



Virtual trade shows: Exhibitors' perspectives on virtual marketing capability requirements



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ABSTRACT

Scant empirical research has examined exhibitors' experiences of participating in virtual trade shows (VTSs). This study aims to expand our understanding of the main drivers and challenges of participating in VTSs and the virtual marketing capabilities required for exhibiting organizations. In-depth interviews were held over a period of six months with managers from educational organizations located in Queensland, Australia, who had participated previously in a VTS. The findings show that the main motivations for participating in VTSs are increasing sales revenue, lowering costs, having access to new or different markets, and building brand credibility and organizational legitimacy among visitors who attend VTSs. The findings suggest that the future of VTSs will most likely depend on the technological development of VTS systems and the way they are integrated into existing technological and strategic firm processes for exhibitors and visitors.

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1. Introduction

Trade shows (TSs) are important platforms from which sellers meet new and existing customers, evaluate new channel partners, enhance their corporate image, carry out market research, and enhance a company's sales efforts (Kerin and Cron, 1987; Shipley et al., 1993; Blythe, 2002). A recent trend in the arena of TSs is the incorporation of virtual environments as a strategic marketing tool. Virtual worlds are a new medium in which users communicate and interact anywhere at any time (Kozinets, 2002; Dahlström and Edelman, 2013). This follows a recent paradigm shift of organizations that have been using virtual environments to communicate with (potential) customers (Mazurek, 2012; Saren et al., 2013). Initially the low-cost characteristics of the Internet were mainly driving the development of virtual services (for example dissemination of information such as attending exhibitors, ticket prices, etc.). However, more recently organizations have been increasingly focusing on the improvement of virtual delivery for customers (Klaus, 2013).

A virtual trade show (VTS) is a type of virtual event, where exhibitors and visitors connect with one another via the virtual environment (Internet), regardless of geographic location, to interact and exchange information. VTSs build on the rise of virtual market-

ing activities used by firms to succeed in the current marketplace (Talukder and Yeow, 2006). A typical VTS often includes a virtual exhibition hall, which users enter with specific permissions. Exhibitors can build virtual stands or booths to exhibit information related to their goods or services, just as they would at a physical TS (Remolar et al., 2015). VTSs may have other components, such as a web conference, a web seminar (webinar), or other educational presentations. Firms can also use tracking mechanisms that allow them to determine the flow of traffic in the VTS.

Despite this development, only one study (Lee-Kelley et al., 2004) has focused on the acceptance of VTSs among exhibitors, and surprisingly scant research examines exhibitors' experiences and challenges of participating in VTSs (Lee-Kelley et al., 2004; Li, 2010; Geigenmülle 2010). Given the virtual environment's unprecedented potential to reach customers globally it is surprising how research is limited in relation to understanding how a firm's practices and structure need to change to incorporate the virtual environment into their strategy and add value to the organization. Conventional marketing practice used in other environments will probably not work in virtual worlds, thus marketers have to learn new ways to operate in them through specific virtual marketing capabilities.

It has been argued in the literature that firms operating in fast-changing dynamic environments must possess capabilities so as to continually adapt, integrate, reconfigure and redeploy resources and capabilities to exploit the opportunities of dynamic environments, such as virtual environments (Teece et al., 1997). Marketing

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capabilities in a virtual environment refer to the processes, structures, and skills adopted by firms for planning and integrating virtual technology into the marketing practices environment (Sayre et al., 2012). These virtual marketing capabilities are necessary to adapt traditional marketing actions to the virtual environment.

In spite of the increased utilization of virtual technology by businesses as a marketing communication tool and distribution channel limited research exists on how companies incorporate and manage virtual technology in their processes. Specifically, from an academic perspective, very little is known about how organizations participate as exhibitors in VTSSs

This study aims to contribute to the lack of empirical research on VTSSs by investigating exhibitors' perceptions and experiences when participating in VTSSs. It draws on Chaffey's (2010) digital capability framework, applying it to a virtual setting. The author identified six key management challenges that organizations confront when engaging in virtual environments that need to be managed within an organization: virtual strategy development, virtual customer acquisition, virtual customer loyalty, virtual customer experience, cross-channel integration, and virtual channel governance.

Specifically, this study explores exhibitors' perceptions of the main benefits and constraints of participating in VTSSs. We also attempt to identify the main marketing capabilities required to integrate virtual technology into marketing practices (Chaffey et al., 2003). Understanding the specific drivers and constraints of VTS participation as perceived by managers is important to ensure that appropriate virtual marketing capabilities are developed to enhance customer experiences in the virtual environment.

The remainder of this article is organized as follows: the next section reviews literature on the TS and the virtual marketing context; this is followed by the methodology section and findings; and the final section discusses the findings and implications of the study.

2. Literature review

Existing literature has recognized TSs as an important and effective means to enhance an organization's marketing effort (Kerin and Cron, 1987; Gottlieb et al., 2011, 2014). Previous research has addressed TS selection (Bonoma, 1983; Rice and Almossawi, 2002; Smith et al., 2004), motivation (Parasuraman, 1981; Rittichainuwat and Mair, 2012; Whitfield and Webber, 2011), effectiveness (Gottlieb et al., 2011; Bettis-Outland et al., 2010; Cavanaugh, 1976), communication (Rittichainuwat and Mair, 2012; Gopalakrishna and Lilien, 2012; Kirchgorg et al., 2010), and visitor behavior (Borghini et al., 2004).

