

Industrial Marketing Management

Digital Media Optimization for B2B Marketing

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Abstract

The role of digital media in B2B Marketing has gained traction with academics and practitioners in recent years. However, a comprehensive framework about the use and value of these media has not been developed, leaving B2B managers and employees uncertain as to their effectiveness. In fact, whether or not digital media can impact the business development and marketing processes to achieve higher performance remains vague. Additionally, there is a paucity of research related to the impact of different media towards the enhancement of processes and outcomes of B2B Marketing to generate opportunities. To provide guidance for marketing managers, we consider marketing processes in the global software industry by researching practitioner experiences. We develop an assessment tool to identify and align marketing processes and digital media. This research attempts to explore and explain how digital media impacts the B2B Business Development process cycle at the conjunction of marketing and sales. The study tests a conceptual model by means of a cross-sectional survey of more than 530 practitioners. Our novel framework provides several contributions to knowledge and practice. Firstly, we identified the critical business development process phases and defined this function at the interface between marketing and sales. Secondly, we determined the platforms from numerous available digital media which are most suitable in these particular phases and result in increased business performance. Thirdly, by

acknowledging the perspectives of vendors, third-parties, and buyers in a simultaneous study, we ensure optimal alignment. We finish the article by discussing limitations and suggestions for further research.

Keywords

Digital Media; Business-to-Business Marketing; Performance

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1. Introduction

Digital media, especially Social Networking Sites (SNSs), have recently gained attention among practitioners and scholars in the industrial marketing field to reach business-to-business clients (Liang & Turban, 2011; Rodgriuez, Ajian, & Peterson, 2016). Despite the opportunity for considering digital media to render marketing-related processes more efficient and effective, a comprehensive framework on how to choose, apply and combine relevant digital media in industrial marketing to improve performance outcomes does not yet exist (Avlonitis & Karayanni, 2000; Bernard, 2016).

Increasing globalization and fierce competition in the software industry (Brink, 2017) forces vendors to continuously review and redesign their marketing routines. There is often a lack of clear strategy on how organizations can align the siloed functions of marketing, business development, and sales (Gigliano, Vitale, & McClatchy, 2011). It is essential to review, redesign, and coordinate marketing with its related functions. For example, traditional activities, like cold calls based on obsolete databases, are replaceable while others (e.g., face-to-face meetings) appear not to be (Cano, Boles, & Bean, 2005; Moncrief, Marshall, & Rudd, 2015). In addition, it remains vague to what extent digital media should be integrated with traditional media in industrial marketing. Rodriguez, Peterson, & Krishnan (2012) suggest a mix of both media (i) to allow marketing and its related functions to act more efficiently (Brennan & Croft, 2013), (ii) to foster effective customer relationships (Wilcox & Sussman, 2014) and (iii) to influence performance (winning new or continued business). Nonetheless, scholars cannot quantify the exact impact of these media activities (Avlonitis & Karayanni, 2000; Rodriguez, Peterson, & Ajjan, 2014).

For example, previous studies (Keinänen, Kuivalainen, & Karjaluoto, 2015; Schultz, Schwepker, & Good, 2012) explore the impact of individual and organizational factors toward digital media business usage in Finland and highlight the importance of these media for

various aspects of B2B vendor-buyer interactions. Their findings suggest that senior executives still rarely engage in digital media because of the uncertain benefits they perceive. [Veldeman, Van Praet, and Mechant \(2017\)](#) noticed a considerable gap in the use of digital media strategies in Belgian compared to Dutch, UK, and US B2B companies.

Digital media technology can ease and accelerate collaborative relationship-building processes ([Jussila, Kärkkäinen, & Aramo-Immonen, 2014](#)). It should, however, not be overlooked that deep-reaching, lasting relationships evolve only gradually over time ([Quinton & Wilson, 2016](#)), and it remains unclear which digital media are pivotal in B2B relationships to optimize organizational purchase behavior ([Guesalaga, 2016](#)).

In contrast, cultural clashes, different objectives, and misalignment of marketing and sales activities affect the quality of customer experiences or jeopardize relationships ([Avlonitis & Panagopoulos, 2010](#); [Stephen & Galak, 2012](#)). The credibility of vendors is at stake when uncoordinated digital media efforts and inappropriate content confuse industrial buyers. This can be perceived as irrelevant noise similar to the irritating, cold-calling of traditional marketers ([Schultz, Schwepker, & Good, 2012](#)).

Scholars have diverging opinions about traditional and digital media. While [Cano, Boles, and Bean \(2005\)](#) support face-to-face communication in B2B processes, [Wymbs \(2011\)](#) suggests a media mix, [McCready \(2013\)](#) envisions an extensive adoption of digital media. [Rodriguez, Ajjan, and Peterson \(2016\)](#) stress the absolute importance of digital media.

Consequently, reviewing marketing and its related processes by identifying suitable media efforts and adopting a customer-centric focus ([Rodriguez, Peterson, & Ajjan, 2014](#)) can have significant implications for B2B marketing.

Whereas the literature has looked into commonly available platforms in marketing, to our knowledge, it has not studied the marketing process phases that can be influenced by digital or traditional media; to optimize the mix of media efforts and to focus on the relevant set of

digital media with decision-maker suitable content. Besides, such a tool would be of high interest to practitioners, for example, to streamline marketing processes and select the best possible media for a given client/decision-maker.

We review the key literature relating to B2B business development (Davis & Sun, 2006; Giglierano, Vitale, & McClatchy, 2011) at the intersection of relationship marketing (Moretti & Tuan, 2014) and sales (Rodriguez, Ajjan, & Peterson, 2016). Subsequently, the managerial implementation of these areas is studied interregional through twelve semi-structured expert interviews and an online survey with 530 cross-functional executives from DACH (Germany, Austria, Switzerland), WE (Western Europe), and NA (North America).

We conceptualize the Digital Business Relevance Index, being instrumental to performance, and discuss a series of related instruments; we conclude the article with theoretical contributions and managerial implications.

2. Literature review

2.1. Digital media at the conjunction of marketing and sales

Digital technologies gain importance in business development, at the junction of the B2B marketing and sales, by improving supplier-vendor relationships as their most precious resource (Brennan & Croft, 2013). This achieves a lasting competitive advantage (Ulaga & Eggert, 2003) to pursue profitable opportunities (Tang, Kacmar, & Busenitz, 2012). The *raison d'être* and ultimate goal of advanced technologies in B2B marketing is, therefore, to optimize its processes similar to business development, thus building trustworthy relationships, retrieving relevant information, and generating new leads and opportunities (Grönroos, 2011; Pöyry, Parvinen, & McFarland, 2017).

In the global B2B software industry, leads and opportunities heavily imply highly complex, non-standardized individualized solutions and services and unique relationships. This means

continuous, relational business instead of one-off transactions (Macdonald, Kleinaltenkamp, & Wilson, 2016; Palmer, Lindgreen, & Vanhamme, 2005).

2.2. The absent definition of business development

Reviewing how business development has evolved in the literature, the topic remains unclear among scholars and a buzz word among practitioners (Giglierano, Vitale, & McClatchy, 2011; Kind & Knyphausen-Aufseß, 2007).

If at all, it is just alluded to in Relationship Marketing, Sales, and Entrepreneurship articles (Davis & Sun, 2006; Kind & Knyphausen-Aufseß, 2007). Relationship Marketing and Sales are abundantly discussed, increasingly in combination with digital media (Agnihotri et al., 2016; Palmer, Lindgreen, & Vanhamme, 2005). In contrast, as the liaison function to align the siloed marketing and sales functions, Business Development remains largely unnoticed (Giglierano, Vitale, & McClatchy, 2011).

Recent studies in the software and biotech industry explored the Business Development function from an entrepreneurial and strategical perspective but failed to recognize the importance of identifying and defining operative processes to integrate digital media (Davis & Sun, 2006; Kind & Knyphausen-Aufseß, 2007).

The authors draw on Relationship Marketing and Sales as major theoretical reference points to develop a definition of business development from a functional and operative perspective. This is in agreement with scholars (Giglierano, Vitale, & McClatchy, 2011; LeMeunier-FitzHugh & Piercy, 2011) who notice the affinity of both functions to business development and their impact on performance.

