

Volume 23 | Issue 1 Article 2

June 2021

# Accounting for Sources of Information in Trade Fairs: Evidence from Portuguese Exhibitors

Pedro M. da Silva Porto Polytechnic, Porto, Portugal, mendonca.silva@ua.pt

José F. Santos Porto Polytechnic, Porto, Portugal, jfsantos@iscap.ipp.pt

Victor F. Moutinho Beira Interior University, Covilha, Portugal, ferreira.moutinho@ubi.pt

Follow this and additional works at: https://www.ebrjournal.net/home



Part of the Business Commons

#### Recommended Citation

da Silva, P. M., Santos, J. F., & Moutinho, V. F. (2021). Accounting for Sources of Information in Trade Fairs: Evidence from Portuguese Exhibitors. Economic and Business Review, 23(1), 15-25. https://doi.org/ 10.15458/2335-4216.1002

This Original Article is brought to you for free and open access by Economic and Business Review. It has been accepted for inclusion in Economic and Business Review by an authorized editor of Economic and Business Review.

# **ORIGINAL ARTICLE**

# Accounting for Sources of Information in Trade Fairs: Evidence from Portuguese Exhibitors

Pedro M. da Silva a,\*, José F. Santos a, Victor F. Moutinho b

#### Abstract

Trade fairs are important sources of information for decision making in marketing management. Currently, trade fairs are places where participants share useful data and information, while creating relationships between customers (visitors) and suppliers (exhibitors). However, only a limited number of studies have focused on the identification of the sources of information that exhibitors can provide for marketing managers at trade fairs. This study examines the importance of the different types of information resources that can be delivered by exhibitors to managers in order to transfer information about product and market trends. Based on the data from a survey of 172 Portuguese executives from different industries, the theoretical hypotheses are tested, using CFA (Confirmatory Factor Analysis).

Consistent with our hypotheses, the results show that Direct Marketing techniques, such as face-to-face contacts and product/service demonstrations, are often used by exhibitors. Information in digital formats and demonstration in digital equipment (Digital Marketing) are also used in trade fairs to display information to potential customers. Additionally, the organization of parallel events (Event Marketing) during a trade fair supplements the package of activities developed by exhibitors to transmit and capture information for their companies. These results provide certain support for the importance of trade fairs in view of being a rich source of market information about not only new technological developments of products, but also major strengths and weaknesses of competitors, and future market trends, among other types of information needed for the marketing planning.

Keywords: Trade fairs, Information sources, Information exchange, Exhibitors' perspective

JEL classification: L81, M41

#### Introduction

T rade fairs represent an opportunity where under the same roof and during a short period of time thousands of potential clients, competitors and specialists gather (Silva, 2014). As such, trade fairs can be an important tool to collect useful data and information about a particular industry (Maskell, 2014). Nevertheless, trade fairs have also been consistently neglected in the marketing research process, especially in gathering marketing information and as an element of the knowledge sharing process in the organization

(Zieliński & Leszczynski, 2011). On the other hand, Søilen (2010) states that trade fairs are some of the most effective intelligence sources. For instance, Zieliński and Leszczynski (2011) and Sarmento and Farhangmehr (2016) argue that knowledge is an important element to both visitors and exhibitors, because knowledge transfer plays the key role in any company's ability to develop and maintain a strategic competitive advantage over time (De Luca & Cano Rubio, 2019).

Currently, visitors are changing their habits towards wanting to spend less time at trade fairs, while at the same time getting more value and experience in return, as trade fairs have similarities

Received 16 November 2019; accepted 16 April 2020. Available online 15 June 2021.

E-mail addresses: mendonca.silva@ua.pt (P.M. da Silva), jfsantos@iscap.ipp.pt (J.F. Santos), ferreira.moutinho@ubi.pt (V.F. Moutinho).

<sup>&</sup>lt;sup>a</sup> Porto Polytechnic, Porto, Portugal

<sup>&</sup>lt;sup>b</sup> Beira Interior University, Covilhã, Portugal

<sup>\*</sup> Corresponding author.

with retailing (Gilliam, 2015). A valuable experience in trade fairs offers cognitive stimulation, not only resulting in new knowledge, but also strengthening the exhibitor/visitor relationship (Gopalakrishna & Lilien, 2012). In the current context, exhibitors should adopt a dynamic posture of information transfer, since visitors value innovation—acquiring new knowledge, thus strengthening exhibitorvisitor relationships (Sarmento & Farhangmehr, 2016). Consequently, trade fairs need to be analyzed through a perspective that integrates both trade and knowledge (Li & Bathelt, 2017), as trade fairs can be a quite decisive information source for marketing research purposes and at the same time critical for the innovation and knowledge creation processes (Bathelt, 2017; Sarmento & Simões, 2019).

Under these circumstances, it is interesting to investigate how exhibitors are delivering information in a trade fair environment. Accordingly, the purpose of the present study is to identify, classify and evaluate the relative importance of the sources of information that exhibitors use at trade fairs to exchange information about new products, competitors and market trends. The focus is on the exhibitors' rather than the visitors' perspective. To address the aforementioned purpose, a survey based on an online questionnaire was administered to a sample of Portuguese trade fairs exhibitors who had by then participated in several trade fairs around the world.

In the following sections of the paper, we first present the theoretical background of the sources of information transfer in a trade fair context. Next, we describe the methodology used and report the results of our empirical examination. The last two sections discuss the results of the study and present the conclusions that include some limitations and suggestions for future research.

#### 1 Theoretical background

Trade fairs and exhibitions, including activities related to business with focus on commercial operations, are classified as "business and trade events" (Getz, 2012). In a traditional perspective, trade fairs are events that bring together a group of suppliers, distributors and related services in a single place and at an exact period of time, where they then display their products and/or services in physical exhibitions under the guidance of a particular organizer (Black, 1986).

The definition of Kirchgeorg, Springer, and Kastner (2010) of trade shows is "market events of a specific duration, held at regular intervals, at which a large number of companies present the main product range of one or more industry sectors".