One area that has been neglected in the literature is the role of new virtual communication technologies on TS strategy (Geigenmüller, 2010). The term virtual refers to virtual reality which is the computer-generated, artificial world in which humans are free to explore (Stone, 1993). VTSSs are web-based platforms where customers, suppliers, and distributors can interact virtually at any time and from any place (Geigenmüller, 2010). Attendees can visit virtual booths to obtain information about a company's goods and services. As such, VTSSs as an element of e-commerce are a technology-mediated environment that lack direct face-to-face interaction (Levy, 2014). Exhibitors and visitors connect with each other to exchange information via the Internet, at any time, regardless of geographical location. Participants can communicate with staff, other visitors, and can select chat rooms, videoconferences, and forums (Lee-Kelley et al., 2004). Hence, VTSSs refer to highly sophisticated, computer-generated TSs that can involve complex virtual elements such as animated, three-dimensional

TS halls, as well as individual TS booths which invite visitors to roam around and experience the elaborate effects.

Initially the TS industry employed the Internet as a marketing tool, using it primarily to interact efficiently with the various TS participants for pre-show promotion, at-show selling, and post-show follow-up on a basic level of information exchange (Li, 2010). Yet, the flexibility of VTSSs has fostered applications of VTSSs as a marketing communication tool. However, it is not expected that VTSSs will ever render real-world TSs obsolete (Geigenmüller, 2010; Gilbert, 2003). The singular direction in which all these indicators for a successful future for VTSSs are pointing, in addition to the academic demand for a closer scrutiny of VTSSs (i.e., Geigenmüller, 2010), are seen as the commencing points of this research project.

Considerable evidence shows that companies and organizations that complement their traditional channels with virtual-based channels can be more successful than single-channel ones (e.g., Ranjay and Garino, 2000). This trend is expected to become even stronger as Internet use continues to grow and new technologies make available an increasing number of virtual channels, such as interactive TV and mobile devices.

The literature suggests that firm capabilities can lead to higher performance for firms in different areas (Teece et al., 1997). Capabilities are defined as clusters of path dependent firm assets resulting from deliberate investment actions dedicated at creating new types of competitive advantage (Teece et al., 1997; Ray et al., 2005). For instance, technology firm-level resources require specialized marketing capabilities to coordinate processes to respond to environmental changes (Mazurek, 2012). These capabilities can be considered as bundles of tangible and intangible assets, including a firm's management skills, its marketing processes and routines, and the information and knowledge the firm possesses (Barney, 2001). The strategic management and marketing literature highlights how firms can build a competitive advantage based on a combination of core technological and marketing capabilities (Song et al., 2005; Prašnikar et al., 2008; Yadav and Pavlou, 2014). These capabilities can affect a variety of organizational outcomes, such as increasing customer satisfaction and loyalty as well as improving communication and new product success rates (Bengtsson et al., 2007; Yadav and Pavlou, 2014).

Academic research into VTSSs is almost non-existent with only a few studies examining the use of virtual TS environments (Lee-Kelley et al., 2004; Li, 2010). Some researchers have recently been more active in conducting studies on VTSSs (McClure, 2009; Gargano, 2011; Soltis, 2010); however, these publications do not meet academic requirements and are based on an individual's personal experiences or expectations. Furthermore, even fewer studies have explored the marketing capabilities needed by firms to deal with virtual environments. Therefore, this study intends to answer the call for further research into this field by examining exhibitors' experiences with VTSSs (Gopalakrishna and Lilien, 1995; Dekimpe et al., 1997; Smith et al., 2004; Hansen, 1996), and explore managers' perceptions regarding the main drivers and constraints of participating in VTSSs, in an attempt to identify the main marketing capabilities required for this purpose.

3. Theoretical framework

The virtual environment can be described as a computer-generated setting in which interactions take place (Mazurek, 2012). Firms are gradually applying virtual technologies to firm processes and activities (Booth and Philip, 1998; Lichenthal and Eliaz, 2003). Specifically, firms are increasingly utilizing advanced information and communication technologies, such as the Internet, in hopes of improving the efficiency, cost-effectiveness, and/or

quality of their customer-facing operations (Bolton and Saxena-Lyer, 2009). However, Trainor et al., (2010) argue that focusing on the technology alone is not sufficient. Powell and Dent-Micallef (1997) and Booth and Philip (1998) show that the value of the Internet is leveraged only when embedded in organizational practices and processes. Thus, embedding virtual technologies within organizational processes may require specific capabilities.

Virtual marketing capabilities are necessary to adapt traditional marketing actions to the virtual environment and gain a competitive advantage. For example, applying virtual technology to marketing activities such as TSs allows firms to identify and respond to opportunities through new processes which are faster, more effective, and lower cost, which are difficult for competitors to imitate (Bengtsson et al., 2007). Virtual technology can also help firms become responsive to consumers' needs and communicate and interact with them in real time. Virtual marketing capabilities enable a firm to establish an open, public, and global platform at low-cost, with rich content and real-time data and deploy it broadly across the supply chain (Frohlich, 2002; Liu et al., 2010). These capabilities can stimulate inter-organizational communication, international marketing, and global reach, and this may bring either opportunities or challenges to an individual firm (Rosenzweig, 2009; Li et al., 2010; Porter, 2001). As Levy (2014) points out, these opportunities can result in increased customer loyalty through the provision of effective and convenient service quality.

To guide the development of our study, this research draws on Chaffey's (2010) capability framework. Although focused on the broader digital environment, this research adapts the framework to a virtual context and argues that it provides a suitable framework to examine exhibitors' perceptions of VTs. The study identifies six areas where there are challenges involved in different stages of virtual technology adoption for firms, and where virtual marketing capabilities are needed for the following purposes: virtual strategy development, virtual customer acquisition, experience and loyalty, cross-channel integration, and virtual channel governance.

According to this framework, initially firms need to develop an appropriate strategy for the virtual environment and decide how the organization will be structured to achieve this strategy. Firms also have to interact and acquire new customers through the virtual multi-media environment. Further, firms must provide an appropriate virtual experience for customers through an appropriate content, layout, and visual design. Moreover, attracting returning customers to websites is vital to the long-term success of firms, and e-mail marketing and virtual platforms are of growing importance to companies for customer retention and growth. In addition, firms need to achieve integration among virtual and offline communication channels. This requires a structural change in the organization's virtual channels to achieve a centralized approach and economies of scale. Finally, firms need to manage both internal and external human resources, financial resources, and infrastructure resources such as software tools and data sources within an organization. In sum, Chaffey's (2010) framework suggests that firms need to generate and assign organizational resources and develop virtual marketing capabilities to manage the customer experience in terms of customer acquisition, conversion, and retention.