Particularly, Giglierano, Vitale, and McClatchy (2011) compare Relationship Marketing to Business Development in the early commercialization of disruptive innovation. Other scholars (Andersen, 2001; Dwyer, Schurr, & Oh, 1987) differentiated several phases in B2B relationships that equate to Business Development. For example, B2B relationships evolve

from a pre-relationship phase, in which vendors are evaluated, a negotiation phase when they are short-listed, a development phase once a business relationship is established, to a termination phase when buyers seek alternative solutions. [Grönroos and Ravald \(2011\)](#) supported the proximity of Business Development to Relationship Marketing from commonality in terms of individual stages (e.g., identifying potential buyers).

In contrast, [Brennan \(2015\)](#) assigns the development of existing business to the Sales function and not to Business Development as existing customers interface with key account managers.

Hence, the similarities mentioned above provide a conceptual groundwork on which Business Development can be understood, and as such, operationalized around process phases.

However, the development and refinement of the definition of Business Development, conceptualizing the behavioral outcome of Business Performance, required not only investigating central topics in the prominent marketing and sales literature ([Rodriguez & Peterson, 2012](#); [Rodriguez, Peterson, & Ajjan, 2014](#)) but also contrasting them with recent job descriptions in the software industry and best practices from experts.

2.3. The software industry

We chose the software industry as the context for the following reasons. Firstly, B2B firms of the software industry like IBM, Microsoft, Dassault Systèmes, and SAP are spearheading digitalization ([Hofacker, Golgeci, Pillai, & Gligor, 2020](#)) and therefore more likely understand the importance of digital media. Secondly, the fundamental research in business development centers around this industry ([Davis & Sun, 2006](#)) and finally, the lead author's background experience in related ERP, MES, and Digital software consulting, third-party and vendor organizations.

2.4. Digital media and B2B business development

Likewise, the impact of digital media is still undetermined (Michaelidou, Siamagka, & Christodoulides, 2011). The marketing literature suggests that digital media are on everyone's agenda (Kaplan & Haenlein, 2010) perceived as "revolutionary and evolutionary for Relationship Marketing" (Moretti & Tuan, 2014, p. 249). Recent studies examined the impact of digital media in B2B or their integration with CRM technology to improve processes and performance (Rodriguez, Peterson, & Ajjan, 2014).

However, understanding as to which media combination is considered most effective in certain B2B processes has not been studied. Likewise, these studies lack specifying digital platforms and assigning them to particular process phases (Keinänen, Kuivalainen, & Karjaluoto, 2015).

They also overlook that B2B relationships require commitment and trust (De Ruyter, Moorman, & Lemmink, 2001), known as relational capital (Kale, Singh, & Perlmutter, 2000), which is critical to mitigate the high risk in the marketing and sales of B2B solutions. Moreover, there is uncertainty about the suitability of digital platforms. While some researchers consider digital media mainly appropriate for soft relationship marketing (Brennan & Croft, 2012) others view them as critical for sales performance (Agnihotri, Kothandaraman, Kashyap, & Singh, 2012; Rodriguez, Peterson, & Krishnan, 2012). Though there is growing certainty about the benefits of digital media features such as cost-advantages, interactivity, the velocity of information, and immediacy (Katona & Sarvary, 2014) that might make traditional media superfluous here remains disagreement regarding the extent (Suh & Houston, 2010).

Within this context, advocates of digital media argue that social networks boost B2B relationships through communication, collaboration, gathering and sharing information (Agnihotri, Kothandaraman, Kashyap, & Singh, 2012). Opponents stress the distraction and privacy issues through information overload (Salo, 2017; Suh & Houston, 2010). The importance of digital media in B2B Business Development is overlooked due to the uncertain

outcome (Michaelidou, Siamagka, & Christodoulides, 2011). Therefore, it is critical to identify which media are appropriate. For digital media, Kaplan and Haenlein's overarching definition (Andersson & Wikström, 2017, p. 61) "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" is a starting point to identify platforms potentially relevant in B2B.

The aim of this research is to address several gaps in the literature (Avlonitis & Karayanni, 2000; Marshall, Moncrief, Rudd, & Lee, 2012). Firstly, to integrate the previously isolated areas of digital media and business development. Secondly, to merge software vendors, buyers and third-parties in one international study (Keinänen, Kuivalainen, & Karjaluoto, 2015; Rodriguez, Ajjan, & Peterson, 2016), and finally to develop specific performance measures and guidelines for practitioners (Lashgari, Sutton-Brady, Solberg Søilen, & Ulfvengren, 2018; Michaelidou, Siamagka, & Christodoulides, 2011).

Our study seeks to identify and define the essential business development process phases. Then, to optimize these phases by assigning the most appropriate digital media and finally, to show the impact on performance by accelerating and enhancing the processes. In turn, the optimization of business development processes with digital media addresses another knowledge gap (Rodriguez, Ajjan, & Peterson, 2016).

Our approach defines the major business development process phases, similar to the aims of relationship marketing and sales, to bridge and align the siloed marketing and sales functions. By identifying effective media to establish and nurture reciprocal business relationships (Hunt & Morgan, 1994) faster-than-expected improvements in performance will be achieved (Vieira, Winklhofer, & Ennew, 2014).

The purpose of the proposed digital business relevance indices is to create awareness and provide practitioners with tools (Brennan & Croft, 2012; Peters, Pressey, & Greenberg, 2010);

to review and redesign existing processes; and to consider those media combinations which abbreviate the process phases, resulting in higher performance.

Consequently, by addressing the various research gaps especially where adequate research was missing (Keinänen, Kuivalainen, & Karjaluoto, 2015; Rodriguez, Peterson, & Krishnan, 2012), and answering the research call of various scholars (Andersson & Wikström, 2017; Rodriguez, Ajjan, & Peterson, 2016), we develop groundbreaking knowledge for academics.

Our research is of particular value for expert practitioners because it lays a broad foundation for strategical recommendations and/or implementation of guidelines (Bernard, 2016; Keinänen, Kuivalainen, & Karjaluoto, 2015). The percentage of C-level/Senior management respondents (50.6%) in the online survey signals that digital media business usage is of growing importance on board level.

3. Research background

To create a context for the anticipated contributions, we briefly review the objective and key concepts. The research aims to address the overall research question '*How does digital media usage impact the Business Development process and ultimately contributes to Business Performance in the global software industry?*'

The objective is to understand digital media technology in the light of a novel conceptualization of Business Development (Davis & Sun, 2006; Kind & Knyphausen-Aufseß, 2007).

This is achieved by aligning the often-isolated functions of Marketing and Sales, using this technology to impact business performance (Lashgari, Sutton-Brady, Solberg Søylen, & Ulfvengren, 2018; Wilcox & Sussman, 2014). The research infers that through digital media, the marketing/sales processes are improved.

For reasons of parsimony, we discuss the model succinctly. The research questions (RQ1–RQ4) listed below emerged from the research calls and gaps in the literature. That is to say, the lack of clarity about the definition of Business Development in academia and practice (Gigliano, Vitale, & McClatchy, 2011; Kind & Knyphausen-Aufseß, 2007), and its liaison role (Avlonitis & Panagopoulos, 2010); the disjoint between the studies of digital media technology and business development (Avlonitis & Karayanni, 2000); the uncertainty about what kind of digital platforms to apply (Agnihotri, Kothandaraman, Kashyap, & Singh, 2012; Brennan & Croft, 2012), and the fact that digital media usage in business development is a relatively new phenomenon and its impact on business performance is still unknown (Hoffman & Fodor, 2010; Lashgari, Sutton-Brady, Solberg Søilen, & Ulfvengren, 2018).

RQ1: What are the critical phases of the Business Development process?

RQ2: How does Digital Media impact Business Development at the conjunction of Marketing and Sales?

RQ3: What particular digital media platforms are applied in the individual phases and the entire process?

RQ4: What is the ultimate impact of Digital Media in the Business Development process on business performance?

3.1. Digital media business usage

The focus is on the exclusive usage of digital media for business purposes (Schultz, Schwepker, & Good, 2012). To identify the relevant set of the various digital media, we drew

mainly on [Agnihotri, Kothandaraman, Kashyap, and Singh \(2012\)](#), [Brennan and Croft \(2012\)](#), and [Kaplan and Haenlein \(2010\)](#), besides the pilot study to select the four most frequently utilized and mentioned platforms in B2B marketing relating to business development and sales. Among these professional and social networking sites are such as LinkedIn and Facebook; Blogs and Microblogs (e.g., Twitter). While networking sites provide access to key contacts, blogs and microblogs produce digital content; assistance in locating opportunities and creating brand communities. The choice of Facebook was debatable since we focused on professional networking sites with mainly business content. However, the digital content of both LinkedIn and Facebook indicated that the boundaries between Professional and Social Networking Sites have become blurred and might disappear in the future. We considered related theories and models (e.g., Social Presence), which imply that face-to-face meetings have greater intimacy than phone calls, and SNS-messages have greater immediacy than emails ([Kaplan & Haenlein, 2010](#)). The Technology Acceptance Model (TAM) clarifies the attitudes and behavioral intention of executives toward digital media whereby their perceived usefulness and user friendliness are critical ([Keinänen, Kuivalainen, & Karjaluoto, 2015](#)).

