the concept of entrepreneurial orientation in trade fair context. The results prove that the Entrepreneurial Orientation mix (Innovativeness, Proactiveness, Risk-Taking, Competitiveness, and Autonomy) is a useful resource for exhibitors to develop networking (Jiang et al., 2018; Ruiz-Ortega et al., 2021), which improves the exhibitor's performance (Kitchen, 2017). The exhibitor's performance was analysed from two perspectives (Sales Performance and Non-Sales Performance). The results suggest that Sales Performance depends on Non-Sales Performance (Kotler & Keller, 2015).

The results confirm that the multidimensionality of Entrepreneurial Orientation contributes to increase outcomes in environments with a social and business networks profile (Tajeddini et al., 2020) and highly competitive as trade fairs (Association of the German Trade Fair Industry [AUMA], 2019; Locatelli et al., 2019; Maskell, 2014). In other words, an exhibitor should adopt entrepreneurial practices, such as innovating, taking calculated risks, being proactive, favouring autonomy and stimulating competitive

aggressiveness. Consequently, Entrepreneurial Orientation develops a strategic role which leads the exhibitor to success and greater competitiveness, particularly by outperforming competitors and growth in leads, sales and market (Falciola et al., 2020) which is reflected in his financial and non-financial performance (Maune, 2014).

2.3 Product Innovation in trade fair context as a competitive factor

In response to the third investigation question, chapter 3 demonstrates that trade fairs are an excellent opportunity for companies, particularly SME, to open up to international markets, which increase their exports (Gerschewski et al., 2019; Monreal-Pérez & Geldres-Weiss, 2019; Gerschewski et al., 2020), as well as to promote product innovations (Kim & Mazumdar, 2016; Bathelt, 2017; Golfetto & Rinallo, 2017).

Chapter 3 analysed SMEs from three different perspectives: Model A contained all surveyed SMEs, Model B included only industrial/producer SMEs, Model C comprised service/other SMEs. In general, results indicate a new antecedent (Product Innovations) of network development and export to SMEs, in trade fair context, as recommended by Gerschewski et al. (2020). However, in the context of Industrial SMEs, the results suggest that presenting Product Innovations is a strong enough reason to promote networking and access international markets (Bathelt, 2017; Golfetto & Rinallo, 2017). At industrial trade fairs, product innovations can be physically inspected by visitors, so this real examination increases their interest (Pramudya & Seo, 2019), particularly in foreign customers.

The study also reinforces knowledge in the existing literature on Industrial SMEs from small economies. Thus, chapter 3 also investigated SMEs considering their home-country context (Lindner et al., 2018). The results suggest trade fairs as an essential tool to help Industrial SMEs face the challenges of today's competitive and demanding business world (Clegg et al., 2019; Oliveira et al., 2019), especially for SMEs residing in small economies such as Portugal.

Finally, chapter 3 concluded that the more experience and continuous participation in trade fairs occurs, the higher the SME's capacity to increase its export performance. The present study indicates the experience as relevant. Frequency of participation also proved to be important, showing that trade fairs imply a continuous medium to long

term process (Silva, 2021). The "Company's Size" does not have significant influence on its Export Performance. Hence, regardless of their size, trade fairs are useful to any company, which is partially corroborated by several authors (Evers & Knight, 2008; Measson & Campbell-Hunt, 2015; Kalafsky & Gress, 2020) about the importance of trade fairs for SMEs, especially industrial micro/small companies (Silva, 2014; Monreal-Pérez & Geldres-Weiss, 2019; Gerschewski et al., 2020).

In short, in the context of a fair, the presentation of product innovation is an exhibitor's differentiating factor, which allows to overcome the competition, generate leads/networking and conquer international markets. In this case, the exhibitor's competitiveness is particularly reflected in its ability to access international markets (Falciola et al., 2020).