Chaffey's (2010) framework is supported by increasing literature that has emerged recently on marketing and consumer behavior in virtual markets (e.g., Blasco-Arcas et al., 2014; Cheon, 2013; Mazurek, 2012). With the growth of virtual shopping, knowing how to use the Internet effectively to gain more customers is becoming increasingly important for organizations. Researchers examining virtual computer-mediated environments have attempted to identify the factors influencing consumer experi-

ences, attitudes, and behaviors (Cheon, 2013; Carlson and O'Cass, 2010). However, less is known regarding organizations' experiences with these virtual environments. Thus, VTS organizers and exhibitors need to better understand the marketing capabilities needed for virtual environments and allocate resources in order to improve the outcomes of their VTS marketing strategies (Li, 2010).

Drawing on the previous literature and on Chaffey's (2010) framework, this paper examines the following two research questions: (1) What are the main drivers and constraints perceived by exhibitors for participating in virtual trade shows? (2) What marketing capabilities are needed by exhibitor firms to operate in VTS?

4. Research methodology

This study employs an exploratory research design. The authors collected primary data in the form of in-depth, semi-structured interviews, and drew heavily from the literature. Interviews were chosen due to their potential to provide detailed information about the perceptions of VTs that would otherwise be impossible to access (Lee-Kelley et al., 2004). Interviews were conducted by both authors using a standardized interview protocol. The interview guide had two general sections. The first section focused on the managers' understanding of VTs, and the second section related to the managers' participation as exhibitors in VTs. Some protocol questions were: Why did you participate in this particular VTS? Which were the outcomes? What are the main benefits and constraints in participating in VTs?

Due to the confidential nature of the research topic interviews were either conducted face-to-face or over the telephone and audio taped. The length of the interviews varied from 30–90 min, with an average of approximately 60 min. The context of this study is the higher education sector in Australia. The use of virtual communication is becoming increasingly common in higher education around the world (Hew and Cheung, 2010). Many institutions are looking to virtual environments, particularly distance education and virtual conferencing, as a versatile medium that can be accessed at anytime and anywhere (Hew and Cheung, 2010; Dickey, 2003). Additionally, several studies consider the effect of virtual environments on customers/students (e.g., Hara and Kling, 2000). Thus, higher education institutions in Queensland were selected as the sample frame. The main criterion for choosing respondents in the organizations was their potential exposure to and use of VTs.

Accordingly, managers possessing personal experience in participating as exhibitors in and/or organizing VTs were interviewed. They were considered as experts for the study questions. In total eight interviews were conducted over a six-month period between July and December 2013. The sample contains five female and seven male marketing managers of higher educational institutions located in Queensland. The names of respondents and organizations are suppressed for confidentiality reasons.

The interviews reached theoretical saturation when the eighth interview did not elicit any new information. As a result the data collection process was terminated at this point (Silverman, 2000). In addition, the interview process considered all the relevant that had participated at least once in a virtual trade show. This research project follows O'Reilly and Parker's (2013) meaning of thematic saturation and their concerns regarding saturation as a quality standard. Detailed information on respondents and firms is presented in Table 1.

The transcripts were examined using thematic analysis to identify, analyze, and report patterns or themes that emerged from the data based on Chaffey's (2010) theoretical framework (Braun and Clarke, 2006). Interpretations of emergent themes were derived

Table 1
Respondents' characteristics.

resp	Position	Real-World Fair Experience	VHEF Experience
1	Business development (Asia, South America, Europe, Africa)	Regular participation locally, internationally as exhibitor	Responsible for organizing VHEFs, no participation as exhibitor
2	Marketing manager Europe internationally as exhibitor	Regular participation	Several participations as exhibitor
3	Deputy director of International marketing and recruitment	Regular participation internationally as exhibitor	Regular participation as exhibitor
4	International marketing communications	Regular participation internationally as exhibitor	Several participations as exhibitor
5	Marketing communications Manager	Regular participation domestically as exhibitor	Several participations as exhibitor
6	Manager of international career development	Regular participation locally and internationally as exhibitor	Several participations as exhibitor
7	Virtual engagement officer	Several local participations as exhibitor	Regular participation as exhibitor
8	Marketing officer (North and South America, Africa)	Regular participation internationally as exhibitor	Regular participation as exhibitor

directly from interview transcripts, interviewer notes, and the extant literature. Inferences resulted from the process of analysis and interpretation (Spiggle, 1994). The interview transcripts were checked against the audiotapes for accuracy. Drawing on Lincoln and Guba (1985), a manual thematic breakdown with key phrases highlighted was used to analyze the transcripts and compare across interviews. Each researcher closely read the transcripts several times to identify initial codes and provisionally categorized them within the dimensions of the framework.

The second stage was to combine the codes into categories to achieve a more coherent picture of the issues being talked about. In the final stage each researcher collapsed their categories to determine the key themes. Researchers then came together to discuss their independent findings and determine their reliability and trustworthiness. Discussion focused on the themes, their underlying narratives, their fit with the research questions, as well as agreeing on which extracts from the transcripts best illustrated each one. Table 2 summarizes the general conceptual findings.

5. Findings

All respondents identified themselves as experienced TS exhibitors, with some also being experienced VTS organizers. Interestingly, all but one interviewee had experience participating in both real-world TSs and VTSs, with 75% participating on both a domestic and international level and 25% participating only on a domestic level. Furthermore, the respondents displayed experiences across a variety of TSs organized by private third parties, government organizations, or by themselves. The high level of engagement with numerous modes of TSs can potentially be explained by their managerial/executive-level job roles.