It should be noted that the terms trade fair, trade show and exhibition are often used interchangeably (Bettis-Outland et al., 2012), because "the term 'trade show' is regarded as a synonym for fairs, trade fairs and exhibitions" (Kirchgeorg, Springer & Kastner; 2010). For consistency, the term "trade fair" is used in this paper.

Currently, trade fairs are more than a simple marketing tool (Silva, 2014), as they are a privileged place for the interaction between the buyer (visitors) and the seller (exhibitors) (Sarmento et al., 2014). Further, trade fairs are also used to develop personal relationships (Kirchgeorg, Jung, & Klante, 2010) and reduce the physical, social and technological distance between buyers and sellers, thus facilitating learning and inter-firm cooperation (Ling-Yee, 2006). Commonly, trade fairs are a workspace where participants search and share information about the trends in the industry and the market (Bathelt, 2017; Rinallo et al., 2010; Rittichainuwat & Mair, 2012; Sarmento & Simões, 2019; Smith et al., 2003).

Information sharing activities are intrinsically related to the practice of searching and using information (Pilerot & Limberg, 2011) which further impacts the activities of the partners involved (Sonnenwald, 2006). In the existing literature, we find a mixture of the terms "information sharing" and "knowledge sharing". Indeed, Savolainen (2017) argues that the terms are largely similar and can be used interchangeably.

### 1.1 Trade fair as space of information exchange

Business information spring up in trade fairs and can be delivered by both attendees and exhibitors. The information can be acquired through a rich variety of media, from printed information, human embodied information, to observation and personal contacts (Keegan, 1989). In fact, it is the personal contacts that are at the heart of interaction between people in a trade fair. The relationship ability has a significant direct impact on the intention to share information (Al-Busaidi & Olfman, 2017). Also, the characteristics of the recipient person influence the motivation to share information (Zhang & Jiang, 2015).

The strong impact of technological tools on the effectiveness of exchanging information between individuals, companies or organizations (Hedgebeth, 2007) influences the ability of managers to optimize their decision making (Harrison et al., 2015). As argued by Hassan et al. (2017), in the transfer of information, it is necessary to also value the role of the individual (i.e. skills, relations, etc.)

(Hassan et al., 2017), because the interaction between technological and intellectual resources is essential for organizational survival (Heisig et al., 2016). The process of information acquisition depends on the personal initiatives that need to be done by the individual, respecting the structure of the organization (Hassan et al., 2017). In particular, trade fairs are spaces for inter-organizational relationships and value creation (Locatelli et al., 2019), where companies establish business relationships and generate learning experiences and customer engagement (Sarmento & Simões, 2019).

Trade fairs are a unique opportunity for participants (meaning both exhibitors and visitors) to meet and communicate face-to-face with third parties (Sarmento et al., 2015). This process involves interaction between participants and fulfills a human need to communicate and socialize (Kitchen, 2017). Face-to-face contact with potential clients and direct competitors is one of the most important reasons for the exhibitor to invest in trade fairs (Kellezi, 2013). Bettis-Outland et al. (2010) and Bettis-Outland et al. (2015) created the Return on Trade Show Information (RTSI) to measure the tangible and intangible benefits that the exhibitor accrues as a result of using market information that is acquired or associated with participation in trade fairs.

For Maskell et al. (2006) trade fairs are "temporary hubs that stimulate processes of knowledge creation and dissemination". Face-to-face communication at trade fairs is obviously the differentiating factor (Sarmento et al., 2015) that allows for increased transparency and mobilizes knowledge or solutions (Ibert, 2007; Maskell, 2014).

Currently, visitor behavior at trade fairs is not characterized by providing "fun, fantasies and feelings" that are usually used as motivators in other events, however, at trade fairs there is an increasing trend in entertainment activities as a means of sharing information (Jensen, 1999; Søilen, 2010) and cognitive experiences (Kitchen, 2017). Rittichainuwat and Mair (2012) identify that one of the main motivations of visitors to visit trade fairs lies exactly in the acquisition of information. Consequently, Rittichainuwat and Mair (2012) divide trade fairs visitors into two groups. The first of the two groups, designated by "Shoppers", is characterized by the main motivation of acquisition. For this group, the exposed product is what really matters to acquire satisfaction and define the future intention to buy (Sarmento & Farhangmehr, 2016). The other group is called "Total Visitors", of which the main motivation is the search for recent information in the industry (Rittichainuwat & Mair, 2012). These visitors are people who usually participate in parallel

activities, such as seminars and workshops, and want to be always informed about new market trends. This type of visitors is interested in visiting trade fairs that are an intense and memorable human experience, which is able to satisfy a wide spectrum of expectations (Sarmento & Farhangmehr, 2016).

Trade fairs generally facilitate five major exchange functions: transactional (sales), informational (information sharing), social (relational), symbolic and cultural (Tafesse & Skallerud, 2015). Despite the hasty, fluid and highly dynamic nature of trade fairs, the information sharing that takes place at these events plays a significant role as a singular process which fosters learning of both customers and suppliers (Reychav, 2009).

In fact, at trade fairs, the information transfer between human beings involves extensive communication (Albino, 2004; Søilen, 2010) and currently the main motivations of trade fairs visitors are cognitive and relational in nature (Han & Verma, 2014; Kirchgeorg, Jung, & Klante, 2010; Kitchen, 2017; Rinallo et al., 2010; Whitfield & Webber, 2011). This explains trade fairs as a very powerful source of information (Bathelt & Schuldt, 2010; Zieliński & Leszczynski, 2011), as it is the trade fairs environment that generates a rich amount of aggregate data about an industry, market and competitors. Kozak (2006) highlights intelligence information about competition, while Tafesse et al. (2010) define how to collect competitive intelligence. Consequently, there is a vast occurrence of the terms "trade fairs intelligence" or "exhibit intelligence" in the existing literature (Ratajczak, 2007; Søilen, 2010).