2.4 Sales Force Proactiveness in trade fair context as a competitive factor

Concerning the fourth research question, chapter 4 shows that the proactiveness of the sales team present at the stand is a decisive attitude for the exhibitor's ability to create networks, generate sales amount and profit, therefore contributing to increase its return on investment. Operationally, proactiveness is the ability to anticipate situations, thus, it is possible to foresee a problem and plan its solution in time (Fadda 2018; Ruiz-Ortega et al., 2021). In a trade fair context, this behaviour can make a difference. An exhibitor's proactive team can always have a broader perspective of situations and define on which priorities to act upon. As trade fairs are highly competitive environments (AUMA, 2019; Maskell, 2014), proactiveness can help to overcome the competition. For instance, it can cause people to concentrate fully on each task during the trade fair, anticipating situations while in search of advantages and opportunities (Fadda 2018; Mason et al., 2015), in this specific case, generate leads and negotiate sales (Haon et al., 2020).

This research recovers the profitable and sales perspective of trade shows that has been neglected by the literature (Nayak, 2019; Sarmento & Simões 2018; Tafesse & Skallerud, 2017). Moreover, the study considers that SMEs are often forced to optimize costs due to limited resources (Fang & Ding, 2020), especially SMEs from countries with low competitiveness. Therefore, this chapter analysed the exhibitor's sales force (staff or stand team) as a factor influencing the trade shows' results (Sarmento & Farhangmehr,

2016; Haon et al., 2020), regardless of available resources. Lastly, this chapter also indicates that the frequency of participation in trade shows is a catalyst for successful exhibitors' Sales Performance (amount, ROI and profit). In this regard, the exhibitor's competitiveness is reflected in its growth in sales and profits (Falciola et al., 2020) more specifically in its financial performance (Maune, 2014).

3. MANAGERIAL IMPLICATIONS

This research provides a better understanding of the impact trade fairs have on the competitiveness of exhibitors. In general, each chapter shows that it is important for professionals/managers to formulate a clear strategy concerning the participation in international trade fairs. Therefore, it is crucial for exhibitors to clearly understand that fairs are a privileged space for multiple strategic exchange: transactional, informational, social, symbolic and cultural (Tafesse & Skallerud, 2015). Thus, the exhibitor/company needs to interpret its role as an active player in the multiplicity of strategic exchanges in the trade fair context. But generally, whether they are exhibitors, visitors or trade fair organizers, they must plan their participation in trade fairs effectively, so it facilitates the individual roles of each in the typical strategic exchanges at trade fairs (Lin et al., 2018). For example, by strengthening the involvement of everyone (exhibitors, visitors and organizers) in intelligence activities and entrepreneurial practices, a more subtle shift is applied from pure exhibitions to a holistic view of how trade fairs can take place successfully (Bauer & Borodako, 2019).

Each chapter presents specific recommendations, particularly to exhibitors, in order to improve their competitiveness at trade fairs. But in general terms, some implications can be highlighted. First, managers must be aware that trade fairs are precious sources of information (Sarmento & Simões, 2018; Tafesse & Skallerud, 2017). From a practical perspective, this means that companies must develop product, customer and market condition intelligence activities. Managers are therefore advised to promote intelligence activities, in order to improve their information systems which support the demand for strategic marketing decisions and positively influence their competitiveness (Hlee et al., 2017; Li, 2020).

Second, company managers must implement entrepreneurial practices in trade fair context, investing in innovation, adopting a proactive and risk-taking attitude, investing in aggressive competitiveness and promoting their employees' autonomy. These entrepreneurial practices motivate the development of networks with consequent positive effects on the exhibitors' performance no-sales and sales. The findings demonstrate that Entrepreneurial Orientation is an important catalyst for exhibitors to operate successfully in competitive, uncertain and dynamic environments like trade fairs (Tajeddini et al., 2020).