5.1. Exhibitors' main benefits for participating in a VTS

The findings suggest that organizations have very similar motivations for participating in VTSs as they have for participating in real-world TSs. (For discussions on TS objectives, see Cavanaugh, 1976; Kirchgorg et al., 2010, and Yuksel and Voola, 2010.) Five major themes regarding perceived benefits of VTS participation over traditional, real-world TSs emerged from the data: first, respondents use the virtual environment as one of several ways to communicate with their current and potential stakeholders; second, VTSs provide additional possibilities of increasing revenues due to gaining access to new markets with significant cost advantages; and, third, VTSs help institutions to increase brand awareness and gather relevant market intelligence.

5.1.1. Increasing revenues and lowering costs

All respondents stated the increase of sales revenue as the top priority for attending VTSs. As one respondent mentioned: "Our main objective is to obviously try and get recruitment; get applications on the spot ... You know we spend x amount of money, we want to get a return." (Respondent 1).

Exhibitors are aware that VTSs regularly are only one step in an often long decision-making process of generating sales (i.e., Bello, 1992); however, they still hope for more potential in VTSs as a sales-generating marketing tool. This holds true even despite current challenges, such as technology, acceptance and access, and the fact that visitors enter the VTS environment during different stages of the decision-making process. Respondents acknowledge that most visitors to VTSs are people who are really at the beginning of their exploration stage.

Table 2
Motivations and Constraints of Virtual Fair Participation for Exhibitors.

capabilities	Motivations	Constraints
Virtual strategy development	Integral part of the strategic approach to access new markets Market intelligence Virtual access due to limitations on resources	Lack of overall virtual strategy a strategic level Performance measurement: lack of awareness of VHEF specific costs
Virtual customer acquisition	Increase in an organization's customer base and revenue Acquisition of new customers, signing of contracts Assisting in the purchase decision-making process	No VHEF-specific effectiveness metric available yet. Objective quantitative measures lack relevance Widespread use of aliases, anonymous participation and use of fake data.
Virtual customer experience	Move towards a simultaneous and supportive use of online/offline resources Instantaneous provision of personalized service tangibles	No identifiable approach towards a balanced digital experience across various digital tools Inability to staff VHEFs with relevant staff
Virtual customer development, loyalty	Use of VHEFs for the strategic development of new markets. Market access Intelligence gathering	VHEFs are not used as relationship and loyalty building tools Repeat purchases Alumni
Cross-channel integration	Increased brand awareness and credibility	VHEFs are not yet integrated into IT systems within the organization strategy
Virtual management	Management commitment Efficiency improvements	Volatile long-term resource commitments

In addition, all respondents agreed on the significant cost advantage of VTSs over real-world TSs. The main saving potentials identified ranged from logistical costs, such as travel costs, freight costs for merchandise and brochures, TS booth hires and its associated costs, to saving transaction costs (Kirchgeorg et al., 2003) and cutting out potential agents who otherwise would obtain fees from the educational firms for students they sign up: *“In the past we had exorbitant freight budgets for hundreds of brochures to go off-shore; that’s probably been cut by a phenomenal amount.”* (Respondent 6)

In sum, the data show that VTSs are used as surrogates for real-world TSs in times of tight budgets. The saving potential is manifold and includes travel expenses, booth rental, and merchandise.

5.1.2. Gaining access to new or distant markets

Another main motivation to participate in VTSs is to access markets they would otherwise not be able to due to budget constraints, security issues, or the difficulties in reaching a foreign market. As one respondent pointed out: *“We couldn’t travel into this country because of safety and security issues . . . we can only travel to certain countries”* (Respondent 1)

Also, the data indicate that VTS and TS exhibitors regularly encounter language barriers when communicating with international students. In the virtual world technology can help exhibitors to converse with visitors and bridge language gaps. Technology takes the discontent out of an interaction by providing both parties with virtual translation services, thus ensuring a flow of information. VTS visitors and exhibitors also value the convenience of communicating with each other from the safety of their home or office – often at any time of the day. Especially for international students, it comes from necessity due to geographical distance. For TS exhibitors the office environment also enables them to access information in a speedier manner and to put VTS visitors in contact with specialists in their field instantly, as opposed to real-world TSs where exhibitors regularly are only able to process follow-ups after the event.

The separation of delivery from production (Dahlström and Edelman, 2013) as a main feature of VTSs provides VTS exhibitors with a unique advantage over traditional, real-world TSs. However, educational institutions have to make sure that they’re constantly available and accessible for potential customers and for brand recognition even if there are no outcomes. VTSs also provide exhibitors with the advantage of providing the target market with more high-quality booth personnel who can react with more flexibility to questions and requests by VTS visitors.

As seen in the data, there appears to be a relationship between the available budget at hand and the utilization of VTSs. Additionally, it seems clear that VTSs and their unique capacity of separation between production and consumption can provide opportunities to access markets that would not be available for penetration with traditional, real-world TSs.

5.1.3. Increasing brand awareness and credibility

Respondents confirmed that brand development is important in the virtual world. Educational firms use VTSs for brand generation and awareness, as well as to develop credibility and trustworthiness: *“[With VTSs] it is all about brand awareness and student recruitment.”* (Respondent 3)

The data suggest that VTS exhibitors are becoming more selective with the organizers they work with for their VTS appearances. This in part is owed to the fact that VTS exhibitors regularly have key performance indicators (KPIs) that directly relate to brand awareness and credibility. These objectives may be severely damaged if an exhibiting party lacks professionalism, or at the very least does not follow a similar long-term strategy, for example using an over complicated registration process or requiring additional software to be installed before access to the VTS is possible.