The outcome of the pilot study revealed that the majority of executives considered Professional Networking Sites very important to develop Social Capital, a resource that impacts knowledge sharing by the inherent social ties, mutual trust and shared value ([Chiu, Hsu, & Wang, 2006](#); [Lin, 2008](#)) and to generate new business ([Petina, Pullins, & Wilkinson, 2014](#)). The executives used other platforms only rarely.

It is expected that digital media as *model antecedents* will enhance the business development process in various ways (e.g., amassing purchase-relevant information) ([Agnihotri, Dingus, Hu, & Krush, 2016](#)), developing committed relationships ([Ryssel, Ritter, & Gemünden, 2004](#)) and generating qualified leads ([Wilcox & Sussman, 2014](#)).

Higher performance is forthcoming (Andzulis, Panagopoulos, & Rapp, 2012) by improved liaison between marketing and sales and rendering business development more effective through digital media engagement (Ahearne, Hughes, & Schillewaert, 2007; Avlonitis & Panagopoulos, 2010).

3.2. Business development as liaison function

RQ1 and RQ2 translate into how the four Business Development process phases representing the *independent model variable* are impacted by the antecedent Digital Media Business Usage.

H₁: Digital Media Business Usage has a positive effect on the *first* Business Development process phase: Identify & Prospect Potential Buyers.

H₂: Digital Media Business Usage has a positive effect on the *second* Business Development process phase: Share Information & Maintain Knowledge.

Both hypotheses can be justified on the grounds of Social Presence/Self-Disclosure Theory. This proposes that digital media-savvy marketers mutually exchange meaningful and adequate digital media profile information, are perceived as credible and trustworthy experts, stand out from the crowd of annoying cold calling marketers, utilize digital media instead of outdated databases and thus are able to retrieve relevant information and firm-specific knowledge about capabilities in the contact initiation phase through meaningful conversations (Quinton & Wilson, 2016; Rodriguez, Peterson, & Krishnan, 2012; Salo, 2017).

Here, the expectation lies in process acceleration (Media Richness Theory) (Kaplan & Haenlein, 2010) by customizing the software proposal, thereby increasing the chance to be positioned on the short-list and win new business more rapidly. Maintaining firm-/market specific knowledge is critical to creating solutions and deepening relationships (Gigliano, Vitale, & McClatchy, 2011).

In contrast, the practitioners in the pilot study viewed the second phase rather as an extension of the first by mentioning activities like *building rapport and trust* as well as *educating and listening*. Both hypotheses were largely supported by the literature (Davis & Sun, 2006; Rodriguez, Peterson, & Krishnan, 2012), job descriptions and pilot study.

The same holds true for:

H₃: Digital Media Business Usage has a positive effect on the *third* Business Development process phase: Build Social Networks & Manage Existing Relations.

H₄: Digital Media Business Usage has a positive effect on the *fourth* Business Development process phase: Increase the Number of Leads & Generate Opportunities.

The third hypothesis relates to extending networks with current and potential customers and managing relationships. Specifically, this process phase is close to efforts in Relationship Marketing and Sales, towards developing and maintaining long-term successful business relationships (Social Capital Theory) characterized by commitment, trust, cooperation and collaboration (Chiu, Hsu, & Wang, 2006; Hunt & Morgan, 1994; Lin, 2008). This in turn enhances performance (Vieira, Winklhofer, & Ennew, 2014) along with value co-creation and competitive advantages (Lambert & Enz, 2012).

Some scholars recognized that customer-oriented technology is critical in building networks, for strengthening B2B-relationships and enhancing processes and performance (Avlonitis & Karayanni, 2000; Brennan & Croft, 2012; Rodriguez, Peterson, & Ajjan, 2014) especially the relationship-oriented digital/social technology (Andzulis, Panagopoulos, & Rapp, 2012; Ellonen & Kosonen, 2010; Vargo & Lusch, 2011). This hypothesis is a replication of parts of the studies by Brennan and Croft (2012) and Rodriguez, Peterson, and Krishnan (2012) within the business development related marketing and sales areas. The definition of this process phase comes close to the description of the semi-structured expert interviews.

The expected outcome of this *third process phase* implies that Digital Media-shaped business processes create meaningful, profitable relationships, satisfied existing customers and new business (Rodriguez, Peterson, & Ajjan, 2014; Rodriguez, Peterson, & Krishnan, 2012). By establishing *authentic, engaging and trustworthy* relationships, this phase is considered to be especially important for the B2B-Business Development process due to its impact on subsequent sales processes.

For the *fourth phase* we drew primarily on Entrepreneurship Theory, Sales Performance and Technology Theory (Agnihotri, Kothandaraman, Kashyap, & Singh, 2012; Davis & Sun, 2006; Giglierano, Vitale, & McClatchy, 2011; Rodriguez, Peterson, & Ajjan, 2014).

This phase anticipates the individual/functional performance in conformity with the entrepreneurial business process of discovering, evaluating and exploiting opportunities (Shane, 2000; Veciana, 2007). Recognizing opportunities is vital for complex software solution selling (Davis & Sun, 2006; Rodriguez, Ajjan, & Peterson, 2016).

Digital Media is seen as instrumental to optimize this phase by enhancing the lead quality, minimizing the acquisition costs of new buyers and shortening the Business Development cycle (Agnihotri, Kothandaraman, Kashyap, & Singh, 2012; Rodriguez & Peterson, 2012). Thus, it is pivotal in generating less-risky, faster, new and recurring business (Ellonen & Kosonen, 2010; Rodriguez, Ajjan, & Peterson, 2016).

Therefore, it is expected that the hypotheses

H_5-H_8 : There is a positive relationship between the Digital Media Business Usage affected Business Development process phases I.–IV. and the Business Performance test positively.

3.3. Business performance

We chose business performance as our *dependent model variable* since the ultimate objective of process acceleration is performance improvement.

Though our primary research emphasis was not on developing actionable performance measurements both literature and pilot study suggested that the objective and result of process optimization must be performance increase. The following types of business performance are noteworthy. Firstly, scholars and practitioners mention *process-based performance measures* which focus on the *duration of business processes* varying with the complexity of marketing software solutions (Gronau, 2001). Digital technology usage enhances the *process-based performance* in terms of *efficiency* (i.e., performing activities in a more timely and less costly manner). For example, tech-savvy executives tend to gather and retrieve business intelligence more efficiently compared to their tech-averse peers (Ahearne, Hughes, & Schillewaert, 2007; Kazienko, Szozda, Filipowski, & Blysz, 2013; Lambert & Enz, 2012).

Secondly, scholars and practitioners notice a positive impact of technology on the *outcome-based performance* in terms of *effectiveness*. This means to execute activities more successfully to generate more opportunities and business contracts (Quinton & Wilson, 2016; Trainor, Andzulis, Rapp, & Agnihotri, 2014).

Thirdly, scholars suggest *media-based performance measures* to understand the instrumental role of digital media technology in the enhancement of operating processes (Rodriguez, Peterson, & Ajjan, 2014) and to assign the most suitable platform features to individual process phases by a media-task-fit model (Wang, Rod, Ji, & Deng, 2017).

Thus, we define *business performance* in a narrow sense based on the differentiation between a process-oriented component (i.e., efficiency) and an outcome-related component (i.e., effectiveness), which is largely supported in the literature (Agnihotri, Kothandaraman, Kashyap, & Singh, 2012; Rodriguez, Peterson, & Krishnan, 2012; Schultz, Schwepker, & Good, 2012).

3.4. Software industry (environment)

We chose to investigate the global software industry. In particular, the software industry counts among the fastest growing industries, anticipates innovations including ERP, Cloud and digital solutions and services.