Third, this dissertation also highlights that within entrepreneurial practices, product innovation in the trade fair context has an important relevance. Therefore, part of this study's findings suggest that exhibitors, mainly industrial SMEs, should bet on trade fairs to promote their innovative products, develop networks and thus access international markets. Hence, this dissertation establishes a dynamic trajectory: Innovate to Networking and Networking to Export (Lewandowska et al., 2016), especially for industries and producers. The pragmatic advices for managers are clear: (1) use trade fairs, continuously and consistently, to develop, test and promote product innovations; (2) be proactive, flexible and communicative at trade fairs to develop networks/leads; (3) take full advantage of both networks and leads to access international markets.

Finally, the fourth overall contribution, the findings of this dissertation also reveal that the sales force proactiveness is a differentiating factor in the development of networks and in the exhibitors' sales performance. Companies must bet on the selection of the stand team with a proactive ability, especially salespeople with a strong character, so they must be well prepared, able to identify opportunities and present solutions (Fadda, 2018), as much as possible more efficiently than the competition present at the trade fair. The proactiveness of the sales force is a factor that does not require considerable investment, for example, it can be developed through training. Therefore, this proactiveness is an accessible and important tool for the development of contacts and the creation of partnerships, which allows adding value to the business and positively influence sales results, regardless of the available resources. A proactive person is one who takes action, without the need for an order or guidance. At trade fairs, staff with this characteristic tends to look for information and business opportunities. Operability, in this case of presence at trade fairs, requires proactiveness, boldness and the courage to always be ahead. The exhibitor's work focused on maintaining and strengthening relationships will achieve sustainable sales and profitability growth over time (Locatelli et al., 2019).

In short, this dissertation advises companies to diversify their participation in trade fairs, investing in new trends: intelligence activities and entrepreneurial practices. However, all parties (exhibitors, visitors and fair organizers) must adopt the multidisciplinary approach for developing initiatives and business in the trade fair context.

4. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

This dissertation has some limitations. Essentially, this study is still the beginning of an investigation and deserves further inquiry, namely a research that empirically analyses the relationship between intelligence activities and entrepreneurial practices in a trade fair context. The present dissertation analyses these themes in parallel but does not present a research on the direct relationship between the themes. Therefore, examining the relationship of mutual influence between intelligence activities and entrepreneurial practices (Boso et al., 2013) in trade fair context, is suggested for future study.

Overall, the studies in chapters 1, 2, 3 and 4 focus on Portuguese companies, which restricts its generalisation. In future research, it will be vital to include other nationality companies. In addition, there are small intrinsic limitations in each chapter/study that are mentioned in said chapters.

Finally, it should be noted that the trade fair industry is undergoing a subtle but fundamental change. So, it is naive to think that after Covid19, trade fairs will return straight as they were before. Certainly, face-to-face trade fairs will continue to be essential, although with changes, such as the implementation of omnichannel strategies. Therefore, many study opportunities will arise. The important thing is to start somewhere, study and start organizing trade fairs, manage expectations and learn.