In addition, the findings indicate that an increasing challenge for VTSs in this sector is to prove to visitors that virtual exhibitors are legitimate organizations. As indicated by respondents, a major concern of visitors is the need to ensure that they converse with an authorized representative of the organization to ensure its legitimacy. In the virtual world firms endeavor to counter this lack of physical evidence by providing as comprehensive as possible. This includes being virtually available permanently, providing reassurance, and being able to answer a variety of questions in a short period of time.

5.1.4. Acquiring market intelligence

Respondents consider VTSs significantly superior to real-world TSs in the areas of market intelligence, information gathering and providing VTS visitors with personalized tangibles. Respondents agreed that market intelligence is becoming more important and it seems to be on the rise. Where at real-world TSs visitors can walk up to a booth attendant and start a conversation without the attendant knowing any details about the visitor this is not the case with VTSs. Depending on the data collected and the registration process, VTS exhibitors are in a position to log and analyze meta data entered by VTS visitors on a voluntary basis, such as age, address, study interests, current level of education, etc. This information can also be used to professionalize follow-ups, and to provide more targeted information while communicating with a VTS visitor: *“We can bypass a lot [of middlemen] and promote ourselves directly to our potential customers.”* (Respondent 5)

In this context VTSs foster direct communication between the exhibitors and future customers. By reducing the need for intermediaries, organizations are able to access directly current and future customers and therefore gather direct market intelligence which they can use to develop future marketing strategies.

5.2. Main challenges and constraints of participating in virtual trade shows

According to respondents the main constraints of participating at VTSs seem to be: difficulty in measuring the effectiveness of the VTS, attracting or engaging potential visitors to the virtual booth site, technological challenges that currently limit the full usability of VTSs, and dealing with virtual rudeness.

5.2.1. Inability to measure effectiveness

Measuring the effectiveness of virtual and offline TSs has always presented a challenge to practitioners and academics alike, and for most respondents it is still an unsolved issue (Gottlieb et al., 2011; Berne and García-Uceda, 2007; Bello and Lohita, 1993; Bettis-Outland et al., 2010). It seems that exhibitors still decide to participate at VTSs and allocate a budget without defining KPIs to measure the effectiveness of this marketing tool. However, respondents indicated that this regularly does not stop them from attending VTSs. Often the TS exhibitors and their managers are aware of the fact that they cannot precisely measure the effectiveness of TS attendance: *“Because it’s so hard to measure the effectiveness of VTS we really aren’t sure how many students are actually watching these things”* (Respondent 5)

Despite the fact that the effectiveness of VTSs is difficult to measure, set KPIs are often questionable in their usefulness. This research indicates that this is most likely because VTS exhibitors use the same KPIs that they use for real-world TSs. Marketers admit that they often follow their instinct and gut feeling more than facts when deciding which VTS to attend. The often unknown performance of VTS participation seems to be one of the main reasons why VTSs have not been more successful in the past. Furthermore, it seems that TS participation costs are a major driver for the future development of VTSs.

Budget cuts in the past were one of the reasons interviewees took up VTSs as a new marketing tool. According to respondents budgetary constraints on people travelling abroad are significant, so by participating in VTSs organizations can save and reallocate resources toward other recruitment methods. Unfortunately, exhibitors regularly do not realize that VTSs are more administratively heavy than their real-world counterparts and also incur additional costs in order to obtain the required resources, such as training employees to handle the technology and manage virtual interactions with VTS visitors.

Ultimately, to a great extent marketers look at VTSs the same way they see real-world TSs – with very similar advantages and challenges, especially in the area of effectiveness evaluation. Respondents mentioned that the decision-making behind participating in VTSs is very much the same as for physical TS participation in terms of costs and visitor attendance.

5.2.2. Difficulty in attracting potential customers

The data indicate that organizations currently do not have enough means to engage VTS visitors once they enter the virtual booth. Most respondents mentioned that many people would visit their booths but would simply pass through. The analytical data from the VTS systems do not always represent reality and are naturally skewed towards a quantitative approach rather than the quality of the interactions. Additionally, respondents experienced frustration with VTS visitors often registering anonymously or with obviously incorrect details or an alias; conducting follow-ups or linking a conversion in the future with an anonymous interaction at a VTS is impossible and unhelpful in determining the effectiveness of VTS participation: *“I thought that students would be quite happy interacting virtually . . . but we just don’t get the same volume of people as in a real-world trade show.”* (Respondent 3)

In addition, for marketing managers it is a challenge to project the credibility of their real-world organization through their virtual presence. Organizations can send out application documents and brochures and set up real face-to-face meetings with a firm’s representative. In the future potential customers will be able to attend a virtual event and be able to follow virtually a representative of a firm with a webcam who will walk around the organization.

5.2.3. Technological problems

Another constraint of VTS participation revolves around Internet infrastructure and VTS systems that are too complex (Kaushik and Rahman, 2015). The findings identify the lack of bandwidth as the main challenge with today’s technology. In particular, respondents are concerned about the speed of data transmission to certain parts of the world such as Africa or China, where the lack of bandwidth often means a suboptimal VTS experience, if any. Basic access to a personal computer and the Internet is also an issue for some international students that are interested in visiting a VTS. At times, organizations have to improvise, using instant messengers for example. The challenge in these instances is to keep the technological requirements to a minimum while still providing an appealing VTS experience. This is also relevant in regards to unstable VTS platforms, often unnecessary pop-ups and other virtual nuisances, too detailed and long registration processes, and a high requirement on the equipment to actually be able to access the VTS. Often VTS exhibitors and visitors are not able to log on because of missing plug-ins or an Internet browser that is not supported. Respondents also indicated that there is still a technological challenge to provide VTS visitors with enough visual elements and data to browse through while they wait for their time to communicate with a VTS exhibitor.