This industry provides leading examples of the business development liaison function in the literature, and the various techniques are replicable to large-scale B2B transactions in other industries (Eisenhardt, 1991; Giglierano, Vitale, & McClatchy, 2011; Hofacker, Golgeci, Pillai, & Gligor, 2020).

Major challenges for the software market include the intense competition of global players and crowded markets of local vendors who often offer lower prices (Jiang & Qu, 2020). The significant investments associated with the launch of new software systems further intensify the pressures on prices and margins. Thus, the fierce battle for prospective buyers of complex B2B solutions and services requires Marketing and Sales to rethink their current processes in terms of *efficiency* and *effectiveness* (Ahearne, Hughes, & Schillewaert, 2007). Marketing executives who actively use digital media technologies prove to be more productive when incorporating these tools into their operations than those who engage exclusively in traditional media (Kazienko, Szozda, Filipowski, & Blysz, 2013; Lambert & Enz, 2012). Moreover, sharing tacit knowledge and skills through digital media improves collaboration and relationships among professionals (Morgan, 2012). Also, digital media is instrumental to accelerate business processes and sales cycles (Rodriguez, Peterson, & Ajjan, 2014; Rodriguez, Peterson, & Krishnan, 2012).

Therefore, applying digital media is imperative.

4. Research design and methodology

The review of the literature indicated that qualitative methods are suitable for studying complex business development processes (Davis & Sun, 2006; Dwyer, Schurr, & Oh, 1987; Kind & Knyphausen-Aufseß, 2007), digital media usage research commonly applies quantitative methods (Alves, Fernandes, & Raposo, 2016; Rodriguez, Peterson, & Krishnan, 2012). It is proposed that a joint study of both areas using mixed methods allows for the greater generalization of the finding (Agnihotri, Dingus, Hu, & Krush, 2016).

Consequently, we applied an exploratory, sequential, mixed methods approach starting with qualitative interviews followed by a quantitative, online survey (Creswell, 2014).

4.1. Semi-structured interviews

We targeted software industry related business executives in the DACH, WE and NA regions to study the current status of business development and common media for business usage. Besides professionals with a particular functional background, we included executives with cross-functional experience (i.e., business development, marketing, and sales).

We selected different levels of seniority from junior to more seasoned executives (Consultant to Chief Officer). Despite concerns that the variety might bias and dilute the outcome, this selection resulted in rich insights. This approach allowed for transferability of the findings to other functions and industries (Eisenhardt, 1991; Giglierano, Vitale, & McClatchy, 2011). Semi-structured interviews allowed consideration of new concepts and theories from the data (Bryman, 2012). The majority of the qualifying executives originated from international B2B software companies in the target geographies with three or more years relevant experience. The interviewees from B2B marketing service providers and software vendors had an average age of 46 years versus 47 years in a comparable study (Keinänen, Kuivalainen, & Karjaluo, 2015) and provided access and critical insight to determine suitable B2B business development process phases, along with the relevant set of available digital

media platforms. Different career levels assured that operative, technological and strategic aspects of B2B business development (Wang, Rod, Ji, & Deng, 2017) were considered.

Twelve semi-structured interviews were conducted by phone or Skype in March 2016 during office hours ranging from 50 to 90 minutes. The individual interviews were recorded, transcribed verbatim and analyzed by Thematic Analysis. This is an "inductive method for identifying, analyzing and reporting patterns (themes) within the data" (Braun & Clarke, 2006, p. 79) and ensuring theme saturation (Guest, Bunce, & Johnson, 2006). The transcripts were analyzed by an independent reviewer (90% intercoder reliability) to ensure objectivity and reliability (Vaismoradi, Turunen, & Bondas, 2013). The themes identified were cross-checked with the outcome of our comprehensive literature review and the job descriptions of global software vendors like Dassault Systems and SAP.

This led to developing and refining the following model.

[\[Figure 1 here please\]](#)

Digital Media: Most of the executives referred to *Professional Networking Sites* (e.g., LinkedIn) when asked about their concept of digital media. Only a minority mentioned other platforms (e.g., Microblogs).

Business Development: Though a clear definition among practitioners was missing, the interviewees largely agreed on the four process phases derived from the literature review.

Performance: This topic emerged as the ultimate outcome of the impact of digital media in business development/marketing processes. The results provided qualitative evidence about relevant concepts within the study and helped in updating the model.

4.2. Sample description and pre-test

To test the final research model, a survey was prepared for Spring 2017. In November, 2016 we sent emails to 120 software companies to raise awareness and recruit participants.

Our pre-test aimed at developing an adequate questionnaire that would provide valid and reliable measure of the constructs and attributes of interest (Collins, 2003).

In January 2017, we conducted a series of in-depth interviews by SKYPE with ten executives who resembled the target population. We focused on one executive, function and industry at a time, progressively revised and simplified the final questionnaire design and validated the content, format, and scales before conducting the actual survey. We recruited for our sampling frame from corporate multipliers in Microsoft and SAP who distributed the survey anonymously within their network and 8,775 contacts from LinkedIn and 904 from XING. The Qualtrics™ based survey was frequently announced on SNSs in Q1, 2017.

The data were gathered in April/May 2017. The respondents were contacted by email, which included a cover letter and the link to the survey (20–25 minutes). This method proved efficient (Sax, Gilmartin, & Bryant, 2003) ensuring anonymity and gaining high response rates (Hair Jr., Celsi, Money, Samouel, & Page, 2015).

By engaging the audience through status updates, thank you notes and reminder emails, the distribution yielded 543 sets. The response rate of 4.55% originated from the 396 (35) LinkedIn (XING) respondents, in addition to 112 responses from the anonymous link.

Most of the companies of the respondents were headquartered in DACH (34.6%), North America (26.9%) and Western Europe (24.7%). We aggregated the remaining regions under 'Others' (13.8%). Respondents from multinational enterprises and small businesses accounted for 79% of the data compared to 21% medium-sized and large-sized companies. Noteworthy industries included Business Consulting, Technology, Software, Real Estate, Financial Services, and Transportation.

35.7% (44.2%) [20.1%] of the sample belonged to vendor (third-party) [buyer] professionals of B2B software related solutions and services.

77.7% of the respondents were male, 22.3% female. The majority of the respondents (71.6%) had an average age of 47 years and belonged to Generation X (36–56 years of age).

Of those categories of respondents representing more than 10%, two out of five assumed an Executive Leadership (20.9%), Business Development (19.0%), Operations (18.2%), or Presales & Sales (14.4%) role. More than 80% held middle and upper management positions, indicating the importance of this research.

4.3. Questionnaire structure, scales, and constructs

The questionnaire consisted of the following sections: (i) introduction – company, career information, and core themes; (ii) independent variable (process phases); (iii) vendor, third-party, buyer-specific media and performance; (iv) socio-demographic – gender, year of birth, education, roles and responsibilities, affinity; (v) research value, commitment to future studies; (vi) interest in executive summary and participation in a raffle.

We operationalized the research by considering variables that authentically captured the constructs. We adapted the initial items and scales from previous studies with a similar research setting, which we also discussed in the interviews.

We refined some scales based on the pilot study and pre-test and added new ones. For example, we further developed the one item-scale for 'Digital Media Business Usage' from prior research (Keinänen, Kuivalainen, & Karjaluoto, 2015; Schultz, Schwepker, & Good, 2012) to a composite scale: two dimensions 'Inclination' and 'Hesitation' with three items each on seven-point Likert scales. Likewise, we partially adopted the scales for Business Development from academic and managerial references.

5. Results

We will now discuss the findings which address the knowledge gaps, answer the research questions, and are of particular interest to practitioners. An extract of the measurement results is highlighted in Appendix B.

5.1. Phases of the B2B business development process

Research question *RQ1* relates to the business development process cycle in the conceptual model (Fig. 1, p. 17). Based on the literature and pilot study, the following phases were recognized: 1. Identify & Prospect Potential Buyers; 2. Share Information & Maintain Knowledge; 3. Build Social Networks & Manage Existing Relations, and 4. Increase the Number of Leads & Generate Opportunities. The Structural Equation Model (not discussed here) largely supported this classification.

5.2. Estimation of B2B business process cycle times

Research question *RQ2* sought to answer how digital media might impact the Business Development process. We looked at *RQ2* from various perspectives. Gronau (2001) found that the duration of B2B business processes for the software industry averaged 17 months from four months to four years. How B2B business processes in marketing, sales (vendors/third-parties), and procurement (buyers) were impacted by digital media usage is discussed below.