The organizations in general look for knowledge components from external partners (Benkler, 2006). For example, the "main actors" of trade fairs are simultaneously the visitors, exhibitors and organizers (Lin et al., 2015) and the vast majority of visitors are not the purchasing decision makers of the companies, but the people who are likely to be useful to the exhibitor (Blythe, 2010). Therefore, trade fairs allow sharing information among organizers, exhibitors (competitors), visitors (potential customers, partners, suppliers), sponsors, etc. (Maskell, 2014) and provide an insight into industry, markets, products/services, technology trends (Borghini et al., 2006; Maskell, 2014) and innovations (Bathelt, 2017).

#### 1.2 Sources of information in a trade fair

Gębarowski and Wiażewicz (2014) present as the main sources of information during a trade fair namely (i) face-to-face conversations at the stands,

(ii) demonstrations of exhibits, (iii) printed advertising materials (leaflets, brochures, catalogues, folders, etc.), (iv) Promotional materials on electronic devices (applications on trade fair attendants' mobile devices, communication via social media) (v) trade fair catalogues, (vi) trade fair website, and (vii) additional events prepared by organizers during trade shows (contests, seminars, conferences, etc.).

From the aforementioned factors, the one that stands out is the power of face-to-face contacts with thousands of potential customers, competitors and industry experts under one roof (Kellezi, 2013; Sarmento et al., 2015). Simeone et al. (2017) and Stevens (2005) enhance the role of design through artifacts, sketches, visual representations or prototypes, documents, all in order to translate ideas, knowledge, theoretical and technical requirements into formats that can be more easily understood and appreciated by various stakeholders at trade fairs. Sarmento et al. (2015), in turn, highlight seminars or the organization or social events scheduled before, during and after trade fairs as essential elements for socialization and information sharing between participants.

The Cheng (2014) study shows that knowledge processes are embedded in the informal social interaction (organizers, exhibitors and visitors) that takes place at trade fairs. The knowledge is created by observing and interpreting the trade fair environment and other actors within the same environment space. In addition, the use of information technology tools at trade fairs has a significant impact on the achievement of the trade fair's objectives; nevertheless, the results vary according to the levels of professional experience (Singh et al., 2017).

Therefore, the most traditional means of transmitting information, such as face-to-face contact, product/service demonstrations, product testing and distribution of documentation (e.g. catalogs, leaflets, product information papers) are still very much used by exhibitors. However, new forms of information transmission, such as digital equipment and the organization of events/activities at trade fair, are emerging. As stated by Proszowska (2018), currently contact should be more intensive and involve other channels and communication tools.

The most important reasons for a company to show at trade fairs are the following: i) reinforcement of market presence (international markets), ii) chance to find new ideas and test new products during the event, iii) strengthening relationships with current and potential clients, and iv) improving the company's image and reputation (Santos & Mendonça, 2014). Currently, the exhibitors value not

only the implementation of sales programs, but also cognitive actions and a relational marketing perspective (Blythe, 2010). This trend is already underway, for example, Shereni et al. (2018) state in their study that exhibitors disapprove weak sharing of information, bad time management and slow internet connectivity at trade fairs (digital communication). For example, mobile marketing is a significant global trend with huge growth potential, and Prenzel (2010) shows that this digital channel can be an excellent asset of information transfer for organizers, exhibitors and visitors. Indeed, a study by Dexperty (2015) reveals that digital transformation is changing the way companies are performing at trade fairs.

The heterogeneity and the number of contacts that trade fairs allow (Kellezi, 2013) together contribute to the overall effectiveness of trade fairs as a tool for sharing information. Therefore, trade fairs are clearly a tool for acquiring information for exhibitors, namely about potential customers (visitors).

Bettis-Outland et al. (2018) illustrate the interface between emotional intelligence, trust and learning in a trade fairs context. Emotional intelligence is defined as "the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion, and regulate emotion in the self and others" (Mayer et al., 2000).

As such, observing potential customers (visitors) and other exhibitors (competitors) are basic forms of information acquisition. However, the number of the tools available to be used by exhibitors to implement these goals that are traditionally involved in trade fairs, namely observing customers and competitors, is increasing (Proszowska, 2018).

Similar to Gebarowski and Wiażewicz (2014), we propose the hypotheses that serve the purpose of grouping the sources for information acquisition during a trade fair.

Direct Marketing integrates all one-to-one contact items designed not only for immediate response, but also for cultivating lasting relationships (Kotler & Keller, 2015). Face-to-face conversations at trade fairs stands are frequently used at trade fairs as a medium that transmits information about the presented products/services (Gębarowski & Wiażewicz, 2014).

H1. Exhibitors will use Direct Marketing for information acquisition during the trade fair.

Regarding the first hypothesis, digital Marketing includes the use of digital tools and devices such as television sets, mobile phones and electronic bill-boards (Dodson, 2016). In addition, promotional material on electronic devices, such as applications

on trade fair attendants' mobile devices and communication via social media, and the trade fair website are commonly used at trade fairs as a tool for sharing information about participants, products/services, innovations, among others (Gębarowski & Wiażewicz, 2014).

**H2.** Exhibitors will use Digital Marketing for information acquisition during the trade fair.

Observation of the competitor's stands and the behavior analysis of potential customers may require good memory and/or extensive notes, but it is nevertheless a useful tool for collecting data in various situations (Kawulich, 2012). In a trade fair context, as it comprises visitors, exhibitors and organizers, all these three players can collect data from each other (Cheng, 2014; Proszowska, 2018).

**H3.** Exhibitors will use Observation for information acquisition during the trade fair.

Event Marketing is defined as the marketing discipline focused on face-to-face interaction via live events (Preston, 2015). It relates to holding or attending events at trade fairs, such as seminars, workshops, etc. Trade fairs are an event in themselves (Silva, 2014), but they also allow the holding of parallel events that favor commercial, social, formative and informative exchanges (Gębarowski & Wiażewicz, 2014; Sarmento, Farhangmehr & Simões; 2015).

H4. Exhibitors will use Event Marketing for information acquisition during the trade fair.

# 2 Methodology

An online survey was used to collect data. The questionnaire was elaborated based on the objectives of the research and a review of the literature, including professional experiences of the researchers involved.

# 2.1 Questionnaire

A structured questionnaire was devised to collect the required data. The questionnaire had 12 items about the information transfer channels used by the exhibitors at the trade fair.