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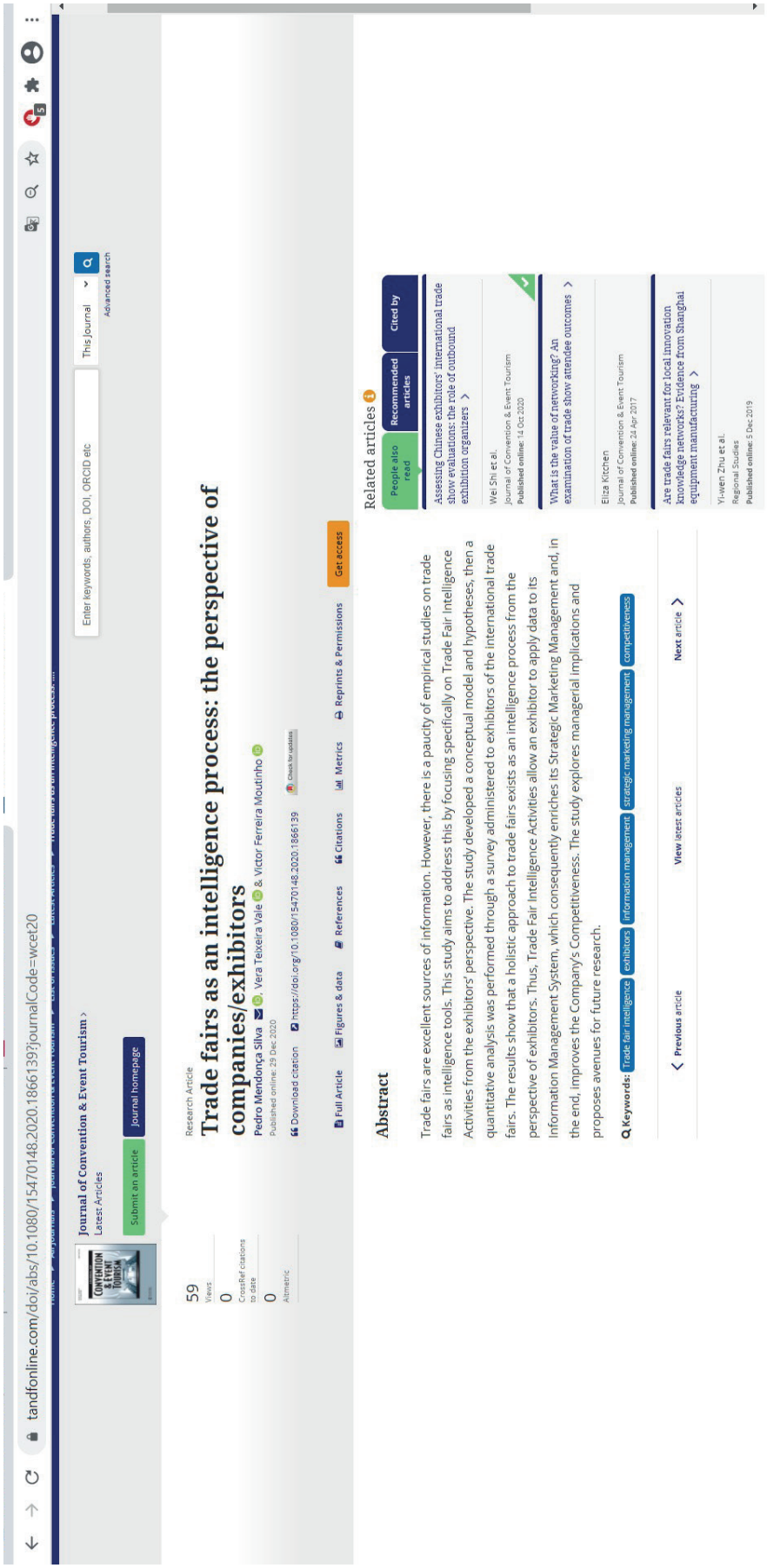
Appendix

Appendix I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Abstract
Trade fairs are excellent sources of information. However, there is a paucity of empirical studies on trade fairs as intelligence tools. This study aims to address this by focusing specifically on Trade Fair Intelligence Activities from the exhibitors' perspective. The study developed a conceptual model and hypotheses, then a quantitative analysis was performed through a survey administered to exhibitors of the international trade fairs. The results show that a holistic approach to trade fairs exists as an intelligence process from the perspective of exhibitors. Thus, Trade Fair Intelligence Activities allow an exhibitor to apply data to its Information Management System, which consequently enriches its Strategic Marketing Management and, in the end, improves the Company's Competitiveness. The study explores managerial implications and proposes avenues for future research.
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Appendix II