To obtain the best possible outcome, the same question was presented slightly differently. The respondents were required to estimate *the average process times* by providing intervals ranging from a *minimum of fewer than six months* to a *maximum of 36 months and more*. The respondents then used sliders to estimate the *minimum* and *maximum* duration of Business Development, Marketing, Sales, or Procurement Processes according to the partial sample to which they belonged. The computed average of both slider values $\Sigma (\text{MinDur} + \text{MaxDur}) / 2$ approximated to *16.2 months*, which was slightly below the average of 17 months.

The vendor sample responses to the question in slider format were appreciably higher. While 13.8% of the vendors chose the option 'Don't know at all' in the estimation format, only 3.2% left the same question in slider format unanswered (both sliders set to zero). Possible reasons are that firstly, minimum/maximum process durations are tacitly known and that secondly, the sliders were perceived as more user-friendly than the required computation of averages.

The cross-functional findings imply that digital media usage expedites the major business processes, whether it refers from the vendor and third-party perspective to business development, marketing, and sales or on the buyer side to procurement and purchasing cycles.

Overall, the identified differences in the B2B Business Process Cycle Times suggested enhancing their alignment by rendering the business processes more agile and rapid through the inclusion of digital media and their targeted deployment within the process phases as depicted in [Fig. 2](#).

[\[Figure 2 here, please\]](#)

5.3. The interplay of digital and traditional media

Another topic of interest to B2B organizations was the combined media business usage and the underlying media affinity. The analyses served to increase confidence in current research findings and add relevance to marketing practitioners ([Brennan, Tzempelikos, Wilson, & Age 2014](#)). The development of scales is selectively presented in Appendix A.

The adjusted sample of 530 respondents with 238 or 44.9% *High Digital – Low Traditional Media* and 292 or 55.1% *Low Digital – High Traditional Media* users indicated that Digital Media are clearly crucial in B2B information gathering and decision-making processes.

The respondents had to choose the *most critical three* out of *twelve media* mentioned in leading journal articles (Bernard, 2016; Brennan & Croft, 2012; Michaelidou, Siamagka, & Christodoulides, 2011; Suh & Houston, 2010) and the pilot study to determine the relevant set of traditional and digital media in B2B.

Table 1 shows for all respondents on a more granular level that, in particular, traditional Face-to-Face and Word-of-Mouth (recommendations) were among the most frequently mentioned information sources critical to B2B decision-making.

[\[Table 1 here, please\]](#)

Though digital media usage has become essential, traditional media usage is still viewed as prevalent. Another reason why traditional media remains paramount is the trade-off between digital media and face-to-face interactions. While digital media better manages buyer-vendor relationships, the associated decline in face-to-face interactions adversely affects the quality of these relationships (Andersson & Wikström, 2017; Guesalaga, 2016).

For example, the closing of business-to-business opportunities involves complex negotiations and is currently not possible solely with digital media. However, digital media resembling their traditional counterparts were among the third and fourth most considered information sources. This finding suggests strategic recommendations such as closing the current gap between (e.g., LinkedIn and Face-to-Face (29.8%)) or Word-of-Mouth and Corporate Websites (32.4%) by aligning the approaches from a technology viewpoint.

Also, more static Professional Networking Site profiles might be further developed towards a more face-to-face oriented format by embedding agile and dynamic digital content.

Personalized videos would allow Professional Networking Site users to establish eminence in their business or industry by giving an authentic impression. Similar to Face-to-Face

meetings, this type of video would allow obtaining realistic clues like body language, voice, and eye contact to arrive at a faster and comprehensive business fit similar to the chemical fit in real sales meetings. Likewise, the content of corporates' websites might be tailored to business challenges of decision-makers rather than general success stories featuring B2B solutions.

According to [Salo \(2017\)](#), the development of buyer-engaging content is instrumental in driving business performance. Creating relevant content compares to word-of-mouth recommendations aligned with the specific requirements of decision-makers. A current study by [Zhu, Lynette Wang, Wang, and Nastos \(2020\)](#) suggests that aligning the strategy of digital content creation to close competitors will eventually lead to better performance by stimulating mutually beneficial referral practices.

It is not surprising that traditional Face-to-Face and Word-of-Mouth were perceived as the most critical information sources for B2B decision-makers throughout the samples. This outcome is supported by a study by IBM, according to which most Chief Marketing Officers rely on traditional market-based information in strategic decision-making since they have not recognized the relevance of Digital Media in the B2B context characterized by Face-to-Face ([Bernard, 2016](#)).

Thus, a strategic recommendation is to focus on digital media that mimic traditional counterparts.

Though digital media increases in popularity, it has not yet reached its full potential, as a survey of benchmarking companies from Belgium, Netherland, Great Britain, and the US showed. 40.8% of IT companies compared to 26.7% industrial B2B companies have implemented digital media strategies ([Veldeman, Van Praet, & Mechant, 2017](#)).

5.4. Identifying the relevant set of digital media platforms

To answer the research question *RQ3* and address gaps in the literature, we identified those digital media platforms (DMP) that are particularly suitable for business processes. The survey

revealed the following classification. (*DMP1*) Professional Networking Sites (e.g., LinkedIn), (*DMP2*) Corporate websites and blogs, (*DMP3*) CRM systems (e.g., Salesforce), and (*DMP4*) Others (e.g., YouTube).

This classification helped create the **Digital Business Relevance Index (DBRI)**, a tool to justify *Digital Media Business Usage* for two reasons. Firstly, to efficiently allocate digital media to the various process phases and the entire cycle (Wang, Rod, Ji, & Deng, 2017), secondly, to accelerate the processes and increase performance.

Consequently, the purpose of the DBRI is to track either the *relevant fit of suitable Digital Media platforms* across the various process phases or suggest an optimized Digital Media platform mix for a particular phase. The DBRI provides information about the degree of digital media platform utilization ranging from 0 to 1. The ranking of the specific digital platform was determined as a function of the *frequency* being mentioned (usage intensity) *within a particular phase, the entire process, and in relation to other platforms*.

The following formulae depict the computations.

[\[Formulae 1 here, please\]](#)

Tables 2.1–2.2 include the partial samples for vendors, third-party and buyers and illustrate the outcome of both aspects of the DBRI based on the computation evidenced in Table 2.3, p. 25 for the total sample $N_T = 530$.

[\[Table 2.1 here, please\]](#)

[\[Table 2.2 here, please\]](#)

It is noticeable that the business development (BD) process phases BD₁ and BD₃ showed higher DBR Indices across the partial samples, which can be explained as follows.

In the first BD process phase, digital media platforms are increasingly applied to reach out to key decision-makers for their contact information and social exchange (Salo, 2017).

Likewise, in the third BD process phase, CRM systems like Salesforce are supplemented by Digital Media Technology (Rodriguez, Peterson, & Ajjan, 2014).

The finding demonstrates that the Professional Networking Sites are prevalent in all process phases among digital media, whereas other platforms played a distinctly lesser role with one exception.

In the vendor sample, the digital CRM system reached .36. This indicates that digital media usage is far from exhausted. These findings suggest managerial guidelines on building awareness on how to leverage specific digital media to focus on the most effective platforms during the business development process.

Table 2.3, p. 40 illustrates both formulae for each platform across the process cycle (vertical view) and the platforms relevant to each individual phase (horizontal view) for the total sample $N_T = 530$.

[\[Table 2.3 here, please\]](#)

The results (e.g., BD_1DMP_j) of .29 (minor relevance) and DMP_1BD_j of .66 (medium relevance) demonstrate that there is still potential to optimize the Digital Business Relevance indices. These indices provide practitioners with operative metrics on how to evaluate specific platforms in light of the requirement of B2B processes and the optimal fit addressing research suggested by Agnihotri, Dingus, Hu, and Krush (2016). Additionally, the indices serve as a

benchmark for professionals to choose the individual digital platform or platform combination (Schultz, Schwepker, & Good, 2012; Wymbs, 2011), which best matches their processes (Media-Task-Fit) (Wang, Rod, Ji, & Deng, 2017).

Overall, these indices represent innovative options to commit and train practitioners to implement digital media into their corporate strategy and tap their full potential (Andersson & Wikström, 2017; Buehrer, Senecal, & Bolman Pullins, 2005; Michaelidou, Siamagka, & Christodoulides, 2011).