The questionnaire ends with a question about the frequency or experiences of respondents with participating in international trade fairs.

The items used are based on the literature review. All items are measured using a five-point Likert

scale (1 = totally disagree, 5 = strongly agree). However, before applying the questionnaire, the researchers requested the opinion of managers with long experience in the field of trade fairs, in both the role of exhibitors and organizers, in order to evaluate the pertinence of the questions and items. Experts consider the items relevant (see Table 1).

A data analysis was then performed, using a statistical package (SPSS, version 24 and AMOS, version 20).

## 2.2 Sample

The population used in this study is composed of exhibitors that have been engaged in B2B trade fairs at least in the last year. In the process of the construction of the database, exhibitors from five major Portuguese B2B trade fairs, namely EMAF (Exponor, Porto), Portojoia (Exponor Porto), Concreta (Exponor, Porto), Maquitex (Exponor, Porto) and Tektónica (FIL, Lisbon), were included. The completed database contained 1850 marketing and/ or sales director contacts.

We then applied the questionnaire through an online platform between December 2018 and January 2019 and obtained 172 useable questionnaires, corresponding to a response rate of about 9%. The sample integrated very experienced exhibitors, as almost 50% of the respondents participated in several trade fairs annually. The data analysis was performed using SPSS 24 and AMOS 20.

#### 3 Data analysis

#### 3.1 Descriptive statistics

Table 2 presents the mean, standard deviation and the minimum and maximum values. According to the table, the face-to-face contacts (M=4.53) are widely highlighted by exhibitors. The exhibitors also emphasize the offer of documentation (M=4.31), the observation of visitors (M=4.24) and the observation of competitors (M=4.08).

The least sources of information indicated by the exhibitors are holding events (M = 3.05) and information gathering from the presence at events developed by trade fair organizers, competitors, etc. (M = 3.08).

#### 3.2 Exploratory factor analysis

A Varimax rotated factorial analysis was used and revealed four major factors that explain 62.88% of the total variance of the items. The value of commonalities ranges from 0.56 to 0.71. The overall

Table 1. Summary of questionnaire items and sources.

COD.	ITEMS	SOURCE
Y1	Face-to-Face contact	Kellezi, 2013; Gębarowski & Wiażewicz, 2014;
		Sarmento et al., 2015
Y2	Product/Service demonstrations	Gębarowski & Wiazewicz, 2014; Simeone et al., 2017;
		Stevens, 2005
Y3	Product testing	Gębarowski & Wiażewicz, 2014; Sarmento et al., 2015;
	· ·	Simeone et al., 2017; Stevens, 2005
Y4	Documentation offer—Catalogs, leaflets, product sheets	Gębarowski & Wiazewicz, 2014; Simeone et al., 2017;
		Stevens, 2005
Y5	Information offer in digital format (pen-drives, CD, mobile,)	Shereni et al., 2018; Prenzel, 2010; Dexperty, 2015
Y6	Holding additional events—workshops, seminars, lectures, etc.	Gębarowski & Wiażewicz, 2014; Sarmento et al., 2015
Y7	Demonstrations in digital equipment—laptops, plasmas, mobile,	Shereni et al., 2018; Prenzel, 2010; Dexperty, 2015
	touch monitors,	
<b>Z</b> 1	Competitor observation	Cheng, 2014; Kozak, 2006; Proszowska, 2018;
	1	Tafesse Korneliussen & Skallerud, 2010
<b>Z</b> 2	Observation of customer/visitors behavior	Cheng, 2014; Proszowska, 2018
<b>Z</b> 3	Information gathering from trade fair organizer, seminars,	Shereni et al. (2018)
	competitors, etc.	
<b>Z</b> 4	Organization observation	Cheng, 2014; Proszowska, 2018
<b>Z</b> 5	Participation in parallel events seminars, lectures, workshops, etc.	Gebarowski & Wiazewicz, 2014; Sarmento et al., 2015

Source: Own elaboration.

Kaiser-Meyer-Olkin (KMO) sample adequacy measure is 0.703 for the set of variables which, according to the defined criteria, should be considered acceptable (Hair et al., 2010).

Table 3 shows the results of the principal component analysis for each of the twelve items. It can be seen that four factors emerge. The first factor is a combination of different methods to capture information, mainly by Direct Marketing (product demonstrations and tests, printed information and personal contacts). The Direct Marketing factor is therefore represented by four item loadings. The second factor includes the information obtained by digital support or equipment, where the Digital Marketing factor is represented by two items. The third factor is observation and includes three items related with the observation of competitors, customers, visitors and the organizers. Finally, the

Table 2. Descriptive statistics.

Item code	N	Mean	Standard Deviation	Minimum	Maximum
<u>Y1</u>	172	4.53	0.556	3	5
Y2	172	4.27	0.659	2	5
Y3	172	3.86	0.969	1	5
Y4	172	4.31	0.744	1	5
Y5	172	3.20	1.173	1	5
Y6	172	3.05	1.199	1	5
Y7	172	3.74	1.173	1	5
<b>Z</b> 1	172	4.08	0.709	2	5
Z2	172	4.24	0.537	2	5
<b>Z</b> 3	172	3.08	1.087	1	5
<b>Z</b> 4	172	3.84	0.731	2	5
<b>Z</b> 5	172	3.41	1.025	1	5

Source: Own elaboration.

fourth factor encompasses three items and relates with the type of events that occur in a trade fair promoted by the trade fair organization and the competition.

The factors found (Direct Marketing, Digital Marketing, Observation and Event Marketing) reveal an acceptable internal consistency (Tavakol & Dennick, 2011). Cronbach's alpha ranges from 0.566 for Observation to 0.689 for Direct Marketing, which can be considered of moderate reliability (Hinton et al., 2014).

Table 4 provides the averages and standard deviations of the items corresponding to each construct. It is appropriate that all items related to the same construct have similar mean scores, otherwise they may be removed, making the study more reliable (Weisberg, 1992).