A re-occurring theme during the interviews was the desire of the interviewees to employ more sophisticated technologies to

provide VTS visitors with a truly virtual experience. Unfortunately this is still a rather limited arena; that is, currently there are no devices available that attract more than the two senses of sound and sight. With the increased use of touch surfaces hopefully in the distant future the sense of touch will be used for marketing purposes and even further in the future marketers might be able to use one’s senses of smell and taste to positively influence behaviors and intentions: *“ . . . you know there’s so much exciting stuff to do in this realm that we’re only limited by our imagination and by our time and by our resources.”* (Respondent 4)

The changing technology in the future will push the boundaries of VTSs and their applicability as a marketing tool. This research, however, suggests that VTSs in the foreseeable future will not replace real-world TSs. Firstly, from a technological perspective, even in advanced countries, both VTS exhibitors and VTS visitors experience a level of dissatisfaction when participating at VTSs due to suboptimal information technology (IT) infrastructure and ease of use of the VTS software. This no doubt will improve over time; however, interviewees agree that for some time there will be a place for communication at VTSs via chat messengers rather than, for example, multi-cam video communication systems. Secondly, the data indicate that organizations target their potential customers differently based on their geographical location and their preferences in information gathering.

5.2.4. Virtual rudeness

A final emergent theme from the interviewees’ responses was a general frustration with the lack of common politeness of visitors of the virtual worlds. One might argue that in virtual worlds where individuals cannot establish a face-to-face interaction virtual politeness is lacking since it is more difficult to establish a common standard given it is an avatar or an individual communicating only via messenger software. Most respondents seem to be concerned about virtual politeness in terms of high levels of rude behavior from visitors – virtual rudeness. This is evidenced by a lack of common courteous language when interacting at VTSs. This is opposed to real-world TSs where it is acceptable and also polite to wait and queue as a visitor if the booth personnel are currently engaged in a conversation with other visitors. In addition, interviewees indicated that they are struggling with the concept of virtual waiting time, since they perceive it as a technological challenge to provide VTS visitors with enough visual elements and data to browse through while they wait for their time to communicate with a VTS exhibitor: *“They [the VTS visitors] don’t have to have feelings for you or show politeness or give you time by sitting down or standing in a queue waiting to speak to the [firm’s representative] like they would at an actual [real-world] event.”* (Respondent 6)

5.3. Virtual marketing capabilities

The findings suggest that VTSs are still considered relatively new to organizations, and executives are still clearly struggling with their usefulness and their contribution to the marketing strategy. This notion is supported by a broad absence of support for VTSs mainly due to a general lack of knowledge of their advantages and challenges for the overall marketing strategy. Overall, the research data identify a clear deficit of virtual marketing capabilities for exhibitors.

This section discusses emergent themes proposed by Chaffey (2010) that reflect empirical dimensions of virtual marketing capabilities required for exhibitor firms to participate in VTSs. Drawing on this framework, virtual strategy development, virtual customer acquisition, virtual customer loyalty, virtual customer experience, cross-channel integration, and virtual channel governance.

5.3.1. Virtual strategy development

The findings also indicate that VTSs are used as surrogates for real-world TSs in times of tight budgets. The saving potential is manifold and includes travel expenses as well as elements such as booth rental and merchandise. VTSs also provide exhibitors with the advantage of providing visitors with more personalized booth staff who can answer questions and attend requests by VTS visitors. As several respondents pointed out, they line up staff, supervisors, and professors to each talk to the VTS visitors for a set period of time. None of the firms interviewed would be willing to fly that many staff to real-world TSs across the globe. Respondents also consider the use of VTSs for gathering market intelligence significantly superior to real-world TSs. Strategically firms are aware of the available data and data streams and the strategic usefulness of their analysis in addition to providing VTS visitors, from a tactical point of view, with personalized tangibles.

This sector is aware of the benefits of VTSs; however, it is only employing this tool on a tactical level and is still in significant need to build up capacity to develop integrated virtual strategies that include strategy formulations beyond the immediate short- to mid-term objectives. This lack of strategic focus of VTSs is further evidenced by the general inability to estimate associated costs in regards to VTSs. Exhibitors regularly do not realize that VTSs require as much, if not more, administrative effort than their real-world counterparts and also incur additional costs in order to obtain the required resources, such as training employees to handle the technology and manage virtual interactions with VTS visitors. Additionally, the data indicate that most firms currently don't have enough means to engage VTS visitors once they enter the virtual booth. Therefore, VTS exhibitors are still in the early stage of adopting this communication tool without fully utilizing its range of marketing capabilities.

5.3.2. Virtual customer acquisition capabilities

According to the data, in general VTSs are not seen as an integral part of the future direction of virtual marketing activities. Rather, VTSs have a strategic position that is mostly concerned with an early access to new markets, not being able to physically travel to a new market, market penetration, and freedom of choice for accessing data. VTSs allow exchanges to occur in a remote setting, where the provider and receiver are not co-located and do not interact face-to-face (Meuter et al., 2000; Bolton and Saxena-Iyer 2009). This remote feature provides VTSs exhibitors with a unique advantage over traditional, real-world TSs.

Many exhibitors still hope for more potential in VTSs as a tool for attracting and selling to potential customers. This holds true even despite current challenges such as technology, acceptance, access, and the fact that visitors enter the VTS environment during different stages of the decision-making process. Respondents experienced frustration with VTS visitors often registering anonymously or with obviously incorrect details or an alias; conducting follow-ups or linking a conversion in the future with an anonymous interaction at a VTS is impossible and unhelpful in determining the effectiveness of VTS participation.

Exhibitor firms need the capability to accurately measure the effectiveness of VTSs they will permanently struggle to justify their investment in this marketing communication tool. As shown above, VTSs are more integrated into an overall marketing strategy than they have ever been. However, as long as masses of anonymous or fake profiles can attend these shows and KPIs are not set or do not generate transparent results VTSs will remain in a niche position in any marketing strategy.