5.5. *Perceived benefits and impact of digital media on performance*

Research Question *RQ4* looked at the effects of engaging in digital media. The deterministic (perceived) and probabilistic (expected) benefits and impact of digital media usage on accelerating processes and impact on performance within a fiscal year were recognized by a clear majority (81.9%) of the vendors with a median in the bracket *between 5% and 10%* more impact. It is noteworthy that 22.3% of all vendors were unable or unwilling to estimate the ultimate impact of digital media (*I don't know at all*). Among third-party respondents, the impact of digital media was perceived more optimistically (i.e., 83.0% with a median in the range *above 10%* more impact). In contrast, only 59.8% of buyers perceived or expected that the benefits of digital media usage might shorten B2B purchasing or procurement processes, with a median *between 5% and 10%* more impact. Nearly one-third of the buyers did not provide any estimate.

This outcome indicated a gap in the buyer sample for digital media compared to the vendor and third-party respondents. Therefore, another strategic recommendation is to build awareness of the relevance of digital media among buyers to close this gap.

6. Conclusion

6.1. *Academical and Managerial Implications*

The concept of digital media at the interface of B2B Marketing and Sales is still ambiguous; this research contributes to a better understanding. Following the recommendations by [Keinänen, Kuivalainen, and Karjaluoto \(2015\)](#) and [Rodriguez, Peterson, and Krishnan \(2012\)](#), our study focused on digital media business usage with the interfacing function of business development and considered the potential impact on processes and performance. Among practitioners and scholars, the liaison function is a somewhat blurred concept ([Kind & Knyphausen-Aufseß, 2007](#)).

We address this by identifying and defining the Business Development process phases for new (phase I–IV) and existing business (phase IV, I–III) in the global software industry depicted in [Fig. 3](#), which addressed RQ1.

This process was primarily supported by the outcome of the Structural Equation Modeling (not discussed explicitly) as stated before (see data file)¹.

[\[Figure 3 here, please\]](#)

¹ Further information is available from the corresponding author*.

Our study tackled the challenge of addressing the process phases more efficiently and effectively using a relevant set of digital media (i.e., Professional Networking Sites, (Micro) Blogs and online communities) (RQ2–RQ3), resulting in higher performance (RQ4) consistent with [Agnihotri, Dingus, Hu, and Krush \(2016\)](#) and [Brink \(2017\)](#).

Moreover, our study provides valuable indications of the salience of the research results from various industries, regions, and viewpoints. It contributes in multiple ways to both knowledge and practice, as illustrated in [Table 3](#).

[\[Table 3 here, please\]](#)

It stimulates discussion to redesign more agile and effective processes rather than just challenge the current status quo, potentially impacting business performance.

The objective was to develop a framework to identify the critical processes at the interface of marketing, sales, and digital media to improving organizational capabilities regarding business development and performance.

By not exclusively focusing on vendors but also including third-party and buyer organizations ([Agnihotri, Dingus, Hu, & Krush, 2016](#); [Keinänen, Kuivalainen, & Karjaluoto, 2015](#)), our study contributed by developing a more comprehensive definition of Business Development and identified a relevant set of digital media to optimize the underlying process phases.

The **Digital Business Relevance Indices** represent valuable tools for CMOs, marketing, and sales executives to further their digital Marketing and Sales efforts concerning existing and new business development. Likewise, identifying the four process phases and the digital media that are particularly suitable among the many available platforms provides a useful format for improving marketing organizations.

In this way, we expect to have transitioned from digital media concepts in marketing to managerial realities of the combined digital and other media channel business usage in marketing. This answered the research call of previous studies ([Avlonitis & Karayanni, 2000](#); [Marshall, Moncrief, Rudd, & Lee, 2012](#); [Rodriguez, Ajjan, & Peterson, 2016](#)) to optimize business development related processes with digital media.

The inclusion of three perspectives of vendor, third-party, and buyer participants added to the meaningfulness of the results. It is evident that vendors, third-parties, and buyers still have different perceptions about leveraging Digital Media and continuing to underestimate the opportunities. This mismatch suggests providing guidelines to apply digital media in marketing related processes optimally.

6.2. Limitations and Further Studies

A limitation of our study can be found in the regional approach. We conducted our survey on a global scale and included three significant regions, which added to the meaningfulness of the outcome. However, the negligible data from outside the target geographies provides limited generalization. Further studies are suggested covering emerging markets with culture-specific particularities (e.g., the BRIC (Brazil, Russia, India, China) region).

Another limitation consists of the digital media that were identified in the expert interviews and literature review. The number of established digital media is relatively small, and we are conscious of emerging available platform choices ([Bernard, 2016](#)), which might challenge the current media set over time.

Moreover, it is not possible to make a general statement that the relevant media set that appears quite prevalent for most industries is absolutely replicable. The pilot study showed that executives in the aerospace and defense industry still hesitate to use digital media to avoid misrepresentations, legal exposure, and leaks of sensitive information. Also, criteria like culture and generation might challenge the currently considered media combinations. Lastly, though the developed digital business indices are relatively novel and shown to be valid and reliable in impacting the various phases of the liaison process, additional scrutiny is necessary to improve the robustness of these measurements.

Finally, the value of the framework and indices will become even more apparent when it can be linked with the desired outcome. Therefore, it is essential to connect the framework to more specified outcome variables than just business performance. For example, metrics such as the Return-on-Digital-Marketing-Investment and Customer Experience, as well as existing and new business transactions due to digital media.

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Appendix A. Scale development for the media mix (extract)

| Item | Original Scale Label INFO <u>Three most critical</u> Sources of Information | Context Statement or Original Scale Item | Development of Scale Item | Final Survey Version Statement |
|--|--|---|---------------------------|--|
| INFO1 | <i>Traditional Media/ Digital Media</i> | Peers & Colleagues (Word of Mouth). Word of Mouth is a conversation with those who are “someone like me”. | Replication | Peers & Colleagues (Word of Mouth) |
| INFO2 | <i>Traditional Media/ Digital Media</i> | Face-to-Face (Meeting) | New Scale | Face-to-Face (Consultant/Salespeople) |
| INFO3 | | Technology/Business Magazines | Replication | Business/Trade Magazines |
| INFO4 | <i>Digital Media Technology Use</i> | Conversation Support | Replication | Webinars/Virtual Presentations |
| INFO5 | <i>Traditional Media/ Digital Media</i> | Emails/Electronic Newsletter | Replication | Emails/Electronic Newsletter |
| INFO6 | <i>Digital Media Technology</i> | Conversation Support | Replication | Business Blogs, Microblogs (Twitter) |
| INFO7 | | Relationship Support | | Personalized SNS (Social Networking Sites), Facebook |
| INFO8 | | | | Professional SNS, LinkedIn, XING |
| INFO9 | <i>Traditional Media Pre-test</i> | Suggestion by IT executive | New Scale | Knowledge Management System (Traditional Sense) |
| INFO10 | | Suggestion by Sales executive | | Brochures and Presentations |
| INFO11 | <i>Traditional/Digital Media</i> | Vendor, Industry, Trade Website | Replication | Corporate Website |
| INFO12 | <i>Digital Media Technology use</i> | Sharing Support | Replication | Others (YouTube, Wikipedia, etc.) |
| The original file with supporting literature for the scale development can be requested from the corresponding author. | | | | |

Appendix B. Measurement model, factor analyzes, structural equation model (extract)

| |
|---|
| <ul style="list-style-type: none"> The internal reliability expressed by Cronbach’s alphas and composite reliability scores demonstrated alpha values in the acceptable range > 0.7 for all considered scales and composite reliabilities exceeding the suggested threshold of 0.7. |
| <ul style="list-style-type: none"> This also applied to the convergent validity with values > 0.5 from the Average Variance Extracted (AVE). |
| <ul style="list-style-type: none"> Similarly, the values for the discriminant validity: all the AVE values exceeded the squared correlations between the constructs, and the cross-loadings were lower than the indicator loading for the constructs. |
| <ul style="list-style-type: none"> The Confirmatory Factor Analysis for the Digital Media Business Usage dimensions (‘Inclination’ and ‘Hesitation’) resulted in GFI \approx .97; CFI \approx .98 and RMSEA \approx .03. |
| <ul style="list-style-type: none"> The Exploratory Factor Analysis for the 28 items (seven per Business Development (BD) process phase explained 57.3% of the variance slightly below the threshold recommended (Hair Jr., Celsi et al., 2011). |
| <ul style="list-style-type: none"> The Final Structural Equation Model for High Digital Media Users ($\chi^2_{(238)} = 19.19$; RMSEA = .036; CFI = .996; and normed χ^2 CMIN/DF = 1.599) largely supported the research model. |