That said, (Y3) "Product testing" and (Z4) "Organization observation" items are removed, because they have significantly different average scores against the other items of the same construct. The item (Z3) "Information gathering from trade fair organizers, seminars, competitors, etc." is also removed to increase the reliability of the scale. Consequently, the values of the Cronbach's alpha change are for Direct Marketing—0.632, Digital Marketing—0.604, Observation—0.506, and Event Marketing—0.598, which anyway maintain a moderate reliability (Hinton et al., 2014).

# 4 Hypotheses testing

To confirm the factors found in the exploratory factorial analysis and evaluate the convergent and

Table 3. Principal Component Analysis with VARIMAX rotation.

ITEM CODE	ITEMS	COMPONENTS			
		Direct Marketing	Digital Marketing	Observation	Event Marketing
<u>Y1</u>	Face-to-Face contact	0.630	0.247	0.205	-0.239
Y2	Product/Service demonstrations	0.789	-0.148	0.134	0.191
Y3	Product testing	0.727	-0.063	-0.132	0.400
Y4	Documentation offer—Catalogs, leaflets, product sheets	0.622	0.443	0.121	-0.096
Y5	Information offer in digital format (pen-drives, CD, mobile,)	-0.085	0.786	0.065	0.112
Y6	Holding additional events—workshops, seminars, lectures, etc.	0.292	0.505	-0.090	0.523
Y7	Demonstrations in digital equipment—laptops, plasmas, mobile, touch monitors,	0.136	0.765	0.047	0.162
Z1	Competitor observation	0.073	0.106	0.774	0.076
Z2	Observation of customer/visitors behavior	0.216	-0.086	0.706	-0.188
Z3	Information gathering from trade fair organizer, seminars, competitors, etc.	-0.309	0.372	0.301	0.527
Z4	Organization observation	-0.082	0.135	0.644	0.416
Z5	Participation in parallel events seminars, lectures, workshops, etc.	0.155	0.125	0.040	0.783
	Cronbach's alpha	0.689	0.604	0.566	0.586

*Note*: Items measured on a 5-point Likert scale. Kaiser-Meyer-Olkin measure of sampling adequacy -0.703; Bartlett's test of sphericity (172.51, p < 0.000).

discriminant validity of the factors, we proceed to a second-order Confirmatory Factor Analysis.

The second-order Confirmatory Factor Analysis is a composite of common factor configuration (Van Riel et al., 2017), thus allowing us to test the 4 factors, namely Direct Marketing, Digital Marketing, Observation and Event Marketing, that might be part of a composite of 4 information acquisition tools (factors) that exhibitors can use at trade fairs.

In Fig. 1, we see the four factor solution submitted to the second-order Confirmatory Factor Analysis using AMOS. This approach was applied to examine the dimensionality of each construct and also to test the model fit of the four constructs.

Based on the criteria defined by Hair et al. (2010), Byrne (2010), and Kline (2011), the model reveals a satisfactory fit to the data (see Table 5).

Table 4. Items analysis.

Construct	Item code	N	Mean	Standard Deviation
Direct Marketing	Y1	172	4.53	0.556
· ·	Y2	172	4.27	0.659
	Y3	172	3.86	0.969
	Y4	172	4.31	0.744
Digital Marketing	Y5	172	3.20	1.173
	Y7	172	3.74	1.173
Observation	<b>Z</b> 1	172	4.08	0.709
	Z2	172	4.24	0.537
	<b>Z</b> 4	172	3.84	0.731
Event Marketing	Y6	172	3.05	1.199
	Z3	172	3.08	1.087
	<b>Z</b> 5	172	3.41	1.025

Source: Own elaboration.

It should be noted that the sample of the study contains only 172 observations, while Kline (2011) suggests a necessary minimum of 200 cases or observations. Obviously, it would be desirable to have more cases, but as we are facing a preliminary study, 172 observations are, in our view, adequate for further analysis. Moreover, we defend that small samples should not be neglected, for example, some recent authors, such as Harrington et al. (2013) and Sideridis et al. (2014) value smaller samples, however, determining sample size requirements for the structural equation model always requires a careful and deliberate assessment of the specific model in question (Harrington et al., 2013). Despite these limitations, the confirmatory factor analysis shows adequate support for the model and, at the same time, allows us to test the hypotheses.

The results of the direct effects reveal that the "Exhibitor Information Acquisition Tools" has a positive and significant impact on the constructs "Direct Marketing" ( $\beta = 0.443$ , p < 0.000), "Digital Marketing" ( $\beta = 0.851$ , p < 0.000), and "Event Marketing" ( $\beta = 0.758$ , p < 0.000).

The first hypothesis (H1) is validated, suggesting that Direct Marketing is used at trade fairs to cultivate lasting relationships, as mentioned by Kotler and Keller (2015), and to have face-to-face contacts to transfer information about the products/services (Gębarowski & Wiażewicz, 2014). Nevertheless, the weight of the coefficient beta also tells us that this source of information is the least preferred among executives.

The second hypothesis (H2) is also confirmed, meaning that Digital Marketing is used frequently

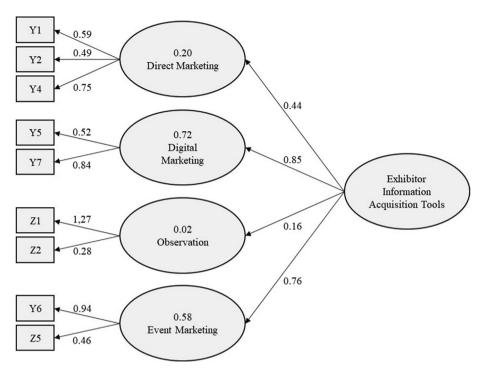


Fig. 1. Second-order Confirmatory Factor Analysis (standardized estimates). Source: Own elaboration.

at trade fairs as a new information and communication technology to exchange digital information about the exhibitor and its products/services (Gębarowski & Wiażewicz, 2014). The highest value of the coefficient beta in this case shows the importance of this tool to both exhibitors and executives.

The fourth hypothesis (H4) is supported, as Event Marketing is often used by the organization of trade fairs in order to promote more proactively the interaction between exhibitors and visitors through parallels events (seminars, workshops) that favor commercial, social, formative and informative exchanges (Gębarowski & Wiażewicz, 2014; Sarmento et al., 2015). The second highest value of the

Table 5. Summary of the goodness of the fit for the model.