5.3.3. Virtual customer conversion and experience capabilities

Organizations must develop positive virtual experiences that match with other marketing communication tools (Chaffey,

2010). The findings show that a virtual presence is at times still considered inferior to a real-world presence of the same organization. This notion is less prevalent with the potential students that virtually search for information and actively seek out VTSs as a source of information. However, for marketing managers it is a challenge to project the credibility of their real-world organization onto their virtual presence. In fact, previous research suggests that customer participation in the virtual environment can add value to the overall virtual experience by reducing operational cost and enhancing customer satisfaction (Sheng and Zolfagharian, 2014). Thus, successful firms will keep pushing the capability development and the technical possibilities to meet or even exceed their visitors' and thus potential new customers' expectations.

Among the sample, only one organization employed an officer that was exclusively responsible for virtual engagement. This may result in exhibiting firms lacking an overall strategic marketing plan on how to carefully target specific market segments. The outcome of this constraint will be ineffective VTS participations with attendance costs of VTS exhibitors regularly being the main concern.

5.3.4. Virtual customer retention capabilities

Loyalty has a significant impact on profitability (Jack and Powers, 2013). However, VTSs are significantly being underutilized for loyalty purposes. As shown by the data, there is no effort made by these organizations to utilize VTSs as a tool for customer loyalty, and no indications were observed in the interviews that the sector is building up capabilities in this regard.

VTSs, as a tool for virtual customer development and growth, at this stage are mainly used to conduct research on potential new markets, to gather market intelligence with existing and potential new customers, and to access new markets. This industry traditionally relies heavily on agents and other middlemen for attracting customers to individual educational institutions. In this context VTSs foster direct communication between exhibitors and future customers. By reducing the need for intermediaries, institutions can access current and future customers directly and therefore gather direct market intelligence which they can use to develop future marketing strategies.

Overall, there is a need to further develop and integrate virtual customer retention and growth capabilities into an overall virtual marketing strategy. Currently, mostly short-term objectives are pursued when utilizing VTSs, such as growth in the number of current customers, with a substantially smaller focus on the strategic development of returning customers for repeat purchases virtually.

5.3.5. Cross-Channel integration and brand development capabilities

The effectiveness of cross-channel integration of marketing activities is still a contested field in the literature (van Baal, 2014). Its effect on constructs such as customer loyalty, customer retention or sales is ambiguous and makes the performance evaluation challenging. The data suggests that firms still consider VTSs to a great extent as real-world TSs that happen to be virtual. Thus, strategies that focus on cross-channel integration and brand building have only been adapted to the virtual environment from their use with real-world TSs in the past. Unfortunately, VTSs currently are not considered mainstream enough and as such have not been able yet to show their full potential when fully integrated with other business activities that have the customers at their center. From an organization's internal point of view this refers to internal processes such as integration with other existing systems, for example customer relationship management (CRM) systems.

From an external point of view communication via different channels should transmit a uniform message that, among other things, helps build and strengthen the relationship with potential new customers. Firms use VTSs for brand generation and aware-

ness, as well as to develop credibility and trustworthiness. However, the data show that the industry is still at the beginning of developing a strategic and integrated approach for VTSs. This is especially significant within this sector where individual organizations most likely want to be perceived as innovative, modern, and at the edge of current technology. Unfortunately, this message regularly is not transmitted successfully as many technological problems are clear constraints for VTS participation.

6. Conclusions, limitations, and future research

Limited empirical research has examined exhibitors' experiences with VTSs (e.g., Lee-Kelley et al., 2004). Our study aimed to address this gap by exploring exhibitors' perceptions of the main drivers and challenges of participating in VTSs. Based on a review of the relevant literature and in-depth interviews with marketing managers of higher education organizations in Australia, the findings show that the main drivers for participating in VTSs are increasing sales revenue and brand awareness, and having access to the market. These are the same objectives for participating in real-world TSs. However, building brand credibility and organizational legitimacy for visitors that attend VTSs is distinct to the virtual sector. The authors assume that VTS visitors base their hesitance on the lack of physical evidence of the organization and that they have possibly been made aware of potential virtual scams and are therefore sensitive to this fact.

The research data also show that the future of VTSs will most likely depend on finding solutions to existing challenges surrounding TSs as a marketing tool – irrespective of whether the event is held virtually or offline. Secondly, it will depend on the future technological development of VTS systems and the way they are integrated into existing technological and organizational systems on both the exhibitor and the visitor side. Therefore, the way academics and practitioners approach the constraints of VTSs will most likely determine the penetration of VTSs as a mainstream marketing tool across industries.

Although VTSs are becoming more known and accepted, in the post-financial crisis era of the 2010s it seems that management is more cautious with their investments. Budget allocations are getting increasingly questioned and require detailed justifications before a decision is made, and decision-makers require evidence that their investments produce a measurable return. Unfortunately, academia and industry alike still struggle with measuring TS effectiveness (Gottlieb et al., 2011; Bettis-Outland et al., 2010; Cavanaugh, 1976) irrespective of whether they be real-world TSs or VTSs.

The difficulty to adequately measure the effectiveness of VTSs also seems to be an unsolved issue for most respondents. It seems that exhibitors still decide to participate at VTSs and allocate a budget without defining KPIs to measure the VTS participation effectiveness. However, respondents indicate that this regularly does not stop them from attending VTSs. Often the TS exhibitors and their managers are aware of the fact that they cannot precisely measure the effectiveness of TS attendance. Ultimately, to a great extent marketers look at VTSs the same way they see real-world TSs – with very similar advantages and challenges, especially in the area of effectiveness evaluation. This indifference is also true for any form of data analysis whereby the analytical data available from the VTS systems do not always represent reality and are naturally skewed towards a mostly quantitative approach. This extends previous research on real-world TSs that not only argues that empirical results still cannot provide exhibitors with proper guidance in regards to TS effectiveness (Borghini et al., 2004) but also that the existing marketing literature does not provide consensus on the measurement for TSs performance (Li, 2007).