[Figure 1]

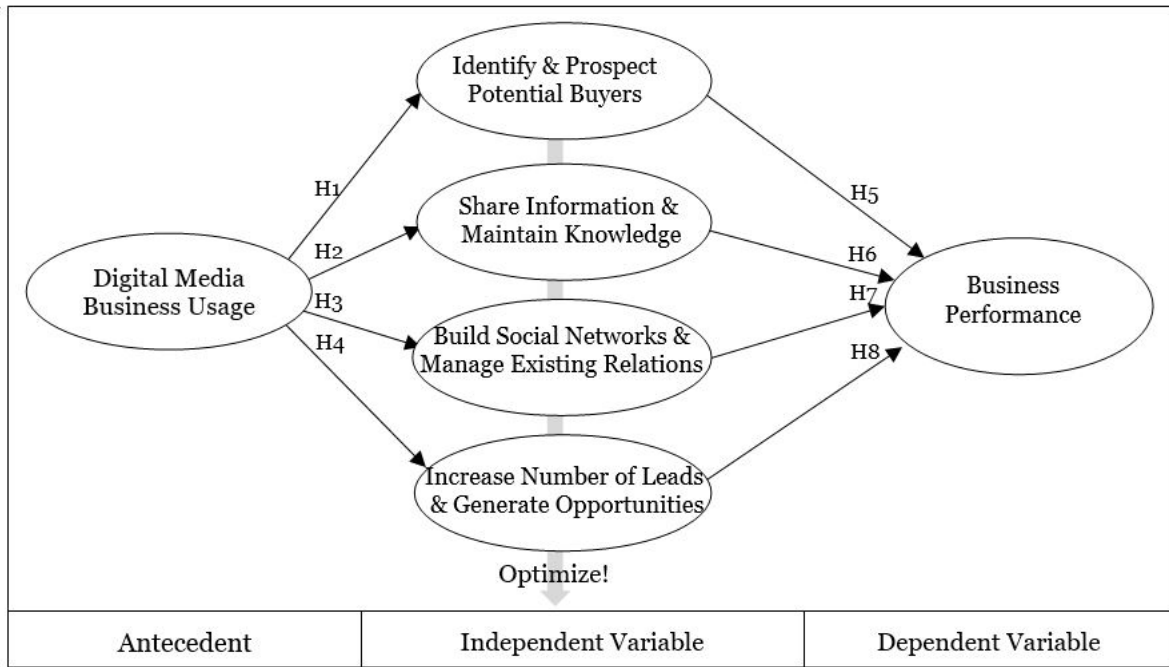


Fig. 1. Conceptual Model.

[Figure 2]

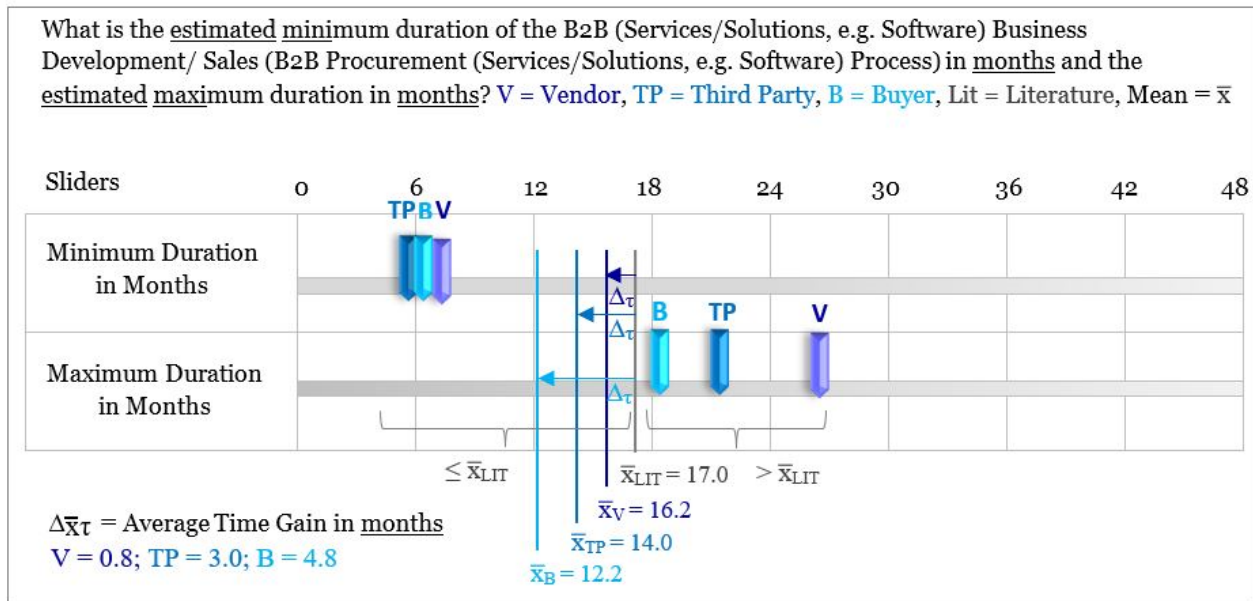


Fig. 2. Average business process cycle times in literature and survey.

[Figure 3]

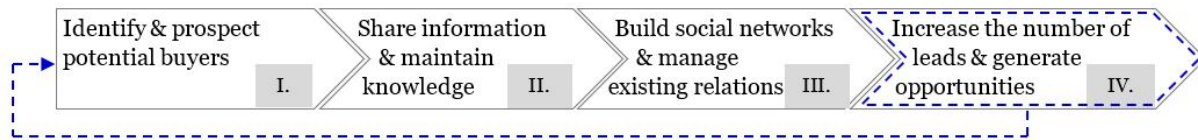


Fig. 3. Process sequences for developing new and existing business.

[Table 1]

Table 1

Preferred media mix in B2B information gathering and decision-making.

| Media | Item | Media Type | FRQ N _T = 530 | Valid Pct. | Rank N _T | FRQ N _V = 188 | Valid Pct. | Rank N _V | FRQ N _{TP} = 235 | Valid Pct. | Rank N _{TP} | FRQ N _B = 107 | Valid Pct. | Rank N _B |
|-------------|--------|----------------------|-----------------------------|---------------|------------------------|-----------------------------|---------------|------------------------|------------------------------|---------------|-------------------------|-----------------------------|---------------|------------------------|
| Traditional | Info1 | Word-of-Mouth | 385 | 72.6% | 2 | 135 | 71.8% | 2 | 170 | 72.3% | 2 | 80 | 74.8% | 2 |
| | Info2 | Face-to-Face | 409 | 77.2% | 1 | 144 | 76.6% | 1 | 184 | 78.3% | 1 | 81 | 75.7% | 1 |
| | Info3 | Tech/BIZ Magazine | 68 | 12.8% | 9 | 26 | 13.8% | 9 | 27 | 11.5% | 10 | 15 | 14.0% | 8 |
| | Info5 | Email, Newsletter | 93 | 17.5% | 8 | 28 | 14.9% | 8 | 50 | 21.3% | 6 | 15 | 14.0% | 9 |
| | Info9 | Knowledge Management | 111 | 20.9% | 6 | 53 | 28.2% | 5 | 38 | 16.2% | 7 | 20 | 18.7% | 6 |
| | Info10 | Brochure | 121 | 22.8% | 5 | 41 | 21.8% | 7 | 51 | 21.7% | 5 | 29 | 27.1% | 5 |
| Digital | Info4 | Webinar | 95 | 17.9% | 7 | 44 | 23.4% | 6 | 35 | 14.9% | 8 | 16 | 15.0% | 7 |
| | Info6 | Blog, Microblog | 57 | 10.8% | 10 | 18 | 9.6% | 11 | 29 | 12.3% | 9 | 10 | 9.3% | 10 |
| | Info7 | Facebook (SNS) | 34 | 6.4% | 12 | 10 | 5.3% | 12 | 16 | 6.8% | 12 | 8 | 7.5% | 12 |
| | Info8 | LinkedIn/Xing (SNS) | 251 | 47.4% | 3 | 86 | 45.7% | 3 | 128 | 54.5% | 3 | 37 | 34.6% | 4 |
| | Info11 | Corp. Web site | 213 | 40.2% | 4 | 79 | 42.0% | 4 | 95 | 40.4% | 4 | 39 | 36.4% | 3 |
| | Info12 | YouTube Channel | 52 | 9.8% | 11 | 24 | 12.8% | 10 | 18 | 7.7% | 11 | 10 | 9.3% | 11 |