Measures	Cut off points (a)	Results
Chi-square (x <sup>2</sup> )	Smaller to 0	33.66
Degree of freedom (df)		23
$\chi^2/Df$	<b>≤1-5</b>	1.4463
Goodness of fit index (GFI)	$\geq$ 0.90	0.960
Tucker Lewis Index (TLI)	$\geq$ 0.90	0.931
Adjusted goodness of fit index (AGFI)	$\geq$ 0.90	0.956
Comparative fit index (CFI)	≥0.95	0.921
Incremental fit Index (IFI)	$\geq$ 0.90	0.958
Root mean squared error of	$\leq$ 0.08	0.051
approximation (RMSEA)		

(a) Hair et al. (2010), Byrne (2010), Kline (2011).

coefficient beta shows that trade fair organizations are increasingly dynamic in creating events and developing a new approach to the traditional way of organizing trade fairs.

The third hypothesis (H3) is, on the other hand, not validated, as the direct effect of "Exhibitor Information Acquisition Tools" on "Observation" is not significant ( $\beta = 0.158$ , p < 0.643).

In short, H1, H2 and H4 are corroborated, while the data do not support H3 for lack of statistical relevance, which means that sources of information from competitor and customer/visitor behavior observation seem to be less important for exhibitors. Nevertheless, these results demonstrate the multidisciplinary nature of trade fairs, as these groups of information allow for multiple functions (e.g. faceto-face contacts, product demonstrations, attending events). The results also show that most exhibitors use trade fairs to develop contact with visitors through direct, digital and event marketing, in order to transfer and capture information about new products, technologies, industry, market, competition, etc (Maskell, 2014). Indeed, trade fairs are a unique and crucial platform for presenting innovations (Bathelt, 2017), information transfer about products/services (Borghini et al., 2006; Maskell, 2014), collecting information about market changes (Kozak, 2006; Maskell, 2014), technology (Borghini et al., 2006; Maskell, 2014), and last but not least, to collect information about competitors (Kellezi, 2013;

Maskell, 2014). Trade fairs are places that facilitate the exchange of ideas between experts, offering along new knowledge, relationships and innovations, all within and outside the respective industry sectors, and where exhibitors can search and find solutions to problems and optimize decision making (Harrison et al., 2015; Ibert, 2007; Maskell, 2014). In addition, innovation could be a consequence of the engagement and learning processes that result from attending trade fairs (Sarmento & Simões, 2019).

#### 5 Conclusion and limitations

The findings of this research confirm that trade fairs are consistently used as important physical spaces for information exchange between visitors, exhibitors and trade fair organizers. Sources of information, such as face-to-face contacts and product/service demonstrations (Direct Marketing), are indeed important for exhibitors. Information in digital formats and demonstration in digital equipment are in fact used at trade fairs to display information to potential customers. Additionally, the organization of parallel events (Event Marketing) during the trade fair supplements the package of activities developed by exhibitors to transmit and capture information for their companies.

The present study is one of a few recent attempts to identify the sources of information that exhibitors use at trade fairs to exchange information about new products, competitors and market trends. It is perhaps the first empirical study to adopt the exhibitor's rather than the visitor's perspective. The results help to provide support for the strategies that exhibitors might use at trade fairs and the best ways to exchange information with visitors via Direct Marketing, Digital Marketing, and Event Marketing. At any rate, these strategies need to be formulated, planned and implemented, depending on the type of the trade fair (consumer/professional), industry/activity sector, and also visitors.

Despite the results obtained, this study is limited by firstly, the small size of the sample that restricts the generalization of the research, and secondly, the items used for each construct that require an update. However, this study is a preliminary approach to the topic that envisages the identification of the main sources of information in the context of trade fairs.

Future studies should in any case focus on the development of the information transfer mechanisms used during trade fairs, as well as on how and in what circumstances such knowledge is transferred.

#### References

- Al-Busaidi, K. A., & Olfman, L. (2017). Knowledge sharing through inter-organizational knowledge sharing systems. *VINE. Journal of Information and Knowledge Management Systems*, 47(1), 110–136.
- Albino, V. (2004). Organization and technology in knowledge transfer. *Benchmarking: An International Journal*, (6), 584-600.
- Bathelt, H. (2017). Trade fairs and innovation. In Harald Bathelt, Patrick Cohendet, Sebastian Henn, & Laurent Simon (Eds.), The elgar companion to innovation and knowledge creation. Cheltenham: Edward Elgar (Chapter 31, pp. 509–522).
- Bathelt, H., & Schuldt, N. (2010). International trade fairs and global buzz, Part I: Ecology of global buzz. European Planning Studies, 18(1), 1957–1974.
- Benkler, Y. (2006). The wealth of networks: How social production transforms markets and freedom. New Haven: Yale University Press.
- Bettis-Outland, H., Borders, A., & Johnston, W. (2015). Return on trade show information: A comparison of exhibitor and visitor perspectives. In H. Spotts (Ed.), Marketing, technology and customer commitment in the new economy. Developments in marketing science: Proceedings of the academy of marketing science. Cham: Springer (pp. 289–289).
- Bettis-Outland, H., Cromartie, J., Johnston, W., & Borders, A. (2010). The return on trade show information (RTSI): A conceptual analysis. *Journal of Business & Industrial Marketing*, 25(4), 268–271.
- Bettis-Outland, H., Johnston, W., & Wilson, D. (2012). Using trade show information to enhance company success: An empirical investigation. *Journal of Business & Industrial Marketing*, 27(5), 384–391.
- Bettis-Outland, H., Monica, D., & Guillory, M. (2018). Emotional intelligence and organizational learning at trade shows. *Journal of Business & Industrial Marketing*, 33(1), 126–133.
- Black, R. (1986). The trade show industry: Management and marketing career opportunities. East Orleans, MA: Trade Show Bureau.
- Blythe, J. (2010). Trade fairs as communication: A new model. *Journal of Business & Industrial Marketing*, 25(1), 57–62.
- Borghini, S., Golfetto, F., & Rinallo, D. (2006). Ongoing search among industrial buyers. *Journal of Business Research*, 59(1), 1151–1159
- Byrne, B. (2010). Structural equation modeling with AMOS: Basic concepts, application and programming (2nd ed.). New York: Taylor & Francis.
- Cheng, H. (2014). International fashion trade shows as knowledge creation platforms for Finnish microenterprises. Master's thesis. In *International Design Business Management (IDBM)*. Department of Management and International Business; Aalto University, School of Business, Finland.
- De Luca, P., & Cano Rubio, M. (2019). The curve of knowledge transfer: A theoretical model. *Business Process Management Journal*, 25(1), 10–26.
- Dexperty. (2015). Blog by messe frankfurt for the digital business. In Study digital business transformation brief information, Frankfurt, 23 September. Available at: https://connected.messefrankfurt.com/en/.
- Dodson, I. (2016). The art of digital marketing: The definitive guide to creating strategic, targeted, and measurable online campaigns. Hoboken NJ: John Wiley & Sons.
- Gebarowski, M., & Wiażewicz, J. (2014). Contemporary trade shows as a place of knowledge sharing about tourism products. In Human capital without borders: Knowledge and learning for quality of life, proceedings of the management, knowledge and learning international conference 2014 (pp. 25–27). June 2014, Portoroż. Available at: https://ssrn.com/abstract=2706205.
- Getz, D. (2012). Event studies: Theory, research and policy for planned events (Events Management) (2nd ed.). London: Routledge.
- Gilliam, D. A. (2015). Trade show boothscapes. *Journal of Marketing Management*, 31(17–18), 1878–1898.