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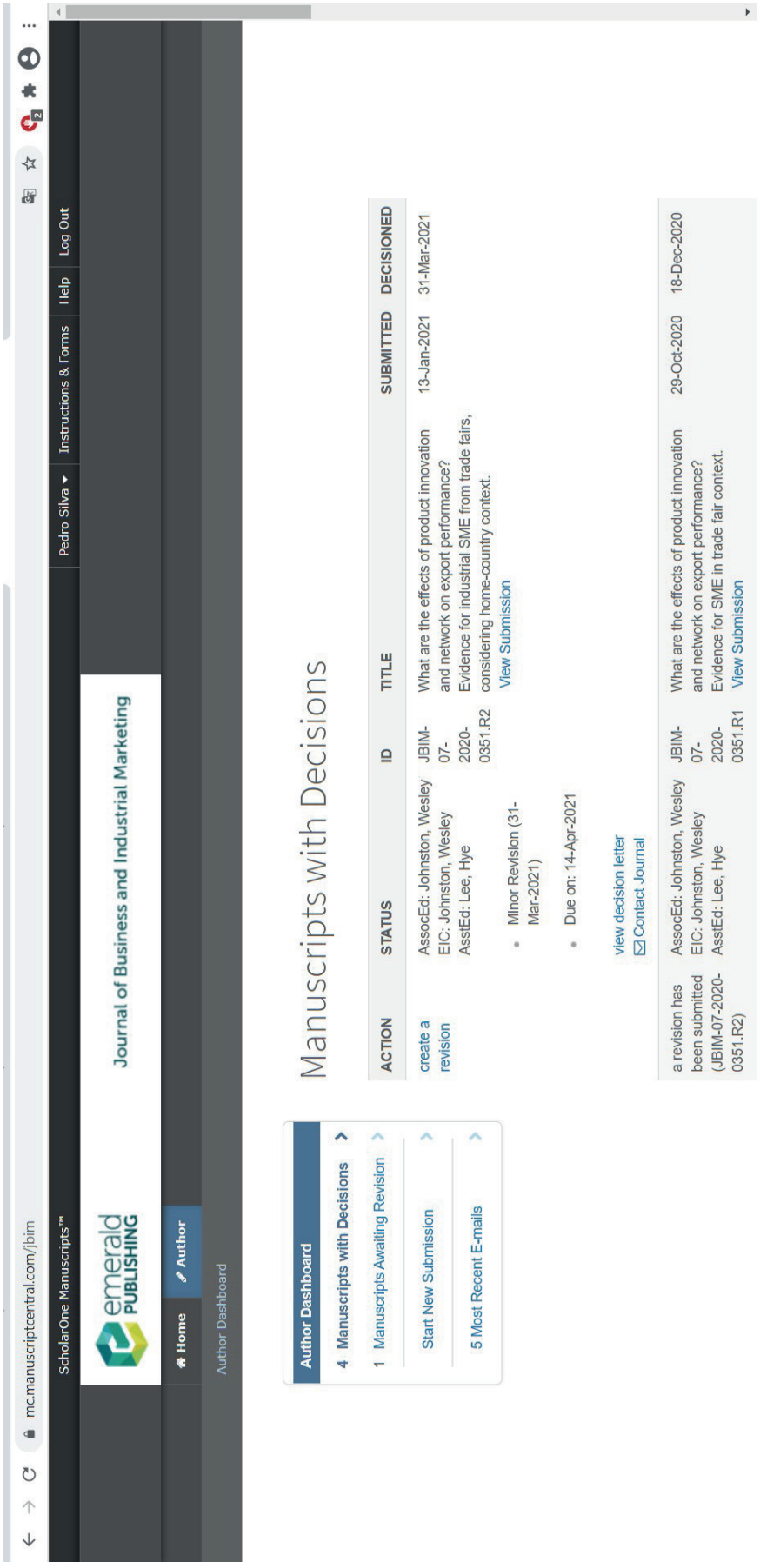