All interviewees are in agreement that until reliable ROI measures are available for VTSs managers will most likely continue to focus mainly on the cost-advantages of VTSs over real-world TSs. Here, the main saving potentials identified range from logistical costs such as travel costs and freight costs for merchandise and brochures, TS booth hire and its associated costs, to saving transaction costs (Kirchgeorg et al., 2003) and cutting out potential agents who otherwise would obtain fees from these organizations. Strategically, however, the longevity and sustainability of VTSs will be threatened if the industry does not see past the cost advantage in the near future. All respondents readily agree that academia and the industry need to develop a strategic orientation, with new and innovative concepts to take advantage of the great potential that VTSs have to offer. Otherwise VTSs will maintain a niche position that is only employed when changed externalities result in reduced budgets or limited access to markets.

6.1. Theoretical contributions

This paper makes two important theoretical contributions. First, this study extends previous research on the application of virtual technology to marketing strategy, and identifies specific drivers and constraints for managers using the virtual environments for exhibiting their products or services. The second contribution is the identification of specific virtual marketing capabilities needed by organizations to deal with virtual environments, based on Chaffey's (2010) virtual capability framework. This is significant since the virtual customer-firm interface plays a critical role in virtual sales of goods and services (Shobeiri et al., 2015) and academia and industry need to keep up with technological developments to maximize the marketing opportunities.

The findings suggest that the main challenge for organizations is managing marketing activities in a virtual environment, such as customer acquisition, development, conversion, and retention. Across all of these activities it is important to devote sufficient organizational resources for managing virtual customer and market information. The findings of this study provide new insights to Chaffey's (2010) model by introducing two external capabilities that also need to be managed to fully exploit the potential of VTSs. This supports recent findings that suggest that deep user immersion into virtual environments significantly affects customer behavior and that virtual environments have now truly become viable consumption-scapes (Dholakia and Reyes, 2013; Alshamaila et al., 2013). First, IT infrastructure is the most significant external capability that needs additional attention and investment in order to provide a highly sophisticated VTS experience to a global audience. In particular, respondents are concerned about the speed of data transmission to certain parts of the world such as Africa or China, where the lack of bandwidth often means a suboptimal VTS experience, if any experience at all. Basic access to a personal computer and the Internet is also an issue for some international students who are interested in visiting a VTS. This suggests that the IT industry – and not the individual organization – needs to manage this need in order to fully exploit its potential. A second external capability is virtual politeness. As Harrison and Barlow (2009) point out, polite behavior is directly influenced by the context an encounter is situated in. The authors argue that for virtual environments it is particularly relevant that polite behavior is linked to the individual's construction of their identity and, within the interactional context of VTSs, the concept of politeness is evolving and thus dynamic.

Overall, the data suggest that the organizations that use VTSs as a marketing tool have not yet found a way to adapt their marketing strategy in order to manage intangible external capabilities appropriately.

6.2. Managerial contributions

This research aids in determining the main motivations and challenges for VTS exhibitors. It also includes implications for other members of the organization that support the virtual environment. A lack of structured planning for virtual technology is evident in the data. This suggests insufficient senior-level involvement in planning and review. Over the next several years we are likely to see the consumer experience radically integrated across the physical and virtual environment (Labrecque et al., 2013). The findings imply that upper management must be highly involved in the organization's marketing cross-channel integration with particular focus on virtual strategy in order to keep up with the increasing demands of customers.

Exhibitors and visitors should be encouraged to be more vigilant with respect to the type of information needed and gathered at VTSS and, ultimately, in the intangible benefits that may result in enhanced decision-making in the organization. Managers need to be aware that the Internet has not just evolved to the primary source of information for billions of people (Klaus, 2013) but also that relationship marketing has changed and customer-to-customer relationships are generating more information that organizations need to manage and listen to (Nicholls, 2010). By following the extended virtual framework presented in this study, managers of industrial firms can generate appropriate customer virtual experiences through acquiring and retaining industrial customers, develop long-term relationships, and hold unique competitive advantages (Chaffey, 2010). Hence, it is critical for companies to comprehend the ways in which they can improve the generation of value through a better virtual experience.

Furthermore, managers must consider that in an on-demand world consumers will judge organizations by their ability to deliver heightened experiences and interactions literally anywhere (Dahlström and Edelman, 2013). A customer's desire for more urgency and ubiquity requires managers of industrial firms to consider a wide set of virtual touch points where products and services are evaluated. Within this industry, the challenge was initially to go from a purely physical world to a virtual presence. Now with a virtual ubiquity that moved from a desktop PC to laptops to tablets and mobile phones there is no time to lose to provide customers the comprehensive offline/virtual experience where they want it, how they want it and when they want it. Therefore, virtual technology should integrate the data on all interactions a consumer has across the decision making journey, and this will also provide insights into customer preferences for future interactions (Mazurek, 2012).

6.3. Limitations and future research

This study is not without limitations. The nature of this sector potentially influences the use of virtual environments. The restriction to a single industry sector must be treated as a potential limitation on the more general applicability of the findings. Furthermore, data collection was retrospective regarding past events. Finally, the limited sample size inhibits the generalization of the data to a wider population.

A number of avenues for future research are appropriate. First, future studies can validate the findings of this study in other contexts/sectors. For example, it would be useful to explore additional VTSSs of various types and various target participants to acquire additional data. In addition, research could be conducted in a B2B context to identify motivations and challenges for exhibiting firms and visitors. Furthermore, replicating the study in other countries can improve generalizability of the findings. Finally, we recommend that future research focuses on opportunities to keep VTS visitors engaged for longer when visiting individual booths.

This may assist in the managerial challenge to convince VTS visitors to queue virtually and also to establish user cohesion and to spend more time at VTSSs. This way future research will assist in strengthening the business case for VTSSs.

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