- Gopalakrishna, S., & Lilien, G. L. (2012). Trade shows in the business marketing communications mix. In Gary L. Lilien, & Rajdeep Grewal (Eds.), *Handbook of business-to-business marketing*. Cheltenham: Edward Elgar (Chapter 13, pp. 226–245).
- Hair, J., Black, W., Babin, B., & Anderson, R. (2010). Multivariate data analysis (7th ed.). NJ: Prentice. Hall.
- Han, H., & Verma, R. (2014). Why attend tradeshows? A comparison of exhibitor and attendee's preferences. Cornell Hospitality Quarterly, 55(3), 239–251.
- Harrington, K., Clark, S., & Miller, M. (2013). Sample size requirements for structural equation models an evaluation of power, bias, and solution propriety. Educational and Psychological Measurement, 73(6), 913–934.
- Harrison, R., Parker, A., Brosas, G., Chiong, R., & Tian, X. (2015). The role of technology in the management and exploitation of internal business intelligence. *Journal of Systems and Informa*tion Technology, 17(3), 247–262.
- Hassan, N., Noor, M., & Hussin, N. (2017). Knowledge transfer practice in organization. International Journal of Academic Research in Business and Social Sciences, 7(8), 750–760.
- Hedgebeth, D. (2007). Making use of knowledge sharing technologies. VINE. Journal of Information and Knowledge Management Systems, 37(1), 49–55.
- Heisig, P., Suraj, O., Kianto, A., Kemboi, C., Arrau, G., & Easa, N. (2016). Knowledge management and business performance: Global experts' views on future research needs. *Journal of Knowledge Management*, 20(6), 1169–1198.
- Hinton, P., McMurray, I., & Brownlow, C. (2014). SPSS explained (2nd ed.). London: Routledge.
- Ibert, O. (2007). Towards a geography of knowledge creation: The ambivalences between knowledge as an object and knowing in practice. *Regional Studies*, 41(1), 103–114.
- Jensen, R. (1999). The dream society: How the coming shift from information to imagination will transform your business. New York: McGraw. Hill.
- Kawulich, B. (2012). Collecting data through observation. In Claire Wagner, Barbara Kawulich, & Mark Garner (Eds.), *Doing social research: A global context* (pp. 150–160). New York: McGraw Hill.
- Keegan, W. J. (1989). Global marketing management (4th ed.). Englewood Cliffs: Prentice. Hall International Editions.
- Kellezi, J. (2013). The effectiveness of trade shows in global competition. *European Academic Research*, 1(3), 2286–4822.
- Kirchgeorg, M., Jung, K., & Klante, O. (2010). The future of trade shows: Insights from a scenario analysis. *Journal of Business & Industrial Marketing*, 25(4), 301–312.
- Kirchgeorg, M., Springer, C., & Kastner, E. (2010). Objectives for successfully participating in trade shows. *Journal of Business & Industrial Marketing*, 25(1), 63–72.
- Kitchen, E. (2017). What is the value of networking? An examination of trade show attendee outcomes. *Journal of Convention & Event Tourism*, 18(3), 191–204.
- Kline, R. B. (2011). Principles and practice of structural equation modeling (3th ed.). New York: The Guilford Press.
- Kotler, P., & Keller, K. (2015). *Marketing management* (15th ed.). Essex: Pearson Education.
- Kozak, N. (2006). The expectations of exhibitors in tourism, hospitality and the travel industry. *Journal of Convention & Event Tourism*, 7(3), 99–116.
- Li, P., & Bathelt, H. (2017). From temporary market to temporary cluster: Evolution of the Canton Fair. *Area Development and Policy*, 2(2), 154–172.
- Ling-Yee, L. (2006). Relationship learning at trade shows its antecedents and consequences. *Industrial Marketing Management*, 35(2), 166–177.
- Lin, Y., Kerstetter, D., & Hickerson, B. (2015). Developing a trade show exhibitor's overall satisfaction measurement scale. In *Tourism travel and research association* (Vol. 28). Advancing Tourism Research Globally.
- Locatelli, D., Silveira, M., & Mourão, P. (2019). Speed dating or marriage? Brazilian business fairs according to a sample of