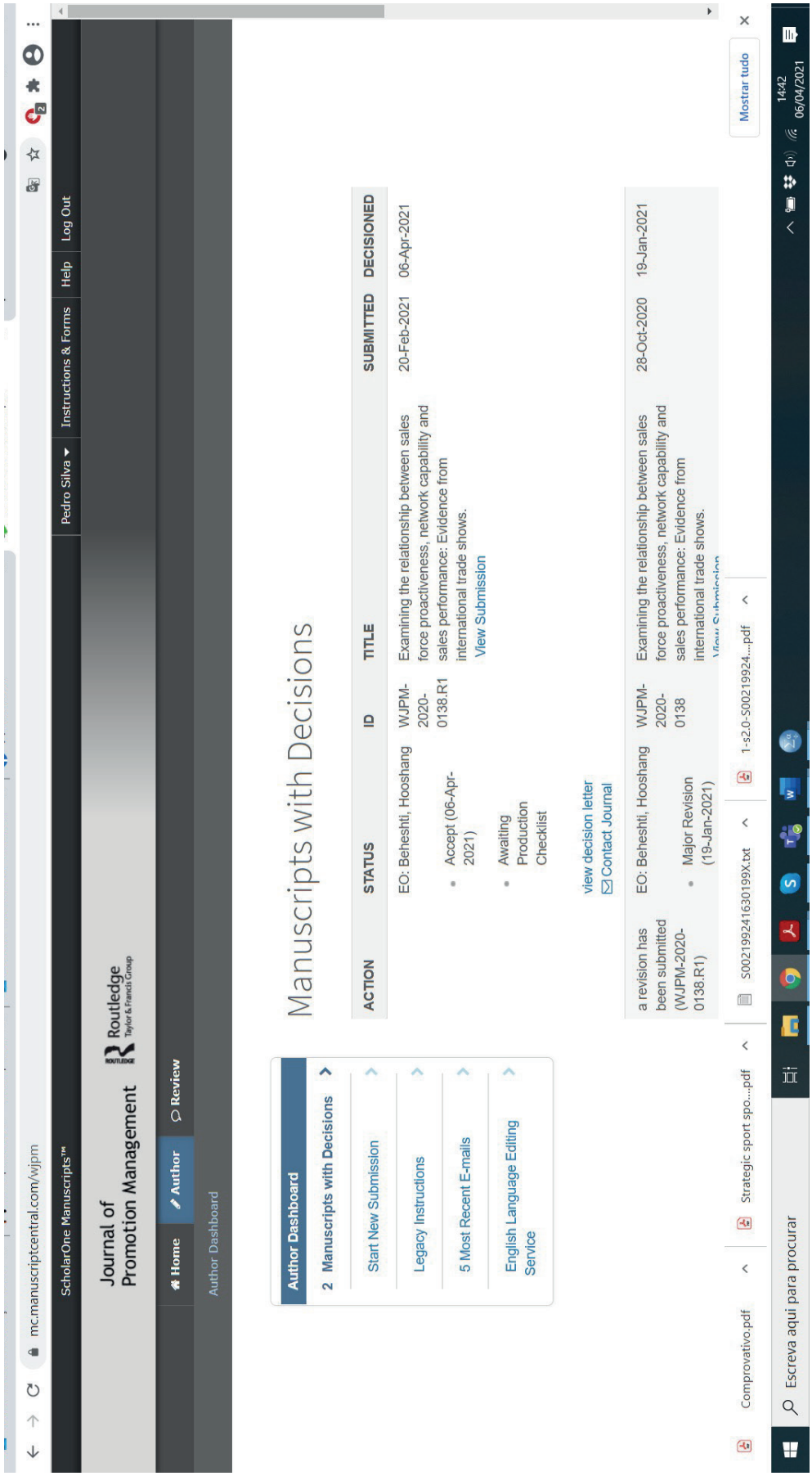
Appendix III



Appendix IV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