Frequency (FRQ) displays the number of the Information source mentioned for the total and the three subsamples (multi-responses)

[Table 2.1]

Table 2.1

DBR indices for each BD process phase across all digital media platforms.

| Sample | N _T = 530 | N _V = 188 | N _{TP} = 235 | N _B = 107 |
|--------|----------------------|----------------------|-----------------------|----------------------|
| BD1 | .29 ACBD | .30 ACBD | .32 ACBD | .28 ABCD |
| BD2 | .27 BACD | .27 BACD | .28 BACD | .26 CABD |
| BD3 | .33 ACBD | .33 ACBD | .33 ACBD | .31 ACB* |
| BD4 | .27 ADBC | .29 BCAD | .27 ACBD | .26 ACBD |

$$\sum_{i=1}^4 BD_j DMP_i \times W_{ij}$$

Example: Rating ACBD [DMP1 (A); DMP2 (C); DMP3 (B); DMP4 (D)]
 * DMP4 for BD3 was not mentioned in the Buyer Sample.

[Table 2.2]

Table 2.2

DBR indices for each digital media platform across all BD process phases.

$$\sum_{j=1}^4 \text{DMP}_i \text{BD}_j \times w_{ij}$$

| Sample | N _T = 530 | N _V = 188 | N _{TP} = 235 | N _B = 107 |
|--------------|----------------------|----------------------|-----------------------|----------------------|
| DMP1 ABAA | .66 | .62 | .69 | .66 |
| DMP2 CACC | .22 | .20 | .21 | .20 |
| DMP3 BCBB | .27 | .36 | .20 | .27 |
| DMP4 DDDD | .02 | .02 | .02 | .03 |

Example: Rating ABAA [BD₁ (A); BD₂ (B); BD₃ (A); BD₄

[Table 2.3]

Table 2.3

Relevance of digital media platforms in the business development process phases.

| Platform | DMP1 Social Networking Sites: LinkedIn, Xing, and Facebook | DMP2 Company Website Subscription, and Blog | DMP3 CRM System combined with Social Networking Sites | DMP4 Other Platforms: Google Plus, Twitter, Wikipedia, YouTube | DMP9 Not Applicable | Total |
|---|--|---|---|--|---------------------------------------|----------------------------------|
| BD Process Phase | | | | | | |
| BD I Identify & prospect potential buyers N _T = 530 (100.0%) | A 249 (47.0%) Frequencies Ranking | C 91 (17.2%) Frequencies Ranking | B 116 (21.9%) Frequencies Ranking | D 34 (6.4%) Frequencies Ranking | D 40 (7.5%) Frequencies | 530 (100.0%) ACBD |
| BD II Share information & maintain knowledge N _T = 530 (100.0%) | B 138 (26.0%) Frequencies Ranking | A 191 (36.0%) Frequencies Ranking | C 115 (21.7%) Frequencies Ranking | D 42 (7.9%) Frequencies Ranking | D 44 (8.3%) Frequencies | 530 (100.0%) BACD |
| BD III Build social networks & manage existing relations N _T = 530 (100.0%) | A 321 (60.6%) Frequencies Ranking | C 37 (7.0%) Frequencies Ranking | B 118 (22.3%) Frequencies Ranking | D 14 (2.6%) Frequencies Ranking | D 40 (7.5%) Frequencies | 530 (100.0%) ACBD |
| BD IV Increase the number of leads & generate opportunities N _T = 530 (100.0%) | A 201 (37.9%) Frequencies Ranking | C 63 (11.9%) Frequencies Ranking | B 166 (31.3%) Frequencies Ranking | D 23 (4.3%) Frequencies Ranking | D 77 (14.5%) Frequencies | 530 (100.0%) ACBD |
| Total | 909 (42.9%) 174.5% of Cases | 382 (18.0%) 72.1% of Cases | 515 (24.3%) 97.2% of Cases | 113 (5.3%) 21.3% of Cases | 201 (9.5%) 37.9% of Cases | 2120 (100.0%) 400.0% of Cases |
| Assessment | Highly Relevant | Partial Relevant | Slightly Relevant | Less Relevant | Not Applicable | |

The Ranking of 'A' to 'D' was determined by the frequencies of mention in the survey with 'A' representing the highest frequency to 'D' the lowest frequency of mention. The weights assigned to the rankings were .4 to 'A', .3 to 'B', .2 to 'C', and .1 to 'D'. The Digital Business Relevance Index (DBRI) for the Digital Media Platforms can be determined by adding the weighted result for each platform separately across the four process phases, i.e. DBR DMP1. The rating of ABAA equals the amount of .47 x .4 + .26 x .3 + .61 x .4 + .38 x .4 (across the vertical of the table). The values range from 0.0 'no relevance' to 1.0 'high relevance' with .66 indicating 'medium relevance'. The computation of the DBR Index for the particular BD Process Phase, i.e. DBR BDP1 (across the horizontal of the table) resulted in the rating of ACDB and the Index of .47 x .4 + .17 x .2 + .22 x .3 + .06 x .1 was .29. This outcome suggested rather a minor relevance. The DBR Index for DMP1 of 66.0% implied that the usage of this digital media might be still increaseable. The DBR Index for the first BD I process phase of 29.0% indicated a higher potential to increase the usage of Digital Media Platforms.

[Table 3]

Table 3

Academic and managerial implications.

| <i>Academic Implications</i> | <i>Managerial Implications</i> |
|---|---|
| <p>Answered largely the research questions.</p> <ul style="list-style-type: none"> • RQ1: Identified and defined four critical business development process phases with the differentiation in ‘existing’ and ‘new business’. Recognized the overlooked liaison role. • RQ2: Provided evidence that digital media accelerates the business development process phases and the entire cycle. • RQ3: Identified a relevant set of digital media for the B2B processes in the software industry. • RQ4: Provided evidence that digital media impact performance components such as efficiency and effectiveness. | <p>Inform and further define concepts and outcome.</p> <ul style="list-style-type: none"> • Bridged academic/practitioner gaps, i.e., definitions, guidelines and recommendations. • Recognized and defined the role of Business Development as liaison between marketing and sales resulting in cross-cultural and -functional alignment of the siloed functions Marketing and Sales. • Added to media-task discussion. • Provided evidence of accelerating and rendering the B2B business development, sales and procurement processes more agile with selected digital media platforms. • Added to outcome discussion by developing new measurements. |
| <p>Identified and bridged gaps in the literature; addressed several research calls.</p> <ul style="list-style-type: none"> • Defined ‘Business Development’ as the liaison of Marketing and Sales • Determined a relevant digital media set for B2B Marketers in the software industry • Combined previously disjointly studied areas, digital media and business development • Merged vendors, third-party and buyers in one international study • Optimized business development processes with digital media | <p>Provided recommendations for individuals and their organizations.</p> <ul style="list-style-type: none"> • Traditional media remain relevant in the near future and in certain process phases. • Choose digital media mimicking traditional ones. • Focus on decision-making relevant platforms. • Align digital content strategy with targeted decision-makers; and with close competitors. • Provided practitioners with operative indices on how to evaluate specific platforms for specific business processes. |
| <p>Developed novel indices</p> <ul style="list-style-type: none"> • Digital Business Relevance Indices | <p>Provided recommendations for practitioners.</p> <ul style="list-style-type: none"> • Which platforms are most efficient and effective in certain process phases? |

[Formulae 1]

Formulae 1

Digital business relevance indices.

| | |
|---|--|
| $DBRI_i = \sum_{i=1}^m \sum_{j=1}^n DMP_i BD_j \times w_{ij} \rightarrow \text{opt!}$ | Digital Media Platform _i DMP _i BD Process Phase _j BD _j Weight w_{ij} |
| $\sum_{i=1}^m BD_j DMP_i \times w_{ij}$ | Digital Business Relevance Index (DBRI) across all i Digital Media platforms for a specific Business Development process phase j. |
| $\sum_{j=1}^n DMP_i BD_j \times w_{ij}$ | Digital Business Relevance Index (DBRI) across all j Business Development process phases for a specific Digital Media platform i. |
| | Weight Interval: $0 \leq w_{ij} \leq 1$ |