- metal/mechanic companies. *Journal of Business & Industrial Marketing*, 34(1), 80–94.
- Maskell, P. (2014). Accessing remote knowledge—the roles of trade fairs, pipelines, crowdsourcing and listening posts. *Journal of Economic Geography*, 14(5), 883–902.
- Maskell, P., Bathelt, H., & Malmberg, A. (2006). Building global knowledge pipelines: The role of temporary clusters. European Planning Studies, 14(8), 997–1013.
- Mayer, J., Salovey, P., & Caruso, D. (2000). Models of emotional intelligence. In R. J. Sternberg (Ed.), *Handbook of intelligence* (pp. 396–420). Cambridge: University Press.
- Pilerot, O., & Limberg, L. (2011). Information sharing as a means to reach collective understanding. *Journal of Documentation*, 67(2), 312–333.
- Prenzel, I. (2010). Applicability of mobile marketing in the marketing mix of trade fair organizers. Munich: GRIN Verlag.
- Preston, C. (2015). Event marketing: How to successfully promote events, festivals, conventions and expositions. London: Wiley.
- Proszowska, A. (2018). Methods of evaluation of trade fairs results employed by exhibitors an overview and scope of application. *Handel Wewnętrzny*, 5(376), 236–246.
- Ratajczak, J. (2007). Engineering engineers: A true story on how to develop a trade show intelligence process. *Competitive Intelligence Magazine*, 10(1), 6–9.
- Reychav, I. (2009). Knowledge sharing in a trade show: A learning spiral model. VINE-Journal of Information and Knowledge Management Systems, 39(2), 143—158.
- Rinallo, D., Borghini, S., & Golfetto, F. (2010). Exploring visitor experiences at trade shows. *Journal of Business & Industrial Marketing*, 25(4), 249–258.
- Rittichainuwat, B., & Mair, J. (2012). Visitor attendance motivations at consumer travel exhibitions. *Tourism Management*, 33(5), 1236–1244.
- Santos, J. F., & Mendonça, P. (2014). Motivations to participate in international trade fairs: The Portuguese experience. British Journal of Economics, Management & Trade, 4(12), 1957–1972.
- Sarmento, M., & Farhangmehr, M. (2016). Grounds of visitors' post. Trade fair behavior: An exploratory study. *Journal of Promotion Management*, 22(5), 735–750.
- Sarmento, M., Farhangmehr, M., & Simões, C. (2015). A relationship marketing perspective to trade fairs: Insights from participants. *Journal of Business & Industrial Marketing*, 30(5), 584–593.
- Sarmento, M., & Simões, C. (2019). Trade fairs as engagement platforms: The interplay between physical and virtual touch points. *European Journal of Marketing*, 59(9), 1782–1807. Forthcoming.
- Sarmento, M., Simões, C., & Farhangmehr, M. (2014). B2B interactions at trade fairs and relationship quality: A conceptual approach. In Arch G. Woodside, Hugh M. Pattinson, & Roger Marshall (Eds.), Field guide to case study research in business-to-business marketing and purchasing (pp. 167–189). Bingley: Emerald Group Publishing Limited.
- Savolainen, R. (2017). Information sharing and knowledge sharing as communicative activities. *Information Research: An International Electronic Journal*, 22(3). paper 767. Available at: http://informationr.net/ir/22.3/paper767.html.
- Shereni, N., Mpofu, N., & Ngwenya, K. (2018). Exhibitors' perception of the 2017 Sanganai/Hlanganani world tourism expo. African Journal of Hospitality, Tourism and Leisure, 7(3), 1–13.
- Sideridis, G., Simos, P., Papanicolaou, A., & Fletcher, J. (2014). Using structural equation modeling to assess functional connectivity in the brain power and sample size considerations. Educational and Psychological Measurement, 74(5), 733–758.
- Silva, P. (2014). Feiras e Exposições. Instrumento de Competitividade Internacional. Lisboa: Chiado Editora.
- Simeone, L., Secundo, G., & Schiuma, G. (2017). Knowledge translation mechanisms in open innovation: The role of design in R&D projects. *Journal of Knowledge Management*, 21(6), 1406–1429.

- Singh, J., Shukla, P., & Kalafatis, S. (2017). IT usage for enhancing trade show performance: Evidence from the aviation services. *Journal of Business & Industrial Marketing*, 32(3), 398–408.
- Smith, T., Hama, K., & Smith, P. (2003). The effect of successful trade show attendance on future show interest: Exploring Japanese attendee perspectives of domestic and offshore international events. *The Journal of Business and Industrial Marketing*, 18, 403–418.
- Søilen, K. S. (2010). Boosting innovation and knowledge through delocalization: Market intelligence at trade shows. Problems and Perspectives in Management, 8(3), 200–207.
- Sonnenwald, D. (2006). Challenges in sharing information effectively: Examples from command and control. *Information Research* (4) paper 270. Available at: http://InformationR.net/ir/11.4/paper270.html.
- Stevens, R. (2005). Trade show and event marketing: Plan, promote and profit (2nd ed.). Mason: Cengage Learning.
- Tafesse, W., Korneliussen, T., & Skallerud, K. (2010). Importance performance analysis as a trade show performance evaluation and benchmarking tool. *Journal of Convention & Event Tourism*, (4), 314–328.

- Tafesse, W., & Skallerud, K. (2015). Towards an exchange view of trade fairs. Journal of Business & Industrial Marketing, 30(7), 795–804.
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's Alpha. *International Journal of Medical Education*, 2, 53–55.
- Van Riel, A., Henseler, J., Kemény, I., & Sasovova, Z. (2017). Estimating hierarchical constructs using consistent partial least squares: The case of second. order composites of common factors. *Industrial Management & Data Systems*, 7(3), 459–477.
- Weisberg, F. (1992). Central tendency and variability-quantitative applications in the social sciences. Thousand Oaks: Sage Publications.
- Whitfield, J., & Webber, D. J. (2011). Which exhibition attributes create repeat visitation? *International Journal of Hospitality Management*, 30, 439–447.
- Zhang, X., & Jiang, J. (2015). With whom shall I share my knowledge? A recipient perspective of knowledge sharing. *Journal of Knowledge Management*, 19(2), 277–295.
- Zieliński, M., & Leszczynski, G. (2011). Trade fairs as source of knowledge – the role of trade fairs organizer. The impact of globalization on networks and relationships dynamics. In 27th International IMP Conference, Glasgow.